



Deborah M. Franco, Esq.
Regulatory Affairs Counsel, SJIU

April 18, 2019

ELECTRONICALLY FILED AND HAND DELIVERED

Aida Camacho-Welch, Secretary
NJ Board of Public Utilities
44 South Clinton Avenue, 3rd Floor
P.O. Box 350
Trenton, NJ 08625-0350

**Re: In the Matter of the Petition of Elizabethtown Gas Company for Approval of Increased Base Tariff Rates and Charges for Gas Service, Changes to Depreciation Rates and Other Tariff Revisions
BPU Docket No. _____**

Dear Secretary Camacho-Welch,

Enclosed herewith for filing please find an original and two (2) copies of the Petition of Elizabethtown Gas Company for Approval of Increased Base Tariff Rates and Charges for Gas Service, Changes to Depreciation Rates and Other Tariff Revisions, which has also been filed electronically today consistent with the Board's e-Filing rules.

Kindly stamp the attached copy of this transmittal letter as "Received" and return the same to our courier.

Respectfully,

A handwritten signature in dark ink, appearing to read "Deborah M. Franco", is written over a light gray circular background element.

Deborah M. Franco

Enclosures

cc: Alex Moreau, Division of Law (2 copies)
Stefanie Brand, Division of Rate Counsel (2 copies)
Service List (Electronic Mail)

**IN THE MATTER OF THE PETITION OF ELIZABETHTOWN GAS COMPANY FOR
APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE,
CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS**

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**IN THE MATTER OF THE PETITION OF ELIZABETHTOWN GAS COMPANY FOR
APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE,
CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS**

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STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF :
ELIZABETHTOWN GAS COMPANY FOR :
APPROVAL OF INCREASED BASE TARIFF :
RATES AND CHARGES FOR GAS SERVICE, : BPU DOCKET NO. _____
CHANGES TO DEPRECIATION RATES AND :
OTHER TARIFF REVISIONS :

CASE SUMMARY, PETITION, NOTICE AND EXHIBITS

Volume 1 of 4

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Attorney for Petitioner
Elizabethtown Gas Company

April 18, 2019

**STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES**

IN THE MATTER OF THE PETITION OF	:	
ELIZABETHTOWN GAS COMPANY FOR	:	CASE SUMMARY
APPROVAL OF INCREASED BASE TARIFF	:	
RATES AND CHARGES FOR GAS SERVICE,	:	BPU DOCKET NO.
CHANGES TO DEPRECIATION RATES AND	:	
OTHER TARIFF REVISIONS		

By this Petition, Elizabethtown Gas Company (“Elizabethtown” or the “Company”) proposes to increase its base tariff rates, modify its depreciation rates and implement certain other tariff revisions as detailed further in its Petition and supporting Exhibits.

Since its acquisition by South Jersey Industries, Inc. (“SJI”) in July 2018, Elizabethtown is well underway integrating into the SJI family and is proud of its accomplishments thus far transitioning from Southern Company (“Southern”) to SJI. Significant milestones to date include bringing the utility dispatch function back to New Jersey and hiring new full-time employees responsible for customer experience, dispatch, engineering, compliance and construction operations, functions formerly provided by Southern. By first quarter 2020, Elizabethtown will have successfully migrated its information technology systems from Southern to Elizabethtown and will have substantially completed its integration into SJI. Throughout this process, Elizabethtown has proudly maintained its best in class customer service and its longstanding record of providing safe and reliable service to its customers.

The Company is committed to its three core values: an overriding commitment to excellent customer service; robust investment in utility infrastructure to ensure safety, reliability and resiliency; and the consistent provision of safe and reliable service at just and reasonable rates. The investments identified in this Petition and the supporting Exhibits, as well as the rate relief requested to support such investments, will allow Elizabethtown to continue to provide the

safe, reliable, and proper service to its customers, support low income customers through energy assistance programs, and contribute to the communities it serves.

This filing is primarily driven by the significant capital investments that the Company has made since its last base rate proceeding. Since that time, the Company has made approximately \$83 million of net plant additions that are not currently reflected in rates, and projects that an additional \$263 million will be added to its plant in service balance by February 29, 2020. These capital investments have been and will continue to be made to ensure the safety, reliability and resiliency of Elizabethtown's distribution system, support customer needs, and enhance customer service. Specifically, significant infrastructure investments have been made to advance the elimination of bare steel and cast iron mains and services in the Company's service territory. Overall, these system improvements will mitigate against future leaks and provide continuous system reliability to Elizabethtown's customers.

With these investments, the Company must be given the opportunity to earn a fair return on and of its investments to ensure it can continue to attract the necessary capital to support further investments that enable it to provide ongoing safe and reliable service to its customers. Without appropriate rate relief in this proceeding and allowing a reasonable return of and return on the Company's investments, Elizabethtown will fall substantially below the 9.60% return on equity authorized by the Board in the Company's last rate case. Absent Board approval of the rate relief requested in this filing, such under-earnings could negatively impact Elizabethtown's ability to attract capital at reasonable rates, which will in turn negatively impact ratepayers.

As further demonstrated in this filing, Elizabethtown's projected operating revenues for the twelve-month period ending August 31, 2019 (utilizing six months of actual data and six months of estimated data) total \$309,945,481. Inclusive of post-Test Year *pro forma*

adjustments, the rates proposed in this filing would yield additional total operating revenues of \$65,027,481, representing an increase of 21.4%.

The impact of this Petition on the bill of an average residential customer using 100 therms per month would be \$16.97 or 17.8%. The actual percentage increase applicable to specific customers will vary according to the applicable rate schedule and the level of each customer's usage.

**STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES**

IN THE MATTER OF THE PETITION OF	:	
ELIZABETHTOWN GAS COMPANY FOR	:	PETITION
APPROVAL OF INCREASED BASE TARIFF	:	
RATES AND CHARGES FOR GAS SERVICE,	:	BPU DOCKET NO.
CHANGES TO DEPRECIATION RATES AND	:	
OTHER TARIFF REVISIONS	:	

TO: THE HONORABLE COMMISSIONERS OF THE BOARD OF PUBLIC UTILITIES

Elizabethtown Gas Company (sometimes hereinafter referred to as "Elizabethtown," "Petitioner" or the "Company"), a public utility corporation of the State of New Jersey, with its principal office at 520 Green Lane, Union, New Jersey, hereby petitions this Honorable Board (sometimes hereinafter referred to as the "Board") for authority pursuant to N.J.S.A. 48:2-21 and N.J.S.A. 48:2-21.1 and N.J.A.C. 14:1-5.12 to increase its base tariff rates and charges for gas service, and to implement certain other tariff revisions. The Company also proposes to modify its existing depreciation rates pursuant to N.J.S.A. 48:2-18 and seeks such other relief as more fully described herein. In support thereof, Petitioner states as follows:

I. BACKGROUND

1. Petitioner is engaged in the transmission, distribution, transportation and sale of natural gas within its service territory within the State of New Jersey. The Company's service territory includes all or portions of the following counties: Hunterdon, Mercer, Middlesex, Morris, Sussex, Union and Warren. Within its service territory, Elizabethtown provides natural gas service to approximately 295,000 customers.

2. Petitioner is a wholly owned subsidiary of SJI Utilities, Inc., which in turn is a wholly owned subsidiary of South Jersey Industries, Inc. ("SJI"). On July 1, 2018, SJI acquired

the assets of Elizabethtown through a transaction that was authorized by the Board by Order dated June 22, 2018 in BPU Docket No. GM17121309.

3. The rate schedules and other tariff provisions that Elizabethtown proposes to increase and modify by virtue of this filing are those currently effective rate schedules and tariff provisions now on file with the Board, designated “Tariff for Gas Service, B.P.U. No. 16 – Gas” (the “Existing Tariff”), a copy of which is attached hereto and marked as Schedule A. The Existing Tariff was issued pursuant to Board Orders in Docket Nos. GR17121309, effective July 1, 2018; GT18050518, effective July 1, 2018; GR17111146, effective September 1, 2018; GR18080852, effective March 9, 2019; GR19010017, effective March 15, 2019; and GR18060608, effective April 8, 2019.

4. The proposed rate schedules and other tariff provisions that Petitioner seeks to make effective as a result of this filing are those contained in the tariff sheets, which are blacklined against the Existing Tariff to reflect proposed changes (the “Proposed Tariff”), a copy of which is attached to the Direct Testimony of Thomas Kaufmann as Schedule TK-8 and incorporated herein by reference. A clean copy of the Proposed Tariff is attached to the Direct Testimony of Mr. Kaufmann as Schedule TK-7 and is also incorporated herein by reference. It is requested that the Proposed Tariff be made effective May 19, 2019, a date which is no less than thirty (30) days from the date of this filing.

II. BASE RATES

5. Petitioner's projected operating revenues for the twelve-month test year period ending August 31, 2019 (utilizing six months' actual data and six months' estimated data) total \$309,945,481. Inclusive of post-test year *pro forma* adjustments, the rates proposed in this Petition would yield additional operating revenues of \$65,027,481, or approximately 21.4%.

6. The impact of this Petition on the bill of an average residential heat customer using 100 therms per month would be \$16.97 or 17.8%. The actual percentage increase applicable to specific customers will vary according to the applicable rate schedule and the level of each customer's usage.

7. In accordance with N.J.A.C. 14:1-5.12(a)(4), the amount of operating revenue derived from intrastate service during the twelve months ended December 31, 2018 was \$303,395,789.

8. The Company proposes to include a Cash Working Capital allowance in rate base of \$38,441,378. This is based, in part, on a lead lag study addressed in the Direct Testimony of Timothy S. Lyons, attached to the Petition and marked as Exhibit P-8.

9. Further, the Company has applied a consolidated tax adjustment, as required by N.J.A.C. 14:1-5.12(a)(11). After the execution of an Agreement of Non-Disclosure, a proposed version of which is included with this filing as Schedule C, a consolidated tax savings schedule calculated in accordance with N.J.A.C. 14:1-5.12(a)(11) will be provided to the parties.

10. Petitioner's test year ends August 31, 2019. Petitioner is proposing to reflect changes in certain capital expenditures through February 29, 2020 and changes in certain revenues and expenses through May 31, 2020.

11. Petitioner's filing in this case is based on six months of actual data, and six months of estimated data. During the processing of this case, Elizabethtown will update its Direct Testimony and Exhibits, as appropriate to reflect actual results. It is anticipated that by the conclusion of this case, the entire test year ending August 31, 2019 will reflect actual results.

III. NEED FOR RATE RELIEF

12. Since the conclusion of Elizabethtown's last base case -- the 2016 Base Rate Case¹ -- the Company has managed its business responsibly and effectively and continues to provide a high quality of service to its customers at reasonable rates. In order to effectuate this high level of service, the Company made significant and prudent investments to its transmission and distribution systems, all the while experiencing cost increases that impact its cost of service.

13. The 2016 Base Rate Case was resolved by the Board in BPU Docket No. GR160908026 on June 30, 2017 when the Board authorized Petitioner to increase its base rates by approximately 4.64%. In that proceeding, the Petitioner's post-test year end utility plant balance at September 30, 2017 was \$1.273 billion. Since that time, the Company has made approximately \$83 million of net plant additions that are not currently reflected in rates, and projects that an additional \$263 million will be added to its plant in service balance by February 29, 2020. In making these needed investments, the Company follows a number of practices to ensure that its capital expenditures are reasonable, including competitive bidding, contractor quality assurance, and cost tracking, which includes budget variance analysis. For municipal projects, the Company endeavors to control costs, by engaging with the municipalities before and during the project to minimize the costs associated with these projects and coordinating with other utility or municipal projects, where possible, in an effort to share costs.

14. The primary driver of the proposed rate increase in this case is to provide the Company a reasonable opportunity to earn a fair return on the investments made, so that it can continue to attract capital at reasonable rates and invest in the infrastructure necessary to

¹ *In the Matter of the Petition of Pivotal Holdings, Inc. d/b/a Elizabethtown Gas for Approval of Increased Base Tariff Rates and Charges for Gas Service and Other Tariff Revisions*, Docket No. GR16090826, "Decision and Order Approving Initial Decision and Stipulation" (June 30, 2017) ("2016 Base Rate Case").

continue providing safe and reliable service to its customers. Elizabethtown's request for rate relief is also driven by a need to recover greater depreciation expense, as well as increases to the operations and maintenance ("O&M") costs incurred by the Company since the 2016 Base Rate Case. Without appropriate rate relief in this proceeding, allowing a reasonable return of and return on these investments, Elizabethtown would earn a 6.22% return on equity ("ROE") for the test year ended August 31, 2019. This represents a significant under-earning relative to the 9.60% ROE authorized by the Board in the Company's last rate case, which may negatively impact Elizabethtown's ability to attract capital at reasonable rates.

15. As a result of the Company's investments, customers are receiving benefits through increased safety and overall system reliability.

16. The Company plans to engage in ongoing, necessary transmission and distribution system construction projects over the test year and post-test year period as further detailed in the Direct Testimony of Michael P. Scacifero, attached hereto as Exhibit P-4. These major projects are necessary to improve Elizabethtown's transmission and distribution infrastructure and maintain safety and reliability. The Company is also planning a number of investments in its information technology ("IT") systems, as discussed in the Direct Testimony of Leonard Brinson, Jr., attached hereto as Exhibit P-6.

17. Since the resolution of the 2016 Base Rate Case, Petitioner has implemented revised distribution rates and a residential service charge to address the impact of the Federal Tax Cuts and Jobs Act of 2017 ("TCJA"), which was signed into law on December 22, 2017, pursuant to the Board's June 29, 2018 Order in BPU Docket Nos. AX18010001 and

GR18030232.² The rates approved by the Board in the June 29 Order went into effect on an interim basis on March 26, 2018 and were approved as final, effective July 1, 2018.³ The revised distribution rates implemented pursuant to the June 29 Order have reduced revenues collected by Petitioner, and consequently, have negatively impacted Petitioner's cash flow. The negative impact of the TCJA on the Company's cash flow and credit metrics is further discussed in the Direct Testimony of Alan D. Felsenthal, attached hereto as Exhibit P-9, and Robert Hevert, attached hereto as Exhibit P-7.

18. Despite the Company's efforts to effectively manage costs while continuing to provide customers with safe and reliable service, ongoing infrastructure investments and related capital expenditures, combined with other expenses, have necessitated this filing for rate relief. Elizabethtown intends to maintain its excellent quality of service while also having an opportunity to earn a reasonable return for its shareholders.

19. Compared to rates in effect a decade ago, the rates proposed in this filing will still result in a 10.1% lower gas bill for a residential heat customer using 100 therms. In 2009, the overall bill for a residential heat customer using 100 therms was \$124.93. By contrast, the rates proposed here would result in a 100 therm bill of \$112.29. Stated another way, the rates proposed in this proceeding, while reflecting substantial capital investments made since the Company's last case, nonetheless result in an overall bill that is \$12.64 less than it was in 2009.

² *In the Matter of the New Jersey Board of Public Utilities' Consideration of the Tax Cuts and Jobs Act of 2017*, Docket No. AX18010001, and *In the Matter of the Compliance Filing of Pivotal Utility Holdings, Inc. d/b/a Elizabethtown Gas*, Docket No. GR18030232, "Decision and Order Approving Stipulation" (June 29, 2018) ("June 29 Order").

³ June 29 Order at 5.

IV. EFFECT OF THE JUNE 22 ORDER

20. The Board's Order issued in BPU Docket No. GM17121309, approving the acquisition of Elizabethtown's assets by SJI, required Petitioner to file a base rate case no later than June 2020 and imposed certain conditions described below.⁴ Petitioner's filing complies with the rate case filing requirement of the June 22 Order.

21. The June 22 Order also imposed the following conditions on the Company that are applicable to this proceeding: (i) that Petitioner flow through to customers through the normal ratemaking process, any realized net savings, net of costs to achieve such savings (there are no such known savings); (ii) that Petitioner not seek to recover through rates certain costs, including transaction costs, goodwill, and acquisition premiums; (iii) that Petitioner maintain a capital structure of no less than 46% equity and file rates in its next base rate case based on a capital structure that contains no more than 52.5% equity, each exclusive of the effects of goodwill to common equity or debt;⁵ (iv) that Petitioner ensure that consummation of the Acquisition will not adversely affect customers because of accounting and ratemaking treatments of any of Elizabethtown's deferred balances of any kind that are due to or due from customers and would typically be a component in the determination of the cost of service and that exist prior to closing on the Acquisition;⁶ (v) that, for a period of five years following the June 22 Order, the amount of costs assessed to Petitioner for services provided by an affiliate be no

⁴ *In the Matter of the Acquisition of Elizabethtown Gas, a Division of Pivotal Utility Holdings, Inc. by ETG Acquisition Corp., a Subsidiary of South Jersey Industries, Inc. and Related Transactions*, Docket No. GM17121309, "Decision and Order Approving Stipulation" (June 22, 2018) ("June 22 Order").

⁵ The June 22 Order further requires the Petitioner to submit in this base rate case such information as it has available concerning Southern Company Gas' capital structure. As of December 31, 2018, the capital structure of Southern Company Gas consisted of 60.6% common equity and 39.4% long-term debt. See Southern Company, Form-10-K, Securities and Exchange Commission (filed Feb. 20, 2019), <https://www.sec.gov/Archives/edgar/data/92122/000009212219000006/0000092122-19-000006-index.htm>.

⁶ Related to this commitment, SJI agreed to indemnify and hold harmless all Elizabethtown ratepayers against any harm resulting from the loss of ratepayer benefits associated with any and all deferred credits or debits, and any and all deferred balances and regulatory liabilities of any kind and for any reason as a consequence of the Acquisition.

greater than they would have been had the Acquisition not occurred. Elizabethtown is in compliance with these requirements as discussed in the Direct Testimony of witnesses Stefany M. Graham, Nickolaos Ntelekos and Robert B. Hevert, attached hereto as Exhibit P-3, Exhibit P-5 and Exhibit P-7, respectively.

22. Furthermore, as part of the June 22 Order, SJI agreed that, subject to operational needs, it would add new employees to perform functions previously performed by employees of Southern in the areas of customer experience, dispatch, engineering, compliance and construction operations. That hiring process has begun and by the end of the post-test year, Elizabethtown expects to have hired additional full time employees that will provide the functions previously provided by Southern.

V. TARIFF PROPOSALS

23. The Company proposes a number of tariff changes discussed in the Direct Testimony of Mr. Kaufmann. The changes proposed by Mr. Kaufmann are designed to streamline and clarify the tariff, as well as to bring the tariff into closer conformity with the Board's regulations and South Jersey Gas Company's tariff.

VI. OTHER REQUESTED RELIEF

24. As more fully discussed in the Direct Testimony of Dane A. Watson, attached hereto as Exhibit P-10, Petitioner proposes to modify its depreciation rates. Petitioner's proposed depreciation rates have been determined in a manner consistent with Board precedent. Petitioner's proposed depreciation rates are set forth in Exhibit P-10, Schedule DAW-1, Appendices A & B. A comparison of Petitioner's current and proposed depreciation rates is set forth in Schedule DAW-1, Appendix B to Exhibit P-10. The effect of the proposed depreciation rates on Petitioner's proposed revenue requirement is discussed by Messrs. Watson and

Ntelekos. Petitioner requests that its revised depreciation rates take effect simultaneously with the effective date of the new rates resulting from this proceeding.

25. As set forth in the Direct Testimony of Mr. Michael P. Scacifero, Petitioner is proposing to establish a regulatory asset in which the incremental costs associated with a transmission integrity management program incurred between rate cases will be tracked and deferred for later review and recovery in rates. These costs relate to certain Federal pipeline safety regulations that are currently pending, may significantly impact gas distribution operating costs, and are not reflected in the Company's test year or post-test year O&M expenses.

26. As further explained in the Direct Testimony of Ms. Graham, Elizabethtown is proposing to amortize fifty percent of expenses related to this filing, including the projected costs of legal and consultant expenses, newspaper notices, court reporting, postage, and other miscellaneous expenses, over a three-year period in accordance with Board precedent.

VII. PROPOSED PROCEDURAL SCHEDULE

27. Elizabethtown respectfully proposes the following Procedural Schedule for the conduct of this proceeding:

April 18, 2019	Petition filed (6 Months Actuals/6 Months <i>Pro Forma</i>)
May 31, 2019	Discovery served by Rate Counsel/Staff
June 14, 2019	Company responses to discovery due on or before
July 1, 2019	Discovery Conference
July 12, 2019	Petitioner issues 9-3 Update
July 12, 2019	Public Hearings
July 22, 2019	All second-round discovery served on or before
August 5, 2019	Company responses to second-round discovery due on or before
August 8, 2019	Initial Settlement Meeting
August 21, 2019	Rate Counsel and Intervenor Direct Testimony due on or before
August 26-30 th	Settlement Meetings (if required)

August 30, 2019	Discovery on Rate Counsel and Intervenor Direct Testimony due on or before
September 3-6 th	Settlement Meetings (if required)
September 13, 2019	Rate Counsel and Intervenor responses to discovery due on or before
September 30, 2019	Petitioner issues 12-0 Update
October 7, 2019	Petitioner and Intervenor Rebuttal Testimony due
October 14, 2019	Serve discovery on Rebuttal Testimony on or before
October 18, 2019	Responses to discovery on Rebuttal Testimony due on or before
Week of October 28 th	Evidentiary Hearings
2 weeks from conclusion of Evidentiary Hearings	Initial Briefs due
2 weeks from filing of Initial Briefs	Reply Briefs due on or before

VIII. MISCELLANEOUS

28. Elizabethtown submits herewith, and incorporates as part hereof, all documents and exhibits required to accompany this Petition pursuant to N.J.A.C. 14:1-5.12, 14:1-4.1 and 14:1-5.1. Likewise, attached hereto and incorporated herein by reference, are the Direct Testimony (Exhibits) and Schedules submitted on behalf of the following witnesses:

- a. Christie McMullen, President and Chief Operating Officer, Elizabethtown Gas Company, whose testimony includes an overview of the Company and the primary issues driving the Company's filing in this case (Exhibit P-2);
- b. Stefany M. Graham, Manager, Rates and Regulatory Initiatives, SJI Utilities, Inc., whose testimony supports the Company's revenue requirement calculation in this proceeding (Exhibit P-3);
- c. Michael P. Scacifero, Director, Engineering Services, Elizabethtown Gas Company, whose testimony addresses the capital expenditures made by the Company (Exhibit P-4);

- d. Nickolaos Ntelekos, Director of Accounting, South Jersey Industries, Inc., whose testimony sponsors certain accounting and related information (Exhibit P-5);
- e. Leonard Brinson, Jr., Vice President and Chief Information Officer, South Jersey Industries, Inc., whose testimony discusses IT initiatives and investments by the Company (Exhibit P-6);
- f. Robert B. Hevert of Scott Madden, Inc, whose testimony discusses cost of capital issues including the proposed return on equity, capital structure and overall cost of capital (Exhibit P-7);
- g. Timothy S. Lyons of Scott Madden, Inc., whose testimony supports the Company's cash working capital request using a lead lag study methodology (Exhibit P-8);
- h. Alan D. Felsenthal of PricewaterhouseCoopers LLP whose testimony addresses certain tax issues (Exhibit P-9);
- i. Dane A. Watson of Alliance Consulting Group whose testimony presents the Company's depreciation proposals (Exhibit P-10);
- j. Thomas P. Kaufmann, Manager of Rates and Tariffs, Elizabethtown Gas Company, whose testimony presents the Company's revenue forecast and sponsors the Company's revised tariff (Exhibit P-11); and
- k. Daniel P. Yardley, Principal, Yardley & Associates, whose testimony includes a cost of service study and rate design based on the Company's revenue requirement (Exhibit P-12).

29. Notice of this filing and two (2) copies of the filing have been served on Stefanie A. Brand, Director, Division of Rate Counsel, 140 East Front Street, 4th Floor, P.O. Box 003, Trenton, New Jersey 08625.

30. Notice of this filing and two (2) copies of the filing have been served on the Department of Law and Public Safety, 124 Halsey Street, P.O. Box 45029, Newark, NJ 07102.

31. Notice of this filing, and the effect thereof will be served by mail upon the clerks of the respective municipalities and counties within Petitioner's service area at least twenty (20) days prior to the date set for the initial hearing, which notice shall include and specify the time and place of said hearing. A list of said municipalities and counties is contained in Schedule TK-

7 of Mr. Kaufmann's Direct Testimony. A copy of the form of notice is included herewith as Schedule C.

32. Customers will be notified of this filing and the effect thereof as well as the time and place of the initial hearing, by publication, at least twenty (20) days prior to the date set for the initial hearing, in newspapers of general circulation within the Petitioner's service territory. A copy of the form of notice is included herewith as Schedule B.

33. The reasons for the proposed rate increase and other relief requested by Petitioner in this Petition are as follows:

a. To be allowed a reasonable opportunity to earn its requested return on investments made in facilities required to provide safe, adequate and proper service to existing and new customers of the Petitioner, which have been put into service since September 30, 2017, the end of the post-test year utilized in the Company's last base rate case. These investments are not currently included in rate base and Petitioner currently bears carrying charges and depreciation expense associated with these facilities.

b. To recover increased costs, not previously recovered in rates.

c. To permit Elizabethtown to earn an adequate rate of return on its current net investment in used and useful utility property.

d. To establish rates which are sufficient to enable Elizabethtown, under efficient and economical operation, to maintain and support its financial integrity and to raise and maintain such additional capital as may be necessary at a reasonable cost for the proper discharge of its public duty.

e. To offset such increases as may occur in operating expenses and to maintain adequate levels of cash flow.

f. To enable Petitioner to continue to furnish safe, adequate and proper service, to maintain existing facilities, and to provide such additional facilities as may be necessary to discharge its public duties.

34. Petitioner respectfully submits that the rates, tariff modifications and other relief requested by it are in all respects just and reasonable.

WHEREFORE, Petitioner respectfully requests the Board find and determine as follows:

a. that the proposed rates, including the proposed depreciation rates, sought herein are just and reasonable and should be made effective; and

b. that Petitioner have such other and further relief as the Board may deem just, reasonable and proper under the circumstances presented to it in this case.

Respectfully submitted,

ELIZABETHTOWN GAS COMPANY



By: _____
Deborah M. Franco
Regulatory Affairs Counsel
SJI Utilities, Inc.

Dated: April 18, 2019

Communications addressed to
the Petitioner in this case should
be sent to:

Deborah M. Franco
Regulatory Affairs Counsel
SJI Utilities, Inc.
520 Green Lane
Union, New Jersey 07083
dfranco@sjindustries.com

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Kenneth T. Maloney
Cullen and Dykman, LLP
1101 Fourteenth Street, N.W., Suite 750
Washington, D.C. 20005
(202) 223-8890
kmaloney@cullenanddykman.com

VERIFICATION

I, Stacy A. Mitchell, of full age, being duly sworn according to law, upon my oath, depose and say:

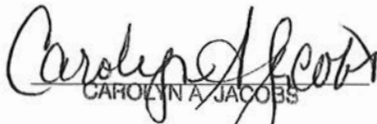
1. I am Vice President, Rates and Regulatory Affairs of SJI Utilities Inc., the parent company to Elizabethtown Gas Company ("Company") and I am authorized to make this verification on behalf of the Company.

2. I have reviewed the within petition and the information contained therein is true according to the best of my knowledge, information and belief.



Stacy A. Mitchell, Esq.
Vice President, Rates and Regulatory Affairs

Sworn to and subscribed
before me this 18 day
of April 2019


CAROLYN A. JACOBS

NOTARY PUBLIC OF NEW JERSEY

My Commission Expires October 28, 2023

ELIZABETHTOWN GAS COMPANY

**TARIFF FOR GAS SERVICE
B.P.U. NO. 16**

Revised April 8, 2019:

Sheet No. 106 – BGSS-P

ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

**ELIZABETHTOWN GAS COMPANY
TARIFF FOR GAS SERVICE**

Date of Issue: July 10, 2018

Effective: Service Rendered
on and after July 1, 2018

Issued by: Brian MacLean, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated June 22, 2018 in Docket No. GM17121309

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THE ENTIRE TERRITORY SERVED BY ELIZABETHTOWN GAS COMPANY

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**TERRITORY SERVED
WHOLLY WITHIN THE STATE OF NEW JERSEY**

ELIZABETHTOWN DIVISION

NORTHWEST DIVISION

Middlesex County

1. Carteret
2. Edison (part)
3. Metuchen
4. Perth Amboy
5. Woodbridge
- Avenel
- Colonia
- Fords
- Iselin
- Keasbey
- Port Reading
- Sewaren

Union County

1. Clark
2. Cranford
3. Elizabeth
4. Fanwood
5. Garwood
6. Hillside
7. Kenilworth
8. Linden
9. Mountainside
10. Rahway
11. Roselle
12. Roselle Park
13. Scotch Plains
14. Union
15. Westfield
16. Winfield
17. Winfield Park

Hunterdon County (Southern District)

1. Alexandria
2. Bethlehem
3. Bloomsbury
4. Califon
5. Clinton (Town)
6. Clinton (Twp.)/ Annandale
7. Delaware
8. East Amwell/ Ringoes
9. Flemington
10. Franklin
11. Frenchtown
12. Glen Gardner
13. Hampton
14. High Bridge
15. Holland
16. Kingwood (Twp.)
17. Lambertville
18. Lebanon (Bor.)
19. Lebanon (Twp.)/Stockton
20. Milford (Bor.)
21. Raritan
22. Readington (part)
23. Stockton
24. Union
25. West Amwell

Mercer County (Southern District)

1. Hopewell (Bor.)
2. Hopewell (Twp. Part)
3. Lawrence
4. Pennington

Morris County (Central District)

1. Mount Olive (Twp. Part) / Budd Lake
2. Washington (Twp. Part) / Long Valley

Sussex County

(Northern District)

1. Andover (Bor.)
2. Andover (Twp.)
3. Branchville
4. Frankford
5. Franklin (Bor.)
6. Fredon
7. Green
8. Hamburg
9. Hampton
10. Hardyston
11. Lafayette
12. Newton
13. Ogdensburg
14. Sparta
15. Sussex
16. Vernon
17. Wantage

Warren County

(Central District)

1. Allamuchy
2. Alpha
3. Belvidere
4. Franklin
5. Greenwich
6. Hackettstown
7. Harmony
8. Independence
9. Lopatcong
10. Mansfield
11. Oxford
12. Phillipsburg
13. Pohatcong
14. Washington (Bor.)
15. Washington (Twp.)
16. White

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STANDARD TERMS AND CONDITIONS

1. GENERAL

1.01 - Applicability

These Standard Terms and Conditions, filed as part of the Tariff of Elizabethtown Gas Company (hereinafter referred to as “Gas Company” or “Company”), set forth the terms and conditions under which service is rendered and will be supplied. They govern all classes of service to the extent applicable and are made a part of all agreements for the supply of gas service unless specifically modified by the terms of a particular service classification or by special terms written in and made a part of a contract for service.

Failure by the Gas Company to enforce any provisions, terms, or conditions set forth in this Tariff shall not be deemed a waiver thereof.

Per the New Jersey Administrative Code (“N.J.A.C.”) 14:3 (“Chapter”) Section 14:3-1.3(i) Tariffs states: If there is any inconsistency with this Chapter and a tariff, these rules shall govern, except if the tariff provides for more favorable treatment of customers than does this Chapter, in which case the tariff shall govern.

1.02 – Termination or Revision of Tariff

This Tariff is subject to the orders of the Board of Public Utilities of the State of New Jersey (hereinafter referred to as “Board” or “BPU”), effective as of this date or as may be promulgated and become legally effective in the future.

Gas Company reserves the right at all times and in any manner permitted by law and the applicable rules and regulations of the Board to terminate, change or modify by revision, amendment, supplement, or otherwise, this Tariff or any part thereof, or any revision, amendment or supplement thereto. All contracts for service are accepted subject to the above reservations.

1.03 – Agents

No representative or agent of Gas Company has the authority to modify, alter, or waive any provision contained in this Tariff or to bind Gas Company by any promise or representation thereto.

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Dated June 22, 2018 in Docket No. GM17121309

1.04 – Application of Tariff

Receipt of gas service from Gas Company makes the receiver a “Customer”, as defined in Section 2.01 hereof. However, Gas Company will not be required to continue to render service unless, if upon request of Gas Company, (a) Customer makes, or has made, an application for service in accordance with the Standard Terms and Conditions set forth herein and (b) such application is accepted by Gas Company in accordance with the terms of said Standard Terms and Conditions.

Service furnished by Gas Company prior to its acceptance of Customer’s application shall, nevertheless, be charged for at the rates contained in the applicable service classification. The applicable service classification, in a case where more than one service classification might apply and Customer has failed to make a selection, shall be that service classification which in the sole judgement of Gas Company is most advantageous to Customer. (See Section 2.03)

1.05 – Inspection of Tariff

The tariff is available to all customers for public inspection in each office where applications for service may be made. The Tariff is also available for review or copying at the Company’s website at www.Elizabethtowngas.com.

2. OBTAINING SERVICE

2.01 – Application for Service

An application for service may be made at any commercial office of Gas Company, either in person, by mail, by telephone, or by any other means made available by the Company. A written application form or agreement may be required from any person, firm, organization, partnership, corporation, or otherwise, applying for or using gas service (hereinafter referred to as “Customer”). If the Company requires a written application, the application may be subsequently submitted to the Customer for signature. There will be a \$15.00 administration charge to establish service to a new customer or re-establish service to an existing customer.

Applicant(s) may be required by the Gas Company to supply proof of identity and prior address. Any such requirement to provide proof of identity or prior address shall be in accordance with the provisions of N.J.A.C. 14:3-3.2 as may be amended or superseded.

Separate application may be required in each case where gas service is applied to the same person, firm, organization, partnership, corporation, or otherwise, at two or more non-contiguous properties. For purposes of applying these rates, service at each non-contiguous location shall be considered as service to a separate customer.

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Customer shall state, at the time of making application for service, the conditions under which service will be required. Customer may be required to sign an agreement covering special circumstances necessary for the supply of service in accordance with Customer's requirements. In the case in which the Customer signs a main and/or service extension agreement and subsequently does not install any of the indicated equipment within a reasonable time, not to exceed one year, or purchase the requested quantities of gas, the Company reserves the right to charge the customer for the full cost of providing the service and main, as applicable.

Gas Company reserves the right to place limitations on the amount and character of gas service it will supply; to refuse service to new Customers or to existing Customers for additional load, if unable to obtain the necessary equipment and facilities to supply such service; to reject applications for service or additional service where such service is not available or where such service might affect the supply of gas to other Customers; or for other good and sufficient reasons.

2.02 – Form of Application

Standard applications or agreements to supply gas service shall be in accordance with the particular service classification. Agreements for longer term than that specified in the service classification may be required where large or special investment is necessary to supply service, where special facilities are required to serve a Customer, or where the hourly capacity of the Gas Company's facilities required to serve the customer's demand, in the opinion of the Gas Company, may be out of proportion to the monthly or annual use of gas service for occasional, intermittent, or low load factor purposes. Gas Company reserves the right to require contributions towards the investment required for such service and to establish such minimum charges and facilities charges as may be equitable under the circumstances involved.

2.03 – Selection of Rate

Gas Company will assist in the selection of the available rate which is most desirable from the standpoint of Customer. However, the responsibility for making the selection shall, at all times, rest with Customer. Any advice given by Gas Company will be based on Customer's statements.

Customer may request Gas Company to change the service classification under which they are billed. However, Gas Company shall not be obligated to make such a change more than once in 12 calendar months even though Customer may qualify for service under more than one service classification.

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2.04 – Deposit and Guarantee

Where an applicant's credit is not established, where the credit of a Customer with Gas Company has become impaired, or where Gas Company deems it necessary for other reasons, a deposit or other guarantee satisfactory to Gas Company may be required as security for the payment of future and final bills for gas service and other charges resulting from the rendering of gas service before Gas Company will commence or continue to render service. Service shall not be discontinued for failure to make such deposit, unless said deposit had been included on prior bills, or notices to the customer. All requests for deposits shall be in accordance with N.J.A.C. 14:3-3.4.

All deposits shall bear simple interest at the rate equal to the average yield on new six-month Treasury Bills for the twelve month period ending each September 30 and shall be paid by the utility on all deposits held by it. Said rate shall become effective on January 1 of the following year. The Board shall perform the annual calculation to determine the applicable interest rate and shall notify the Gas Company of said rate.

Interest accrued from deposits for Residential Service accounts shall be credited to Customer's bill, unless the Customer requests a separate check, at least once during a 12-month period for such service rendered or to be rendered. Customers not purchasing gas under the Residential Service classification will be refunded interest accrued from their service deposit at the time that the deposit is refunded to the Customer. A deposit shall bear interest until it is returned or applied to an outstanding balance.

Gas Company shall review a residential customer's account at least once every year and non-residential customer's account at least once every two years and if such review indicates that a customer has established good credit, the Gas Company will apply the deposit to the outstanding balance on the customers' account, unless the Customer requests a separate check.

Gas Company reserves the right to apply a deposit, plus accrued interest on said deposit, against unpaid bills for service or other charges resulting from the rendering of gas service. If such action is taken and the customer continues to receive gas service the Customer shall be required to restore the deposit to the original amount or such other reasonable amount as Gas Company may determine. If the account is closed only the remaining balance will be refunded.

Gas Company shall have a reasonable time in which to read meters and to ascertain that all the obligations of Customer have been fully performed before being required to refund any deposit, in accordance with N.J.A.C. 14:3-3.5.

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2.05 – Planning Area Certification for Extensions

The Gas Company, prior to accepting application for new or upgraded gas service, will determine the planning area in which service is being requested. Such planning areas are as designated by the New Jersey State Planning Commission in accordance with N.J.A.C. 5:85-1.4.

A deposit or contribution in aid of construction may be required towards the Cost of installing an Extension, as set forth in Section 3 of these Standard Terms and Conditions.

2.06 – Permits

The Gas Company shall obtain or cause to be obtained all easements, licenses or permits necessary to enable the Gas Company or its agents access to connect its mains to the Customer's equipment. This shall be construed to mean all permits and certificates, municipal or otherwise, required by law or the Gas Company's rules. The Gas Company shall not be obliged to furnish service unless and until such permits, instruments, consents and certificates shall have been delivered to the Company. The Company reserves the right to require that Customer obtain or cause to be obtained all easements, licenses, or permits necessary to enable the Company or its agents access to connect its mains to the Customer's equipment.

The Customer may be responsible for payment of the amount by which such easements, licenses or permit fees exceeds \$15.00. Payment shall be made prior to the Company filing for said documents.

By making application for service, Customer grants to Gas Company a right-of-way for its lines and other facilities, across, over, under or along the property owned or controlled by Customer, to the extent that the same is necessary to enable Gas Company to render service to premises.

2.07 – Temporary Service

Where service is to be used for a limited period, the use of the service shall be classified as temporary and Customer shall be required to assume the actual cost of the facilities required to furnish service and also their connection and removal, which shall not be less than twice the minimum charge per month for residential service. The minimum period for billing of gas consumption shall be one (1) month. Temporary service will be furnished only where Gas Company's facilities are suitable and quantity of gas is available without in any way interfering with other Customers of Gas Company.

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2.08 – Authorization to Turn On Gas to the Meter

Only duly authorized employees or agents of Gas Company shall be permitted to turn on gas.

3. EXTENSIONS OF MAINS AND/OR SERVICE LINES

3.01 – Definitions and General Provisions

The following definitions shall apply when referring to Extensions:

Applicant For An Extension – means a person that has applied to the appropriate regulated entity, as defined in the N.J.A.C. 14:3-1.1 for construction of an Extension, as defined at N.J.A.C. 14:3-8.2 hereinafter referred to as Applicant.

Distribution Revenue – means the total revenue, plus related Sales and Use Tax, collected by a regulated entity from a Customer, minus, for a gas public utility as defined at N.J.A.C. 14:4-1.2, the Basic Gas Supply Service charges, plus related Sales and Use Tax on the Basic Gas Supply Service, assessed in accordance with the gas public utility's tariff. As applied to Extensions and/or upgrades, the Distribution Revenue shall be the incremental initial or actual total annual billings, as determined by the Gas Company, derived from the Applicant's and/or existing Customer's applicable Service Classification minus the Basic Gas Supply Service.

Extension – means the construction or installation of plant and/or facilities to convey service from existing or new plant and/or facilities to one or more new Customers, and also means the plant and/or facilities themselves. This term includes all plant and/or facilities for transmission and/or distribution, whether located overhead or underground, on a public street or right-of-way, or on a private property or private right-of-way, including the wire, poles or supports, cable, pipe, conduit or other means of conveying service from existing plant and/or facilities to each unit or structure to be served. For gas service, an Extension begins at the existing infrastructure, using system design standards as determined by the Gas Company, and ends at the meter, whose placement and location is determined solely by the Gas Company, and includes the meter as well as any upgrades to the existing infrastructure to serve one or more new and/or existing Customers.

Cost – means, with respect to the cost of construction of an Extension, actual and/or unitized expenses incurred for materials and labor (including both internal and external labor) employed in the design, purchase, construction, and/or installation of the Extension, including overhead directly attributable to the work, as well as overrides or loading factors such as those for mapping and design. The term does not include expenses for clerical, dispatching, supervision, or general office functions. Costs shall be determined by the Gas Company and shall include all Costs inclusive of items such as upgrades to the existing infrastructure as well as tax gross ups, inclusive of the applicable bonus depreciation credits per the Tax Reform Act of 1986, for contributions in aid of construction.

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The Gas Company will construct, own, and maintain gas mains, services, meters and other appurtenances located before the premise side of the meter. Payments of monthly charges, deposits and/or a contribution in aid of construction shall not give the Applicant, existing Customer and/or depositor any interest in the facilities, the ownership being vested exclusively with the Gas Company.

Upon receipt of an application for service, the Company, in its sole discretion, will determine if a deposit or contribution in aid of construction is required based on the Applicant and/or existing Customer's location, service requirements, investment allowances and Costs. The allowances will be determined based on the equipment the Applicant and/or existing Customer represents will be installed as well as the intended hours of operation. The Costs will be based upon normal conditions and service offerings. Such Costs may be increased for unusual Customer requirements or unforeseen conditions, such as excessive rock or other unknown conditions found during excavation. In such cases, the Gas Company may require an additional deposit and/or contribution in aid of construction.

The deposit amount shall be subject to refund, if applicable, as outlined below, except that refunds shall be a function of the Distribution Revenue generated over a pre-determined base. In addition, a contribution in aid of construction may be required for Company approved Customer requests and/or required services above standard services such as those described in Sections 5.03 and 7.02 of this tariff or requests to place a meter at a location other than that designated by the Gas Company. In lieu of a deposit and/or contribution in aid of construction, the parties may agree upon a revenue guarantee.

3.02 – Charges for Extensions

1) Residential, Firm Commercial or Firm Industrial Extensions

The Gas Company will install Extensions to serve individual permanent Applicants and/or existing Customers free of charge where the Cost of such Extensions does not exceed ten (10) times the estimated annual Distribution Revenue to be realized from such Extensions. Deposits shall be calculated as the difference between the Extension Costs and the initial Distribution Revenue times ten (10). However, the Company will waive the required deposit if it is less than \$500.

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The required deposit shall be delivered to the Gas Company and remain, without interest, in the possession of Gas Company until such time as the actual Distribution Revenue from the particular Extension in an annual period, as measured from the month service begins for residential Customers and the month in which the deposit was received for all other Customers, exceeds the higher of the initial estimated and/or subsequent years highest actual Distribution Revenue. At such time any such excess shall be refunded to the depositor, on a ten (10) to one (1) basis times the tax gross up factor used when the deposit was taken. Refunds made in succeeding years will be computed as above until such time as accumulated refunds are equal to, but not in excess of the sum deposited. All deposits not returned to the Customer within a period of ten (10) years shall remain the property of Gas Company with no further obligation of refund.

2) Land Development Extensions

Where applications for Extensions into newly developed tracts of land are made by individuals, partnerships, or corporations interested in the development and sale of land and or building of structures but not as ultimate occupants, the Gas Company may require a deposit from the Applicant covering the entire Cost of installing the Extensions necessary to serve the tracts and/or structures.

Such Extension deposits are to be returned to the depositor, without interest, if during a ten (10) year period from the date of the original deposit, when and as new structures abutting on such Extensions are completed. Completion shall mean either the facilities gas equipment is installed and in full use for the foreseeable future, and/or the dwellings are occupied by bona-fide owners or responsible tenants who have entered into an agreement for use of service. Upon such completion, there shall be returned to the depositor an amount equal to ten (10) times the estimated annual or actual Distribution Revenue for each of the dwellings as described above times the tax gross up factor used when the deposit was taken. In subsequent years the refund shall be based on the higher of the initial estimated and/or subsequent years highest actual Distribution Revenue on a combined basis for each unit computed as above on a ten (10) to one (1) basis times the tax gross up factor used when the deposit was taken. In no event shall more than the original deposit be returned to the depositor. All deposits not returned to the Applicant within the ten (10) year period shall remain the property of Gas Company with no further obligation of refund.

3) Interruptible and Alternate Fuel Extensions

The Gas Company reserves the right to require any interruptible or alternate fuel Customer to contribute an amount equal to the entire cost of any new or upgraded facilities required to supply service. The Gas Company is under no obligation to refund any of the contribution but reserves the right in its sole judgment to do so where economics and revenue conditions warrant said action.

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4. SERVICE CONNECTIONS

4.01 – General

Subject to the provisions of the Extensions of Mains and/or Service Lines section of this tariff, gas service will normally be supplied to each premise through a single service pipe, except where, in the judgment of Gas Company, it is deemed desirable to install more than one service pipe. The Gas Company may also choose to install multiple meters on one service pipe providing service to several premises. If more than one service is installed for the convenience of the Customer, each location will be considered as a separate Customer. In addition, at its expense and option, the Company may include a “customer valve” on the premise side of the meter on new, existing and/or re-established existing services. The ownership of the valve will be transferred to the Customer upon gas flowing through the valve.

4.02 – Change in Existing Installations

Any change in the location of the existing service pipe or meter set requested by Customer and approved by Gas Company shall be made at the expense of Customer. The Gas Company reserves the right to change the location of an existing service pipe or meter set to a placement and location determined solely by the Gas Company upon giving the Customer ten (10) days notice, unless it is done as part of an unforeseen repair or an upgrade to the main. The Gas Company shall bear all costs related to such changes including re-connecting pipes to the premise side of the meter and appurtenances related to any meter reading devices.

A Customer who qualifies pursuant to 49 CFR Section 192 and/or has a service line that is 2” or less and has a system minimum pressure of ten (10) pounds per square inch gauge or more may request installation of an Excess Flow Valve (EFV). If a Customer does not qualify for an EFV the Company will offer to install a Curb Stop. The Customer will be required to pay all EFV or Curb Stop installation costs associated with such installation before the Company begins work if:

- a) the Company has not scheduled the Customer’s premises for a service line replacement or a new service line or,
- b) the Customer requests the installation prior to the Company’s scheduled installation time.

5. METERS AND ASSOCIATED EQUIPMENT

5.01 – General

Subject to the provisions of the Extensions of Mains and/or Service Lines section of this tariff, the Gas Company will furnish, install and maintain meters for each premise and/or service. In addition where appropriate, when a Customer has two or more service classifications, the Customer will have separate meters.

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Where more than one meter is installed in a premise, the readings of all such meters supplying a Customer under the same service classification may be combined for billing purposes. The Customer may be charged a monthly service charge for each meter even if said meters are combined for billing purposes.

5.02 - Customer's Responsibility

Customer shall provide and maintain, without charge to Gas Company, a suitable space for the metering and associated equipment. Such space shall be as near as practicable to the point of entrance of the service pipe, adequately ventilated, dry, free from corrosive vapors, not subject to extreme temperatures, free from appreciable vibrations or any other conditions that may impact the meter as well as being readily accessible to authorized employees or agents of Gas Company. In apartment houses, office buildings, townhouses or condominiums with multiple service, all meters shall, whenever possible, be grouped together. Adequate passageway, maintained free of obstacles and unsafe and hazardous conditions, shall be provided at all times.

Customer shall not tamper with or remove meters or other equipment or permit access thereto, except by authorized employees or agents of Gas Company.

With the exception of the "customer valve" on the premise side of the meter, when installed (see Section 4.01), all equipment furnished by the Gas Company shall remain its property and may be replaced whenever deemed necessary by the Gas Company or as required by the Board and may be removed by Gas Company at any time after discontinuance of service.

In case of loss or damage from the act or negligence of Customer or the Customer's agents, employees and or contractors, or of failure to return property supplied by Gas Company, Customer shall pay to Gas Company the value of such property.

5.03 – Automatic Meter Reading Equipment (AMR)

The Company in its sole discretion may install, at its expense, an AMR device to monitor a customer's gas consumption. However, when gas is to be delivered at a pressure in excess of the Company's standard gauge pressure noted in Section 7.02, or such equipment is required by the service classification under which the customer will receive service, the Company shall determine any necessary equipment inclusive of compensating and AMR devices to be installed at the customer's expense. When such devices require attachment to telephone and/or electric utilities, the Customer shall provide and pay for suitable connections unless the Company elects to make such connections. When an AMR device is requested by the Customer, the AMR device and any necessary appurtenances shall be installed at the Customer's expense if the installation is deemed feasible by the Company. Where feasible, the Company will make data from the AMR device or other equipment available to the Customer upon the signing of a Service Agreement.

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Payments made by the Customer shall not give the Customer ownership of the equipment. All equipment remains the sole property of the Company. Installation of an AMR does not relieve the customer of the obligations of Sections 5.02 or 9.

6. CUSTOMER'S INSTALLATION

6.01 – General

No material change in the size, total capacity, or method of operation of Customer's equipment shall be made without previous written notice to the Gas Company and subsequent approval by the Gas Company.

The Gas Company will assume no responsibility for the condition of Customer's gas installation or for accidents, fires, or failures which may occur as the result of the condition of such gas installation.

Neither by inspection or non-rejection, nor in any other way, does the Gas Company give any warranty, expressed or implied, as to the adequacy, safety, or other characteristics of any structure, equipment, wires, pipes, appliances, or devices used by the customer.

Gas Company shall not be liable for damages to the Customer's equipment or injuries sustained by Customer due to the condition or character of Customer's facilities and equipment. The Gas Company will not be responsible for the use, care or handling of the gas delivered to Customer after same passes beyond the point at which the Company's service facilities connect to the customer's facility. Gas Company also shall not be liable for any claim for damage resulting from the supply, use, care or handling of the gas or from the presence or operation of the Company's structures, equipment, pipes or devices except for direct damages resulting from the Gas Company's negligence, recklessness or willful misconduct. The Gas Company will not be liable for special or consequential damages.

6.02 – Equipment, Piping and Installation

Customer appliances, piping and installations shall be made and maintained in accordance with the standards and specifications set forth in American National Standard, National Fuel Gas Code, ANSI Z223.1, and such other regulations as may be promulgated from time to time by any governmental agency having jurisdiction over the Customer's installation.

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6.03 – Back Pressure and Suction

When the nature of Customer's gas equipment is such that it may cause back pressure or suction in the piping system, meters, or other associated equipment of Gas Company, suitable protective devices, subject to inspection and approval by Gas Company, shall be furnished, installed, and maintained by Customer.

6.04 – Adequacy and Safety of Installation

Gas Company shall not be required to supply gas service until Customer's installation has been approved by the authorities, if any, having jurisdiction, and Gas Company further reserves the right to withhold its service or to discontinue its service whenever such installation, or part thereof, is deemed by Gas Company to be unsafe, inadequate or unsuitable for receiving service, to interfere with or impair the continuity or quality of service to Customer or others, or for other good and sufficient reason.

7. METER READINGS AND BILLING

7.01 – General

Gas Company will select the type and make of metering equipment and may, from time to time, change or alter such equipment. It shall be the obligation of Gas Company to supply meters that will accurately and adequately furnish records for billing purposes. Bills will be based upon registration of Gas Company meters, except as otherwise provided for herein.

At such time as Gas Company may deem proper or as the Board may require, Gas Company will test its meters in accordance with the standards and bases prescribed by the Board. The performance of a test outside of these standards is at the Company's option. Any customer requesting such a meter test more than once in a twelve (12) month period shall be charged all related costs to test the equipment, inclusive but not limited to time and material costs with overhead factors for the second and subsequent tests. In the event of a dispute the Gas Company's meter will be presumed to be correct, subject to test results in accordance with N.J.A.C. 14:3-4.5 and 14:3-4.6.

7.02 – Correction for Pressure and/or Temperature

For purposes of measurement, a cubic foot of gas is that volume occupying one cubic foot (12" x 12" x 12") at the Company's standard gauge pressure of five (5) inches water column and at a temperature of 60°F.

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In any case where Gas Company measures or the Customer has requested that the gas delivered is at a pressure greater than five (5) inches of water column or at temperatures other than 60° F, the cubic feet of gas registered by the meter shall be subject to correction for billing purposes by the application of proper correction factors or by the use of pressure and/or temperature compensating devices, see 5.03.

7.03 – Therm Conversion Factor

Meter readings of Customers shall be converted from cubic feet to therms by applying a therm conversion factor. A therm is defined as a unit of heat energy equal to 100,000 British Thermal Units (B.T.U.'s). For billing purposes, the customer's gas usage in cubic feet will be converted to therms using a therm conversion factor representing the actual weighted average BTU value per 100 cubic feet of gas that was delivered into the Company's system in the second preceding calendar month as adjusted to a dry basis as reported each month to the Board in accordance with N.J.A.C. 14:6-3.2. This therm conversion factor expressed to precision of at least three decimal places, shall be applied in calculating bills on a service rendered basis. The Gas Company may at its option, upon 30 day notice to Board and the New Jersey Division of Rate Counsel ("Rate Counsel or RC"), modify the calendar period used in determining the BTU factor, if it is modified toward or at a period closer to that of the Customer billing periods. In that event, the Company's reports to the Board concerning the BTU value of gas delivered into the Company's system shall contain sufficient detail to allow the Board to review the Company's calculation of therm conversion factors.

7.04 – Billing Period

Unless otherwise specified, the charges in this Tariff are stated on a "monthly" basis. The term "month" for billing purposes, shall mean a period of thirty (30) days.

Bills for service furnished will normally be rendered monthly. However, the Company reserves the right to bill bi-monthly. Gas Company also expressly reserves the right to render to any Customer bills based on meter reading periods which may be shorter than a month. Such bills will be prorated as provided in Section 7.05 hereof and are due as provided in Section 7.10 hereof.

7.05 – Proration of Monthly Charges

Except for temporary service accounts, the monthly charges for all initial bills, all final bills, and all bills for periods longer than five (5) days more, or shorter than five (5) days less, than the regular monthly billing period shall be prorated on the basis of a thirty-day month or the actual number of days in the billing period. For temporary service accounts, the minimum billing period for billing purposes shall be one month.

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7.06 – Estimated Bills and Discontinuance of Service for Excessive Estimated Reads

Where Gas Company is unable for any reason to read the meter, Gas Company reserves the right to estimate the amount of gas supplied based upon past usage and other information available and submit a bill determined on that basis. Such a bill shall be marked as to the fact that it is an estimated bill. During the summer period (defined here as May 15th through September 15th) the Gas Company may suspend the reading of manually read meters when the Company determines such suspension is necessary to permit the Company to redirect its work force to higher priority projects, provided, however, that the Company may not suspend meter readings for any individual customer for four (4) or more consecutive billing periods (monthly accounts) or two (2) or more consecutive billing periods (bimonthly and quarterly accounts). During such time the accounts will be billed based on estimated usage. Adjustment of Customer's estimated use to actual use shall be made when an actual reading is next obtained. Notwithstanding the above, the Gas Company reserves the right to discontinue gas service when a meter reading is not obtained in accordance with N.J.A.C. 14:3-7.2(e)(3) which states "When a utility estimates an account for four consecutive billing periods (monthly accounts), or two consecutive billing periods (bimonthly and quarterly accounts), the utility shall mail a notice marked "Important Notice" to the customer on the fifth and seventh months, respectively, explaining that a meter reading must be obtained and said notice shall explain the penalty for failure to complete an actual meter reading. After all reasonable means to obtain a meter reading have been exhausted, including, but not limited to, offering to schedule meter readings for evenings and on weekends, the utility may discontinue service provided at least eight months have passed since the last meter reading was obtained, the Board has been so notified and the customer has been properly notified by prior mailing. If service is discontinued and subsequently restored, the utility may charge a reconnection charge equal to the reconnection charge for restoring service after discontinuance for nonpayment."

7.07 – Billing Adjustments Due to Inaccurate Meter Recordings

When it is determined that the Gas Company's meter is inaccurate or defective, the use of gas service shall be determined by a test of the meter, or by registration of the meter set in its place during the period next following, or after due consideration of previous or subsequent properly measured deliveries. Whenever a meter is found to be registering fast by more than 2% an adjustment of charges shall be made in accordance with the provisions of N.J.A.C. 14:3-4.6.

If a meter is found to be registering less than 100% of the service provided, the Gas Company shall not adjust the charges retrospectively and/or require the Customer to repay the amount undercharged except if: 1) the meter was tampered with; 2) the meter failed to register at all; or 3) the circumstances are such that the Customer should reasonably have known that the bill did

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not reflect the actual usage. In rebilling a Customer under such conditions the Gas Company may, per its determination, utilize previous or subsequent properly measured deliveries, perform a load analysis and/or a degree day analysis to estimate the usage. The Gas Company shall allow the customer to make payment over a period of time equal to that during which the undercharges occurred, in accordance with N.J.A.C. 14:3-4.6(f).

Any adjustment to the Customer's account resulting from the terms in this section will be billed or applied to the account as the case may be. If the adjustment results in a credit, such amount may be refunded upon request by the Customer, in lieu of bill credit, in accordance with N.J.A.C. 14:3-4.6, as may be amended or superseded.

7.08 – Separate Billing for Each Installation

The service classifications are based upon the rendering of service through a single delivery and metering point. Service rendered to the same Customer at other points of delivery shall be separately metered and billed, except as provided in Section 5.01 hereof.

7.09 – Sale for Resale of Gas Service and Sub-Metering

1. General

Gas service supplied by the Company shall not be resold by Customer to others except where the Customer is another publicly regulated gas utility, where the gas is used for conversion to Compressed Natural Gas ("CNG"), or the customer of record is sub-metering in accordance with the conditions set forth below.

2. Sub-Metering

- a. Gas sub-metering is the practice in which a customer of record of the Gas Company, through the use of direct metering devices, monitors, evaluates or measures the customer of record's own utility consumption or the consumption of a tenant for accounting or conservation purposes.

Gas sub-meters are devices that measure the volume of gas being delivered to particular locations in a system after measurement by a Company owned meter.

- b. If the customer of record charges the tenant for the usage incurred by the tenant, the sum of such charge(s) to the tenant shall not exceed the cost incurred by the customer of record for providing gas service, including reasonable administrative expenses. Further, the sum of such charge(s) to the tenant shall not exceed the amount the utility would have charged such tenant if the tenant had been served and billed by the Company directly. The reselling of sub-metering gas service for profit is prohibited.

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- c. Gas sub-metering, in accordance with the conditions described hereinabove, is permitted in new or existing buildings or premises where the basic characteristic of use is industrial or commercial. Gas sub-metering is not permitted in existing buildings or premises where the basic characteristic of use is residential except where such buildings or premises are publicly financed or government owned or are charitable in nature or are condominiums or cooperative housing.
- d. The customer of record shall contact the Company prior to the installation of any gas sub-metering device, in order to ascertain whether the affected premises is located within a low pressure portion of the Company's supply system and whether or not the installation of a gas check metering device will cause any significant pressure drop to the affected premises.
- e. All gas consuming devices in any unit must be metered through a single gas sub- meter.

7.10 – Payment of Bills

At least 15 days' time for payment shall be allowed after the date a bill is mailed. Bills are payable at any commercial office at Gas Company or at any duly authorized collection agency or by mail or any other means made available by the Company. The Gas Company may discontinue service for nonpayment of bills provided the amount is greater than \$100 and or more than three (3) months delinquent and it gives the customer at least 10 days' written notice of its intention to discontinue service. The notice of discontinuance shall not be mailed until the expiration of the said initial 15-day period. However, in cases of fraud, illegal use, or when it is clearly indicated that the customer is preparing to leave, immediate payment of accounts may be required. The Gas Company reserves the right to request wire transfer of funds for payment of bills when the Company reasonably determines that payment by wire transfer is required.

A late payment charge equal to one-twelfth of the lower of 18% or the highest rate allowed by law shall be applied to the monthly billing for all non-residential customers. However, service to a governmental entity will not be subject to a late payment charge. Per Section 14:3-7.1(e) of the N.J.A.C., the utility shall not apply a late payment charge sooner than twenty five (25) days after a bill is rendered. Therefore, the Company may, beginning on the twenty-sixth (26th) day after rendering a bill, assess late payment charges. The charge will be applied to all amounts previously billed including late payment charges and accounts payable that are not received by Gas Company within the days specified above. The amount of the late payment charge to be added to the unpaid balance shall be calculated by multiplying the unpaid balance by the late charge rate. When payment is received by the Company from a Customer who has an unpaid balance which includes charges for late payment, the Customer's payment shall be applied first to such late payment charges and then the remainder to the unpaid balance.

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7.11 – Reimbursement of Expense for Processing Uncollectible Checks

A charge of \$15.00 will be made to reimburse the Company for the expense of processing customer checks which are returned by the Company's bank as uncollectible. A charge of \$8.00 will be made to reimburse the Company for the expense of processing customer checks that are re-submitted and again returned by the Company's bank as uncollectible.

7.12 – Beginning and Ending Service

Any Customer starting the use of service without making application for service and enabling Gas Company to read the meter will be held liable for any amount due for service supplied to the premises from the last reading of the meter immediately preceding the Customer's occupancy, as shown by the records of Gas Company.

Customers shall give reasonable notice of intended removal from any premises wherein they are receiving gas service. Customer shall be liable for service taken after notice of termination has been received by the Company until such time as the meter is read and disconnected, not to exceed forty-eight (48) hours. Notice to discontinue service does not relieve a Customer from any minimum or guaranteed payment under any service classification or contract.

7.13 – Budget Plan

Heating Customers billed under Service Classification RDS have the option of paying for their use of total service in equal estimated monthly installments as set forth in the applicable Gas Company's House Heat Budget Plan. The Company may offer a budget plan to all classes of Customers.

8. LEAKAGE

Customer shall immediately give notice to Gas Company of any escape of gas in or about Customer's premises.

9. ACCESS TO PREMISES

Properly identified employees or agents of Gas Company shall have access to Customer's premises at all reasonable times for any and all necessary purposes in connection with the rendering of service or the removal of its property.

10. RIGHT TO SUSPEND, CURTAIL, OR DISCONTINUE SERVICE

Gas Company shall have, upon reasonable notice, when it can be reasonably given, the right to suspend, curtail or discontinue its service for any of the following reasons:

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- (1) For the purpose of making repairs, changes, replacements, or improvements in any part of its system.
- (2) For compliance in good faith with any governmental order or directive, whether federal, state, municipal, or otherwise, notwithstanding such order or directive subsequently may be held to be invalid.
- (3) For any of the following act(s) or omission(s) on the part of Customer:
 - a. Non-payment of a valid bill due for service furnished at the present or any previous locations. However, nonpayment for business service shall not be a reason for discontinuance of residential service.
 - b. Tampering with any facility of Gas Company.
 - c. Fraudulent representation in relation to the use of gas service.
 - d. Customer moving from the premises unless the Customer requests that service be continued.
 - e. Delivering gas service to others without written approval of Gas Company except as permitted under 7.09 – Sale for Resale of Gas Service, Check Metering and Sub-metering.
 - f. Failure to make or increase an advance payment or deposit when requested by Gas Company.
 - g. Refusal to contract for service where such contract is required.
 - h. Connecting and operating equipment in such a manner as to produce disturbing effects on the gas system of Gas Company or on systems of other Customers.
 - i. Failure to comply with any of these Standard Terms and Conditions.
 - j. Where the conditions of Customer's installation or facilities presents a hazard to life or property.
 - k. Failure of Customer to repair any faulty facility of Customer.
 - l. Failure to provide access to the meter to obtain a reading as permitted under 7.06 – Estimated Bills and Discontinuance of Service for Excessive Estimated Reads.

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- (4) For refusal of reasonable access to Customer's premises for necessary purposes in connection with the rendering of service, including meter installation, reading or testing, or the maintenance or removal of the property of Gas Company.

Failure of Gas Company to exercise its rights to suspend, curtail or discontinue service, for any of the above reasons, shall not be deemed a waiver thereof.

Should gas service be terminated for any of the above reasons, the minimum charge for the unexpired portion of the term shall become due and payable immediately, provided, however, that if satisfactory arrangements are subsequently made by Customer for reconnection of the service, the immediate payment of the minimum charge for the unexpired portion of the contract term may be waived or modified as the circumstances indicate would be just and reasonable.

11. RECONNECTION AND TAMPERING CHARGES

11.01 – Reconnection and Collection Charges

A charge of \$15.00 shall be made when the Company makes a collection visit to the customer or the premises and/or to restore service when service has been suspended or discontinued for any of the reasons cited in Sections 10.(3), excepting 10.(3)d, and 10.(4) of these Standard Terms and Conditions. Recurring reconnection charges in any 12-month period shall be charged at the approved regular rates for customer service otherwise performed by Gas Company but not less than \$30.00.

A charge of \$200.00 may be made when service has been terminated for any of the reasons cited in Sections 10.(3), excepting 10.(3)d, and 10.(4), and which required the installation of a curb box for said termination.

11.02 – Tampering Charge

In the event it is established that a Company's meters or other equipment on the customer's premises have been tampered with, and such tampering results in incorrect measurement of the service supplied as determined by the Company, the cost for such gas service, based upon the Company's estimate from available data and not registered by the Company's meter, shall be paid by the beneficiary of such service. The beneficiary shall be any person who benefits from such tampering. The actual cost of investigation, inspection and determination of such tampering, and other costs, such as but not limited to the installation of protective equipment, legal fees, and other costs relating to the administrative, civil or criminal proceedings, shall be billed to the beneficiary of such tampering in the case of non-residential accounts. In the case of residential accounts, all such costs shall be billed to the responsible party. The responsible party shall be the party who

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either tampered with or caused the tampering with a meter or other equipment or knowingly received the benefit to tampering by or caused by another. In the event a residential customer unknowingly received the benefit of meter or equipment tampering, the Company shall only seek from the benefiting customer the cost of the service provided but not the cost of investigation.

Under certain conditions, tampering with the Company's facilities may also be punishable by fine and/or imprisonment under New Jersey law.

11.03 – Diversion of Service

Diversion is an unauthorized connection to pipes and/or wiring by which the utility service registers on the tenant customers' meter although such service is being used by other than the tenant-customer of record without the tenant-customer's knowledge or cooperation. Where a tenant-customer alleges or it is established that service has been diverted outside of such customers' premises, that tenant-customer shall not be required to pay for such service without that tenant-customer's consent. The definitions, procedures, investigations and determination of N.J.A.C. 14:3-7.8 shall apply.

12. CONTINUITY OF SERVICE

Gas Company will use reasonable diligence to provide a regular and uninterrupted supply of service; but, should the supply be suspended, curtailed, or discontinued by Gas Company for any of the reasons set forth in Section 10 of these Standard Terms and Conditions or should the supply of service be interrupted, curtailed, deficient, defective, or fail, by reason of any act of God, accident, strike, legal process, governmental interference, acts of third parties, or by reason of compliance in good faith with any governmental order or directive, notwithstanding such order or directive subsequently may be held to be invalid, provided such reasons are not the product of the Company's negligence, or willful misconduct, Gas Company shall not be liable for any loss or damage, direct or consequential, resulting from any such suspension, discontinuance, interruption, curtailment, deficiency, defect, or failure.

Additionally, Gas Company may curtail or interrupt service to any customer or customers in the event of emergency threatening the integrity of its system or the systems to which it is directly or indirectly connected if, in its sole judgement, such action will prevent or alleviate the emergency condition.

13. LIMITATION OF SERVICE AVAILABILITY

Where the facilities of Gas Company and/or the quantity of gas available are restricted or limited, preference may be given by Gas Company in supplying service to customers giving consideration to such factors as 1) annual gas use, 2) volume of gas, 3) load factor, 4) end use of gas, 5) capital investment costs, and 6) number of appliances.

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14. CHARACTERISTICS OF SUPPLIED GAS

Type(s) of gas supplied:

1. Natural gas
2. Natural gas mixed with Propane-Air Gas and or Manufactured Gases and or Liquefied Natural Gas
3. In areas where natural gas service is not available, undiluted commercial grade propane gas distributed through Gas Company facilities and having a minimum heating value of 2,400 BTU per cubic foot.

15. GENERAL

15.01 – Inspection of Customer Facilities

Neither by inspection, approval nor non-rejection, nor in any other way does Gas Company give any guarantee or assume any responsibility, expressed or implied, as to the adequacy, safety, or characteristics of any structures, equipment, pipes, appliances, or devices owned, installed, or maintained by Customer or leased by Customer from third parties, except in those instances in which the above equipment or facilities are owned, or leased by Gas Company.

15.02 – Force Majeure

Neither Gas Company, Third Party Supplier, or Customer shall be liable for damages to the other for any act, omission, or circumstance occasioned by or in consequence of any acts of God, strikes, lockouts, acts of the public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of rulers and people, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, temporary failure of gas supply, temporary failure of firm transportation arrangements, the binding order of any court or governmental authority which has been resisted in good faith by all reasonable legal means, acts of third parties, and any other cause, whether of the kind herein enumerated or otherwise, not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.

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Such cause or contingencies affecting the performance by Gas Company, Third Party Supplier or Customer, however, shall not relieve it of liability in the event of its concurrent negligence or in the event of its failure to use due diligence to remedy the situation and remove the cause in an adequate manner and with all reasonable dispatch, nor shall such causes or contingencies affecting performance relieve either party from its obligations to make payments of amounts then due hereunder in respect of gas theretofore delivered.

16. GAS CURTAILMENT PLAN

16.01- Purpose

The purpose of this plan is to preserve the ability to continue to provide essential gas services, as defined below, to the broadest base of customers given limited gas supply and/or delivery capacity.

16.02 - Definition of Essential Gas Users

Essential Gas Users are defined as gas service to individual residential dwellings, multi-family residential dwellings, schools, hospitals, day care centers, nursing homes, dormitories, correctional facilities, twenty-four hour emergency facilities such as municipal police, fire or emergency medical departments and similar facilities which do not have installed alternate fuel equipment and an alternate fuel supply.

16.03 – Actions Required Before Implementation of the Gas Curtailment Plan

The Gas Curtailment Plan will be implemented only after the Company has:

1. Exercised all of its rights to interrupt service to interruptible service classifications – ITS, IS, CS, CSI, as provided for in the Company's Tariff;
2. Availed itself of all cogeneration firm recall gas;
3. Interrupted SIS service, if being provided.

Nothing in the Gas Curtailment Plan shall inhibit the Company from managing and scheduling interruptions in service as covered above in a manner that it determines is appropriate to meet the conditions on its system. However, the Gas Curtailment Plan Action Steps will not go into effect until such time as all options available above have been exercised.

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16.04 – Curtailment Plan Action Steps

1. The Company shall request all transportation customers and their third party suppliers to maximize deliveries of gas into the Company's system and request excess deliveries be made available to the Company at a compensation price agreed to by the parties.
2. The Company shall reduce gas service to its own facilities to a minimum;
3. The Company shall appeal to firm large industrial and commercial customers to voluntarily reduce gas consumption;
4. The Company shall appeal to its general population of customers to reduce gas consumption by lowering thermostats 5° F, closing off unused rooms, reducing non-essential uses of gas – i.e., gas lights, clothes drying;
5. The Company shall declare the existence of a gas curtailment emergency on its system and notify the BPU and other appropriate state agencies;
6. The Company shall seek emergency supplies from pipelines, suppliers and other gas companies;
7. The Company shall curtail service to all firm industrial services greater than 2,000 therms/day other than plant protection;
8. The Company shall curtail service to all firm industrial services less than 2,000 therms/but greater than 500 therms/day other than plant protection;
9. The Company shall curtail non-essential firm commercial usage 500 therms/day or greater;
10. The Company shall curtail remaining non-essential commercial and industrial usage;
11. The Company shall curtail service for industrial plant protection;
12. The Company shall systematically curtail essential uses employing the Company's emergency plan.

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16.05 – Appropriation of End User Transportation Gas

When a gas curtailment emergency is declared (Step 5 in Section 16.04 above), any third party transportation gas being delivered into the Company's system for end-use customers shall be appropriated by the Company to serve the priority of service under this curtailment plan. Customers and Third Party Suppliers whose gas is so appropriated shall be compensated for such gas at its replacement cost but not less than the equivalent price of #2 fuel oil and to the extent the customer's actual delivered service is curtailed, that customer shall receive curtailment credits equal to a proration of any fixed monthly service charge and demand charges to correspond to the amount of the curtailed service.

16.06 – Liability Exclusion

The declaration of a gas curtailment emergency shall constitute a force majeure condition under Section 15.02 of these Standard Terms and Conditions. Consequently, the Company shall not be liable for any damages, loss of product or other business losses suffered by customers as a result of curtailed gas service.

17. UNAUTHORIZED GAS USE

Unauthorized Use includes, but is not limited to, any volume of gas taken by Customer in excess of its maximum daily requirement as set forth in its Service Agreement with Gas Company or the quantity of gas allowed by Gas Company on any day for any reason, including as a result of a curtailment or interruption notice issued by the Company in accordance with its tariff and/or the Board of Public Utilities of the State of New Jersey or any other governmental agency having jurisdiction. A "day" shall be a period of twenty-four (24) consecutive hours, beginning as near as practical to 8 a.m., or as otherwise agreed upon by Customer and Gas Company.

The Company reserves the right to physically curtail the gas service to any Customer if, in the Company's sole judgement, such action is necessary to protect the operation of its system.

If a Customer uses gas after having been notified that gas is not available under their Service Classification, and or if applicable, uses gas in excess of the maximum daily quantity or requirements as established in the Service Agreement then unauthorized gas charges shall apply.

Furthermore, if a Third Party Supplier (TPS) fails to deliver gas in the quantities and or imbalance ranges specified in the TPS Service Classification then unauthorized gas charges shall apply to the TPS.

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In addition to the above, the following conditions have been ordered by the BPU specifically related to Interruptible Customers and their suppliers: A Customer who fails to discontinue natural gas use, consistent with the terms and conditions of the relevant interruptible service agreements, and suppliers who fail to deliver natural gas during a critical period/OFO notice, consistent with the terms and conditions of applicable service agreements and TPS Agreements, shall be charged a penalty equal to the charges for Unauthorized Gas Use.

All Unauthorized Usage shall be billed at the higher of \$2.50 per therm or a rate equal to ten times the highest price of the daily ranges which are published in Gas Daily on the table "Daily Price Survey" for delivery in Transco Zone 6 or Texas Eastern Zone M-3. This rate shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of the interstate pipelines which deliver gas into New Jersey. This is in addition to all applicable taxes and charges of the Customer's service class.

Nothing herein shall be construed to prevent the Company from taking all lawful steps to stop the unauthorized use of gas by Customer, including disconnecting Customers service.

Such payment for unauthorized use shall not be deemed as giving Customer or TPS any rights to use such gas.

The Gas Company may, in its sole discretion, permanently discontinue service upon a finding by the Gas Company that the customer has not complied with the conditions and provisions of the tariff.

TPSs that have subscribed to Standby for their Essential Use Customers are not subject to Unauthorized Use Charges for volumes that are within the limits of their Standby Service but will be billed the Standby Rate determined at month end. Any revenues from Unauthorized Gas Use penalty charges shall be credited to the BGSS.

All Unauthorized Use Charges applicable to transportation services will be billed to and payable by the TPS providing gas supply for such services. In the event a TPS fails to pay these charges, the customers of that TPS shall be billed directly by the Company for either: 1) their proportionate share, based on the Allocation of Supplies as set forth in the TPS service classification; or 2) their direct share identified through their non-compliance to Company directives to ease or curtail gas use.

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18. NEW JERSEY SALES AND USE TAX

In accordance with P.L. 1997, c. 162 (the “energy tax reform statute”), as amended by P.L. 2016, c. 57 , provision for the New Jersey Sales and Use Tax (“SUT”) has been included in all charges applicable under this tariff by multiplying the charges that would apply before application of the SUT by the factor 1.06625. The energy tax reform statute exempts the following customers from the SUT provision, and when billed to such customers, the charges otherwise applicable under this tariff shall be reduced by the provision for the SUT included therein:

1. Franchised providers of utility services (gas, electricity, water, waste water and telecommunications services provided by local exchange carriers) within the State of New Jersey.
2. Cogenerators in operation, or which have filed an application for an operating permit or a construction permit and a certificate of operation in order to comply with air quality standards under P.L. 1954, c. 212 (C.26:2C-1 et seq.) with the New Jersey Department of Environmental Protection, on or before March 10, 1997.
3. Special contract customers for which a customer-specific tax classification was approved by a written Order of the BPU prior to January 1, 1998.
4. Agencies or instrumentalities of the federal government.
5. International organizations of which the United States of America is a member.

In accordance with P.L. 2004, c. 65 “The Business Retention and Relocation Assistance Act” and subsequent amendment (P.L. 2005, c.374) exempts the following customers from the SUT provision, and when billed to such customers, the charges otherwise applicable shall be reduced by the provision for the SUT included therein:

1. A qualified business that employs at least 250 people within an enterprise zone, at least 50 % of whom are directly employed in a manufacturing process, for the exclusive use or consumption of such business within an enterprise zone.
2. A group of two or more persons:
 - a. Each of which is a qualified business that are all located within a single redevelopment area adopted pursuant to the “Local Redevelopment and Housing Law,” P.L.1992, c.79 (C.40A:12A-1 et seq.);

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- b. That collectively employ at least 250 people within an enterprise zone, at least 50% of whom are directly employed in a manufacturing process;
 - c. Are each engaged in a vertically integrated business, evidenced by the manufacture and distribution of a product or family of products that, when taken together, are primarily used, packaged and sold as a single product; and
 - d. Collectively use the energy and utility service for the exclusive use or consumption of each of the persons that comprise a group within an enterprise zone.
3. A business facility located within a county that is designated for the 50% tax exemption under Section 1 of P.L.1993, c.373 (C.54:32B-8.45) provided that the business certifies that it employs at least 50 people at that facility, at least 50% of whom are directly employed in a manufacturing process, and provided that the energy and utility services are consumed exclusively at that facility.

A business that meets the requirements in (1), (2) or (3) above shall not be provided the exemption described in this section until it has complied with such requirements for obtaining the exemption as may be provided pursuant to P.L.1983, c.303 (C.52:27H-60 et seq.) and P.L.1966, c.30 (C.54:32B-1 et seq.) and the Company has received a sales tax exemption letter issued by the New Jersey Department of Treasury, Division of Taxation.

19. NEGOTIATED RATES, TERMS AND CONDITIONS

In accordance with the BPU's Order dated August 18, 2011 in BPU Docket No. GR10100761 ("Order") the Company has developed the following criteria for determining whether it will, in individual circumstances, negotiate rates, terms and conditions of service with customers that otherwise would not take service under the terms of the service classifications set forth in this tariff. Any individually negotiated rates, terms or conditions agreed to pursuant to this tariff provision are subject to prior approval by the BPU. Negotiated rates, terms and conditions that may be made available are intended to address unique circumstances applicable at the time that the negotiated rates, terms and conditions are agreed to with individual customers.

Negotiated rates, terms and conditions will be offered by the Company in circumstances in which it determines in its sole reasonable judgment, that such individual rates, terms and conditions are necessary to prevent (i) physical bypass of the Company's distribution system, (ii) economic bypass of the Company's distribution system or, (iii) the loss of load that could otherwise be served at rates that would exceed marginal costs.

Customers seeking negotiated rates, terms and conditions, and claiming that such rates, terms and conditions are necessary to prevent the customer from physically bypassing the Company's distribution system, must provide the Company with the following:

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- (i) a statement from an interstate pipeline involved in such bypass that the proposed interconnection between customer and the pipeline is operationally viable, that sufficient capacity is available to serve such customer, and that the pipeline would serve the customer if requested;
- (ii) maps or flow diagrams that identify the proposed route of the pipeline needed to serve the customer from the interconnection with the pipeline and the customer's site, the size of the connecting pipeline and any other appurtenant facilities required;
- (iii) engineering studies related to the estimated costs to complete construction of facilities interconnecting the pipeline and the customer;
- (iv) information concerning the status of all reliability and environmental or other permits and approvals from local, state and federal agencies;
- (v) a description of any other benefits that the customer proposes to provide the Company under a service agreement between the Company and customer; and
- (vi) such other information as the Company may require.

Customers seeking negotiated rates, terms and conditions for reasons other than to avoid physical bypass must provide the Company (i) such information as the customer deems relevant to its request, and (ii) such information as the Company may require given the particular circumstances.

In determining whether to offer individually negotiated rates, terms and conditions to a particular customer, the Company will consider all relevant information provided by the customer and make a judgment as to whether negotiated rates, terms and conditions are necessary to prevent physical or economic bypass or the loss of load that could otherwise be served at rates that exceed marginal costs. Customers may apply for negotiated rates, terms and conditions by contacting the Company in writing. The Company will respond to any request for negotiated rates, terms and conditions within sixty (60) days of receiving a customer's written request and all required information.

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 36

SERVICE CLASSIFICATION – RESIDENTIAL DELIVERY SERVICE (RDS)

APPLICABLE TO USE OF SERVICE FOR:

All residential purposes in individual residences and in individual flats, individual apartments in multiple family buildings, only where each individual flat or individual apartment is served through its own separate meter and religious institutions where the total rated input capacity of all gas utilization equipment does not exceed 500,000 BTU per hour. The rate is not available for hotels, nor for recognized rooming or boarding houses where the number of rented bedrooms is more than twice the number of bedrooms used by Customer. This rate is not applicable for industrial or commercial use of gas. In residential premises, use for purposes other than residential will be permitted only where such use is incidental to Customer's own residential use. Service for heating and/or cooling of premises will be rendered at this rate. Service to detached outbuildings or outside appliances appurtenant to the residence will be included in this rate provided Customer installs the necessary piping so that the gas used in such facilities may be measured by the meter located at the residence.

Service will be provided if Gas Company's facilities are suitable.

CHARACTER OF SERVICE:

Continuous, however, customers may either purchase gas supply from a Third Party Supplier ("TPS") or the Company's Rider "A", Basic Gas Supply Service ("BGSS")

*CHARGES PER MONTH:

	<u>Gas Supply from BGSS</u>	<u>Gas Supply from TPS</u>
Service Charge	\$8.19	\$8.19
Distribution Charge per Therm	\$0.3625	\$0.3625
Commodity Charge	Per Rider "A"	Per TPS Agreement

* The charges set forth in this Service Classification include sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. A customer that receives gas supply from a TPS will be charged for commodity according to any agreement between the customer and the TPS.

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SERVICE CLASSIFICATION – RESIDENTIAL DELIVERY SERVICE (RDS)
(continued)

MINIMUM MONTHLY CHARGE:

Service Charge.

TERM OF PAYMENT:

All bills are due upon presentation.

TERM OF CONTRACT:

One year, and thereafter until terminated by five (5) days written notice.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS

1.

Utilizing a Third Party Supplier

A customer choosing to contract with a TPS for supply service will be enrolled for this service with the Company by the TPS on their behalf. A customer will receive a confirmation notice from the Company noting their choice of supplier and that the customer will have seven (7) calendar days from the date of the confirmation notice to contact the Company and rescind its selection, after which, if not rescinded, the residential customer's TPS enrollment shall be accepted by the Company. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by the TPS.

2. Switching Suppliers

Customer may switch TPSs or return to the Company's BGSS service at any time subject to the conditions of Customer enrollment. A Customer electing to return to the BGSS service should contact their TPS who will carry out the necessary steps with the Company. The decision and steps necessary to switch TPSs are carried out between the newly selected TPS and the Customer. Customer will not be charged a fee to change its TPS or return to BGSS service.

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SERVICE CLASSIFICATION – RESIDENTIAL DELIVERY SERVICE (RDS)
(continued)

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS (continued)

3. Limitations on the Availability of Transportation Service

Customer's TPS must demonstrate that it possesses Comparable Capacity or Standby Balancing Service sufficient to provide their Customers' Unadjusted Average Daily Delivery Quantity, as defined under the TPS Service Classification, during the months of November through March. If at any time it is determined that TPS does not meet this provision, then TPS's customers will be returned to BGSS gas supply service.

4. Load Balancing Charge

A Load Balancing Charge of \$0.0552 per therm, which includes taxes, shall be billed to the TPS for all metered quantities of its RDS customers.

5. Gas Commingling

Service under this Service Classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas with other supplies. Moreover, the Company reserves the right to utilize Customer's gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

6. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for Customers for transporting gas from its source to the Company's interconnection with delivering pipeline suppliers. All such responsibility rests with Customer's TPS. Company shall have no responsibility with respect to such gas before Customer delivers or has delivered on its behalf such gas to Company or after Company redelivers such gas to Customer at the meter at Customer's premises or on account of anything which may be done, happen or arise with respect to such gas before such delivery or after such redelivery. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by TPS.

7. Gas Supply Obligation

In the event that Customer's TPS ceases operations, or for any other reason fails to deliver the Average Daily Delivery Quantity ("ADDQ"), the Company shall provide replacement gas supplies under the BGSS service.

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ORIGINAL SHEET NO. 39

SERVICE CLASSIFICATION – RESIDENTIAL DELIVERY SERVICE (RDS)
(continued)

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS (continued)

8. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company's system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company's system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas into Company's system on behalf of Customer.

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SERVICE CLASSIFICATION – SMALL GENERAL SERVICE (SGS)

APPLICABLE TO USE OF SERVICE FOR:

Small General Service is available to those customers whose annual weather normalized usage as determined by the Company is less than 5,000 therms per year and where Gas Company's facilities are suitable and the quantity of gas is available for the service desired. In August of each year the Company shall review each customer's eligibility based on their annual normalized usage and if in excess of 5,500 therms for two consecutive years will transfer the customer to General Delivery Service.

CHARACTER OF SERVICE:

Continuous.

*CHARGES PER MONTH:

	<u>Gas Supply from BGSS</u>	<u>Gas Supply from TPS</u>
Service Charge	\$21.92	\$21.92
Distribution Charge per Therm	\$0.3175	\$0.3175
Commodity Charge	Per Rider "A"	Per TPS Agreement

* The charges set forth in this Service Classification include sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. A customer that receives gas supply from a TPS will be charged for commodity according to any agreement between the customer and the TPS.

MINIMUM MONTHLY CHARGE:

The Service Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

One year, and thereafter until terminated by five (5) days written notice.

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SERVICE CLASSIFICATION – SMALL GENERAL SERVICE (SGS)
(continued)

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS (TPS)

1. Service Agreement

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a TPS are conditions precedent to receiving gas supply from a TPS.

2. Balancing Charge

Customers will be charged a balancing charge of \$0.0171 per therm, which includes sales tax, in the months of November through March to offset system supply costs utilized to absorb the differences between the TPS delivered Average Daily Delivery Quantities and the actual daily gas supply requirements of the customers.

3. Commingling

Service under this Service Classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas with other supplies. Moreover, the Company reserves the right to utilize Customer's gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

4. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service Customers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

5. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customers the total monthly requirements for that billing month per an Average Daily Delivery Quantity ("ADDQ") determined as stated in the TPS section of this tariff.

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SERVICE CLASSIFICATION – SMALL GENERAL SERVICE (SGS)
(continued)

6. Utilizing a Third Party Supplier

A customer choosing to contract with a TPS for supply service will be enrolled for this service with the Company by the TPS on their behalf. A customer will receive a confirmation notice from the Company notifying them of their enrollment by a TPS and that the customer should contact the TPS noted on the letter within seven (7) calendar days if they seek to have it rescinded. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by the TPS.

7. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges the customers shall be billed directly by the Company for their direct portion, if by their non-compliance to Company directives to cease gas use, and/or a prorata share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas customers will first be credited with standby gas purchased by the TPS on their behalf.

8. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

9. Gas Supply Obligation

In the event that Customer's Third Party Supplier fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service, except for those whose TPS contracted for Standby Service, limited to Essential Gas User customers. In the event that a Customer that is not covered by Standby Service seeks to purchase natural gas supplies from the Company, such sales may be made by the Company in its sole discretion under such terms and conditions as the Company may require.

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SERVICE CLASSIFICATION – SMALL GENERAL SERVICE (SGS)
(continued)

10. Limitations on the Availability of TPS Transportation Service

TPS Service is not available to Customers who are defined as “Essential Gas Users” under the curtailment provision as set forth in Section 17 of the Standard Terms and Conditions of this Tariff unless such Customers’ TPS, in an amount sufficient to meet such Customers’ ADDQ and/or DCQ, agrees to contract and pay for Standby Service as defined in the TPS Service Classification or for such Customers’ TPS demonstrates that it possesses Comparable Capacity as defined in the TPS Service Classification.

11. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company’s system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company’s system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas on behalf of transporting customer.

III. SPECIAL PROVISIONS, APPLICABLE TO VETERANS’ ORGANIZATIONS:

Veterans’ Organization Service: Pursuant to N.J.S.A 48:2-21.41, when natural gas service is delivered to a customer that is a Veterans’ Organization, serving the needs of veterans of the armed forces, the customer may apply and be eligible for billing under this Special Provision.

Each customer shall be eligible for billing under this Special Provision upon submitting an Application for Veterans’ Organization Service under this service classification and by qualifying as a “Veterans’ Organization” as defined by N.J.S.A. 48:2-21.41 defines a Veterans’ Organization that qualifies for this Special Provision as “an organization dedicated to serving the needs of veterans of the armed forces that: is chartered under federal law, qualifies as a tax exempt organization under paragraph (19) of subsection (c) of section 501 of the federal Internal Revenue Code of 1986, 26 U.S.C. s.501(c)(19), or that is organized as a corporation under the ‘New Jersey Nonprofit Corporation Act,’ N.J.S.15A:1-1 et seq.” Under N.J.S.A. 48:2-21.41, a qualified Veterans’ Organization shall be charged the residential rate for service delivered to the property where the Veterans’ Organization primarily operates, if the residential rate is lower than the commercial rate for service at that property.

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 43.1

SERVICE CLASSIFICATION – SMALL GENERAL SERVICE (SGS)

(continued)

III. SPECIAL PROVISIONS, APPLICABLE TO VETERANS' ORGANIZATIONS. (continued):

The customer shall furnish satisfactory proof of eligibility of service under this Special Provision to the Company. Once proof of eligibility is determined by the Company, service under this Special Provision shall begin with the next billing cycle following receipt of the Application.

The customer will continue to be billed on this service classification. At least once annually, the Company shall review eligible customers' charges for service delivered, defined to include Service Charges and Distribution Charges, under this Special Provision for all relevant periods. If these comparable charges for service delivered under the Residential Delivery Service (RDS) classification are lower than the charges under this classification a credit in the amount of the difference shall be applied to the customer's next bill.

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 44

SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)

APPLICABLE TO USE OF SERVICE FOR:

General Delivery Service is available to those customers whose annual weather normalized usage as determined by the Company is 5,000 or more therms per year and where Gas Company's facilities are suitable and the quantity of gas is available for the service desired. In August of each year the Company shall review customer usages and those customers whose weather normalized usage, as determined by the Company, is less than 4,500 therms for two consecutive years will be transferred to Small General Service.

CHARACTER OF SERVICE:

Continuous, however, customers may either purchase gas supply from a Third Party Supplier ("TPS") or the Company's Rider "A", Basic Gas Supply Service ("BGSS").

*CHARGES PER MONTH:

	<u>Gas Supply from BGSS</u>	<u>Gas Supply from TPS</u>
Service Charge	\$28.90	\$28.90
Demand Charge per DCQ	\$0.806	\$0.806
Distribution Charge per Therm	\$0.1893	\$0.1893
Commodity Charge	Per Rider "A"	Per TPS Agreement

* The charges set forth in this Service Classification include sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. A customer that receives gas supply from a TPS will be charged for commodity according to any agreement between the customer and the TPS.

DETERMINATION OF THE DEMAND CHARGE QUANTITY (DCQ)

The DCQ will be determined by the Customer's maximum daily requirements in terms of therm units per day. The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer's premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise DCQ shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April), normalized for weather, divided by the applicable number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer's gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined.

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B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 45

SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

DETERMINATION OF THE DEMAND CHARGE QUANTITY (DCQ) (continued)

If the Customer's maximum daily usage exceeds the DCQ as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement to the highest level experienced during the previous 12 months.

MINIMUM MONTHLY CHARGE:

The sum of the Service Charge and the Demand Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

One year, and thereafter until terminated by five (5) days written notice.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

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B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 46

SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

SPECIAL PROVISIONS SECTIONS I & II:

I. SPECIAL PROVISIONS, APPLICABLE TO ALL CUSTOMERS RECEIVING SERVICE UNDER THIS SERVICE CLASSIFICATION

1. Distributive Generation Under 12 kW and Gas Cooling & Refrigeration, 2 tons to under 10 Tons

Upon separate application, Customers who have installed a separate meter for distributed generation equipment having a rated capacity under twelve (12) kW and/or gas cooling equipment having a rated capacity of not less than two (2) tons but less than ten (10) tons of refrigeration will be separately metered for such service and will be billed at the above rates, except that the applicable Distribution Charges will be billed at a rate of \$0.1285 per therm in the period extending from Customer's meter reading taken in the ordinary course of business in May through October. Where, in the Gas Company's opinion, it is impractical to provide separate metering, Gas Company may estimate the use of gas for other than distributed generation and water heating during the foregoing period of May to October. During all other periods, the Distribution Charge per therm stated in this service classification shall apply.

2. Distributed Generation of 12 kW or More and Gas Cooling & Refrigeration of 10 Tons or More

Under separate application Customers who are using gas for distributive generation with a rated capacity of twelve (12) kW or more, and/or gas cooling equipment with a rated capacity of ten (10) tons or more, and where gas consumed is separately metered, will be billed at the above rates, except that the applicable Distribution Charges will be billed at a rate of \$0.0589 per therm commencing with the first meter reading taken in the ordinary course of business in May and concluding with the meter reading taken in the ordinary course of business in October. During all other periods, the Distribution and Commodity Charge per therm stated in this service classification shall apply.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

I. SPECIAL PROVISIONS, APPLICABLE TO ALL CUSTOMERS RECEIVING SERVICE
UNDER THIS SERVICE CLASSIFICATION (continued)

3. Economic Development Service (EDS):

Any new customer employing a minimum of ten (10) employees, who locates in or expands a new or vacant building within the Company's service territory and enters into a GDS service agreement and (2) any existing customer who expands into a new or vacant building within the Company's service territory and is a party to a GDS service agreement shall be eligible for an EDS discount. For new customers, this building must be new or have been vacant for a minimum of three (3) months. For existing customers, the space utilized for operations must expand by more than 5,000 square feet. Gas used subject to the EDS discount for existing customers will be calculated by the Company and will be based solely on the customer's incremental usage. This service is offered to any eligible customer for a period of five (5) years from the date of the initial Service Agreement under this service. The EDS Customers shall receive a fifty (50) percent pre tax discount in this Service Class's Distribution Charge during the period of eligibility.

4. Boiler Limitation

This service classification is not available for new or additional boiler equipment with a rated input in excess of 12.5 million BTU's per hour. The Gas Company may waive this limitation in cases where the Customer enters into a longer term contract or agrees to guarantee a monthly minimum revenue level as may be determined by the Gas Company.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY
FROM THIRD PARTY SUPPLIERS (TPS)

1. Service Agreement

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a TPS are conditions precedent to receiving gas supply from a TPS.

2. Balancing Charge

Customers with a DCQ under 500 therms will be charged a balancing charge of \$0.0171 per therm, which includes sales tax, in the months of November through March to offset system supply costs utilized to absorb the differences between the TPS delivered Average Daily Delivery Quantities and the actual daily gas supply requirements of the customers.

3. Commingling

Service under this Service Classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas with other supplies. Moreover, the Company reserves the right to utilize Customer's gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

4. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service Customers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

5. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customers the total monthly requirements for that billing month. A TPS with Customers having a DCQ under 500 therms and those requiring an AMR not yet installed are required to deliver these customers natural gas requirements per an ADDQ determined as stated in the TPS section of this tariff.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM THIRD PARTY SUPPLIERS (TPS) (continued)

6. Utilizing a Third Party Supplier

A customer choosing to contract with a TPS for supply service will be enrolled for this service with the Company by the TPS on their behalf. A customer will receive a confirmation notice from the Company notifying them of their enrollment by a TPS and that the customer should contact the TPS noted on the letter within seven (7) calendar days if they seek to have it rescinded. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by the TPS.

7. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges the customers shall be billed directly by the Company for their direct portion, if by their non-compliance to Company directives to cease gas use, and/or a prorata share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas customers will first be credited with standby gas purchased by the TPS on their behalf.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM THIRD PARTY SUPPLIERS (TPS) (continued)

8. Automatic Meter Reading (AMR) Equipment for Customers with a DCQ of 500 therms or more.

AMR equipment is required for customers with a DCQ of 500 or more therms, as determined by the Company,. Customer shall pay for all costs to install AMR equipment including power, communications and other equipment as specified by the Company and provide access for such equipment. The cost of any Company equipment may be paid by Customer over a one (1) year, or some lesser, period by means of a monthly surcharge designed to recover the cost of the equipment plus interest equal to the Company's overall rate of return as authorized from time to time by the BPU. Payments made by the Customer shall not give the Customers ownership of the equipment which shall remain the sole property of the Company.

9. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

10. Gas Supply Obligation

In the event that Customer's Third Party Supplier fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service, except for those whose TPS contracted for Standby Service, limited to Essential Gas User customers. In the event that a Customer that is not covered by Standby Service seeks to purchase natural gas supplies from the Company, such sales may be made by the Company in its sole discretion under such terms and conditions as the Company may require.

11. Limitations on the Availability of TPS Transportation Service

TPS Service is not available to Customers who are defined as "Essential Gas Users" under the curtailment provision as set forth in Section 17 of the Standard Terms and Conditions of this Tariff unless such Customers' TPS, in an amount sufficient to meet such Customers' ADDQ and/or DCQ, agrees to contract and pay for Standby Service as defined in the TPS Service Classification or for such Customers' TPS demonstrates that it possesses Comparable Capacity as defined in the TPS Service Classification.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY
FROM THIRD PARTY SUPPLIERS (TPS) (continued)

12. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company's system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company's system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas on behalf of transporting customer.

III. SPECIAL PROVISIONS, APPLICABLE TO VETERANS' ORGANIZATIONS:

Veterans' Organization Service: Pursuant to N.J.S.A 48:2-21.41, when natural gas service is delivered to a customer that is a Veterans' Organization, serving the needs of veterans of the armed forces, the customer may apply and be eligible for billing under this Special Provision.

Each customer shall be eligible for billing under this Special Provision upon submitting an Application for Veterans' Organization Service under this service classification and by qualifying as a "Veterans' Organization" as defined by N.J.S.A. 48:2-21.41 defines a Veterans' Organization that qualifies for this Special Provision as "an organization dedicated to serving the needs of veterans of the armed forces that: is chartered under federal law, qualifies as a tax exempt organization under paragraph (19) of subsection (c) of section 501 of the federal Internal Revenue Code of 1986, 26 U.S.C. s.501(c)(19), or that is organized as a corporation under the 'New Jersey Nonprofit Corporation Act,' N.J.S.15A:1-1 et seq." Under N.J.S.A. 48:2-21.41, a qualified Veterans' Organization shall be charged the residential rate for service delivered to the property where the Veterans' Organization primarily operates, if the residential rate is lower than the commercial rate for service at that property.

The customer shall furnish satisfactory proof of eligibility of service under this Special Provision to the Company. Once proof of eligibility is determined by the Company, service under this Special Provision shall begin with the next billing cycle following receipt of the Application.

The customer will continue to be billed on this service classification. At least once annually, the Company shall review eligible customers' charges for service delivered, defined to include Service Charges, Demand Charges and Distribution Charges, under this Special Provision for all relevant periods. If these comparable charges for service delivered under the Residential Delivery Service (RDS) classification are lower than the charges under this classification a credit in the amount of the difference shall be applied to the customer's next bill.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)

APPLICABLE TO USE OF SERVICE FOR:

This Service Classification is available to any non-Residential Customer who wishes to purchase natural gas sales and/or transportation service and have the Company own and maintain facilities at Customer's premises to compress gas into CNG ("CNG Fueling Facilities") for use as fuel for self-propelled motor vehicles ("Vehicular Gas"). This Service Classification also sets forth the terms and conditions under which the Company may sell and/or distribute Vehicular Gas at CNG Fueling Facilities operated by the Company as Public Fueling Stations.

CHARACTER OF SERVICE:

Continuous to Customers signing a Natural Gas Vehicle ("NGV") Service Agreement ("Agreement").

CONDITIONS PRECEDENT:

A Customer must sign an NGV Agreement with the Company to receive continuous service under this Service Classification. Service under such NGV Agreement is for the term of the NGV Agreement and may be continued beyond the term of the NGV Agreement only by the mutual agreement of Company and Customer. Members of the general public who wish only to obtain Vehicular Gas at Public Fueling Stations need not sign an NGV Agreement; however, they must establish an account with the Company. Such members of the public have no entitlement to continuous service under this Service Classification. Service under this Service Classification will be separately metered. Customers must indicate in their Agreements whether they will purchase gas supply from Company or from a Third Party Supplier ("TPS").

Section 6.01 of the Standard Terms and Conditions of this Tariff sets forth standards that establish the Company's liability for damages. Section 6.01 applies to any claim arising from services provided or facilities constructed, maintained or operated by Company under this Service Classification. Moreover, the specific provisions of Section 6.01 that apply to Customers will apply both to Customers signing an NGV Service Agreement and members of the public who obtain Vehicular Natural Gas under this Service Classification.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

LICENSING, PERMITS AND LEGAL REQUIREMENTS:

Customers installing CNG Fueling Facilities on their premises must meet all applicable licensing, permitting and other legal requirements associated with operating CNG Fueling Facilities or Company may suspend or terminate service to such facilities without further liability.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

MAIN AND SERVICE EXTENSIONS FOR NGV SERVICE, CNG FUELING FACILITIES AND
THE INCREMENTAL COSTS OF CNG-POWERED VEHICLES:

Under this Service Classification, Company may construct and/or install mains, services, automatic meter reading devices, and other facilities necessary to provide sales and transportation service to Customers. Company may also construct and/or install CNG Fueling Facilities located behind Customer's meter. Company may also construct Public Fueling Stations. On a not unduly discriminatory basis, Company may require revenue guarantees sufficient to enable Company to fully recover the costs of all such facilities over a negotiated period as set forth in the NGV Agreement. All negotiated charges under this Service Classification may be revised at the expiration of the term of an NGV Agreement and reflected in any new/replacement NGV Agreement.

Subject to an appropriate revenue guarantee, Company may invest up to ten times the projected annual Distribution Revenues from service provided under this Service Classification in facilities necessary to provide service under this Service Classification. To the extent that Company's investment exceeds ten times projected annual Distribution Revenues, Customer will be assessed a CNG Facilities Charge sufficient to recover Company's excess investment (including its authorized pre-tax return). In lieu of paying a Facilities Charge, Customer may provide a Contribution In Aid of Construction. To the extent that this Section of the NGV Service Classification conflicts with Section 3 of the Standard Terms and Condition of Company's Tariff with respect to service provided under this Service Classification, this Section will control.

I. COMPANY-OWNED AND MAINTAINED CNG FUELING FACILITIES ON CUSTOMERS'
PREMISES

Customer may elect to have Company construct, own, and maintain CNG Fueling Facilities at Customer's Premises ("Customers' Premises Facilities"). Such service does not include the dispensing of CNG into vehicles. Under this option, the dispensing of CNG into vehicles shall be the sole responsibility of the Customer. In addition, Customer may, at its option, either contract and pay separately for electricity needed to operate the CNG Fueling Facility or have the Company contract for such electricity and pass through its actual electricity costs to Customer.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

Rates and Charges Applicable to Customers' Premises Facilities:*

The following rates and charges apply to service under this Service Classification at Customers' Premises Facilities:

1. Distribution Charge - \$0.2585 per therm

2. Fueling Station Charge

A Fixed monthly amount, designed on an individual Customer basis to recover the Company's projected cost of maintaining the Customer's specific CNG Fueling Facility.

3. Facilities Charge

A Fixed monthly amount, designed on an individual Customer basis to recover Company investment in excess of ten times projected annual Distribution Revenues in facilities necessary to provide service under this Service Classification. The Facilities Charge shall be computed by multiplying the Company's investment in excess of ten times projected annual Distribution Revenue (including its authorized pre-tax return) by an appropriate percentage that will be based upon the term of the NGV Agreement.

4. Gas Cost

BGSS-M rate applicable to month of sale for gas sold by Company, not applicable if supplied by a Third Party Supplier.

5. Taxes and Fees

Motor Fuel and all other taxes and fees or other similar charges applicable to sale and/or transportation of Vehicular Gas. The remittance of any applicable taxes related to such use shall be the sole responsibility of the Company.

*The charges set forth in this section exclude sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any additional taxes, fees or similar charges that are lawfully imposed by the Company. A Customer that receives gas supply from a TPS will be charged for commodity according to the agreement between the customer and the TPS.

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 55

SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

Sales of Vehicular Natural Gas to Third Parties:

Customer may agree in the Agreement to allow its CNG Fueling Station to be used to sell and dispense CNG to the general public. Such sales will be made at publicly posted prices as determined by the Customer. Distribution Charge revenues from sales to the public shall be credited against any revenue guarantee obligation of Customer.

II. PUBLIC FUELING STATIONS

Company may construct, operate and maintain CNG Fueling Facilities for the purpose of providing Vehicular Gas to the general public.

Rates and Charges Applicable to Company Owned Public Fueling Stations:*

If Company offers service to the general public, the Company shall charge the rates set forth below. The Company shall post such rates at each Public Fueling Facility owned and operated by the Company. The price shall be the Gasoline Gallon Equivalent ("GGE") of a price per therm that includes the following components:

<u>Distribution Charge</u>	\$0.2585 per therm
<u>Fueling Station Charge</u>	\$0.3600 per therm
<u>Facilities Charge</u>	\$0.2987 per therm
<u>Gas Cost</u>	BGSS-M rate applicable to the month of sale
<u>Taxes and Fees</u>	Motor fuel and all other taxes and fees or other similar charges applicable to sales of Vehicular Gas. The remittance of any applicable taxes related to such use shall be the sole responsibility of the Company.

*The charges set forth in this section exclude sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any taxes fees or similar charges that are lawfully imposed by the Company.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS ("TPS"):

1. Service Agreement

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a TPS are conditions precedent to receiving gas supply from a TPS.

2. Automatic Meter Reading (AMR) Equipment

Customer shall pay for all costs to install AMR equipment including power, communications and other equipment as specified by the Company and provide access for such equipment. Payments made by the Customer shall not give the Customers ownership of the equipment which shall remain the sole property of the Company.

3. Gas Commingling

Service under this Service Classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas with other supplies. Moreover, the Company reserves the right to utilize Customer's gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

4. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service Customers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

5. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customers the daily requirements.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS ("TPS"): (continued)

6. Utilizing a Third Party Supplier

A customer choosing to contract with a TPS for supply service will be enrolled for this service with the Company by the TPS on their behalf. A customer will receive a confirmation notice from the Company notifying them of their enrollment by a TPS and that the customer should contact the TPS noted on the letter within seven (7) calendar days if they seek to have it rescinded. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by TPS.

7. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and/or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges the customers shall be billed directly by the Company for their direct portion, if by their non-compliance to Company directives to cease gas use, and/or a prorata share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas customers will first be credited with standby gas purchased by the TPS on their behalf.

8. Gas Supply Obligation

In the event that Customer's Third Party Supplier fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service, except for those whose TPS contracted for Standby Service, limited to Essential Gas User customers. In the event that a Customer that is not covered by Standby Service seeks to purchase natural gas supplies from the Company, such sales may be made by the Company in its sole discretion under such terms and conditions as the Company may require.

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 58

SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS ("TPS"): (continued)

9. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company's system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company's system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas on behalf of transporting customer.

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SERVICE CLASSIFICATION – LARGE VOLUME DEMAND (LVD)

The signing of a service agreement is a condition precedent to receiving service under this classification. The Service Agreement will include the Customer's Demand Charge Quantity (DCQ).

APPLICABLE TO USE OF SERVICE FOR:

Applicable to Commercial and Industrial Users, when daily demand is not less than 2,000 therms per day up to the maximum daily demands as set forth in the Service Agreement, provided that all firm gas service is supplied under this rate, Gas Company's facilities are suitable, and the required quantity of gas is available for the service desired. The consumption of gas in different locations will not be combined for billing purposes.

CHARACTER OF SERVICE:

Continuous.

*CHARGE PER MONTH:

Service Charge	\$274.04
Demand Charge per DCQ	\$1.030
Distribution Charge per Therm	\$0.0422
Commodity Charge	Per Rider "A"

*The charges set forth in this Service Classification include sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. A customer that receives gas supply from a TPS will be charged for commodity according to any agreement between the customer and the TPS.

DETERMINATION OF THE DEMAND CHARGE QUANTITY ("DCQ"):

The DCQ will be determined by the Customer's maximum daily requirements in terms of therms per day and included in the Service Agreement.

The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer's premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise DCQ shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April), normalized for weather, divided by the applicable

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SERVICE CLASSIFICATION – LARGE VOLUME DEMAND (LVD)
(continued)

DETERMINATION OF THE DEMAND CHARGE QUANTITY (“DCQ”): (continued)

number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer’s gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined.

If the Customer’s maximum daily usage exceeds the contract demand as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement to the highest level experienced during the previous 12 months.

MINIMUM MONTHLY CHARGE:

The sum of the Service Charge and the Demand Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

Not less than two (2) years, and for successive two (2) year terms thereafter unless terminated by written notice prior to sixty (60) days of the contract anniversary date. At the Company’s option, the Customer may switch to a firm transportation service within the first two years. However, the customer is obligated to a minimum of two (2) years of service.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

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SERVICE CLASSIFICATION – LARGE VOLUME DEMAND (LVD)
(continued)

SPECIAL PROVISIONS:

1. Plant Shutdowns

In the event Customer is compelled to shutdown operation of its entire manufacturing or commercial facilities because of a major disaster, major strike, or order of any court or administrative agency having jurisdiction, and said shutdown continues in effect through a full calendar month, Gas Company, upon written request from Customer, may adjust the Minimum Charge for the calendar month. Separate written requests by Customer must be made for each month in which an adjustment of the Minimum Charge is desired and said request shall set forth in detail the exact reasons therefor.

2. Standby Equipment and Fuel

It is the Customer's responsibility to provide for alternate energy facilities needed, if any to provide plant protection service, including cool down periods for refractory, during periods in which gas may be curtailed in accordance with curtailment plan authorized by the State of New Jersey or appropriate Federal Government Agency that are applicable to the Company's operation. In addition, the Gas Company reserves the right to interrupt or suspend service rendered hereunder by customer if, in the sole judgement of the Company, it is necessary to meet system integrity or to meet other emergency demands under its Curtailment Action Plan as set forth in Section I of this tariff.

3. Facility Charges

The costs of any changes in the facilities of the Gas Company necessary to render this service will be paid for by the Customer.

4. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 62

SERVICE CLASSIFICATION – ELECTRIC GENERATION FIRM SERVICE (EGF)

All customers must sign a Service Agreement. Service will be restricted to the maximum annual and hourly requirements, and the location and equipment specified in the Agreement.

APPLICABLE TO USE OF SERVICE FOR:

Available to customers who utilize natural gas for Qualifying Cogeneration, as defined below, Distributive Generation, Micro Turbine and Fuel Cells at facilities with a rated production of over 500 Kilowatts (kW). Customers have the option of taking service under this Service Classification or negotiating a sales and/or transportation service contract which will be filed with the BPU.

A Qualifying Cogeneration Facility is one that meets the Federal Energy Regulatory Commission (FERC) certification of qualifying status for the sequential production of electrical and/or mechanical energy and useful thermal energy from the same fuel source by a facility as defined in Section 201 of the Regulatory Policies Act of 1978.

CHARACTER OF SERVICE:

Continuous

*CHARGE PER MONTH:

	<u>Tax-Exempt ⁽¹⁾</u>	<u>Taxable ⁽²⁾</u>
Service Charge	\$52.27	\$55.73
Demand Charge per DCQ	\$0.421	\$0.449
Distribution Charge per Therm	\$0.0405	\$0.0432
Commodity Charge	Per Rider "A"	Per Rider "A"

* The charges set forth in this Service Classification include sales and use tax, unless noted tax-exempt and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company.

- (1) Tax-Exempt rates apply to cogeneration facilities that are in compliance with the terms of N.J.S.A. 54:30A-50.
- (2) Taxable rates apply to customers, unless specifically exempted by law, entering Service Agreements with the Company after 3/10/1997.

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SERVICE CLASSIFICATION – ELECTRIC GENERATION FIRM SERVICE - (EGF)
(continued)

DETERMINATION OF THE DEMAND CHARGE QUANTITY ("DCQ"):

The DCQ will be determined by the Customer's maximum daily requirements in terms of therms per day and included in the Service Agreement.

The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer's premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise DCQ shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April), normalized for weather, divided by the applicable number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer's gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined.

If the Customer's maximum daily usage exceeds the DCQ as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement to the highest level of usage experienced within the past 12 months.

The billing demand quantity for the initial month of gas consumption shall be the rated twenty-four (24) hour input of the connected equipment expressed in equivalent therms.

Demands established during the billing months of May through September, inclusive, will not be used for billing purposes to the extent that such demands exceed previously established billing demands.

MINIMUM MONTHLY CHARGE:

The sum of the Service Charge and the Demand Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

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SERVICE CLASSIFICATION – ELECTRIC GENERATION FIRM SERVICE - (EGF)
(continued)

TERM OF CONTRACT:

The term of the contract will be specified in the Service Agreement, but shall not be less than two years. Successive two-year terms shall be provided unless terminated by written notice prior to 60 days of the contract anniversary date.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS:

1. Maximum Gas Usage and Deliveries

Service will be restricted to the maximum annual and hourly requirements, and the location and equipment specified in the Service Agreement. Upon request by customer, Company may deliver available quantities of gas in excess of maximum hourly requirement for limited periods. Such deliveries shall not be deemed to constitute a change in the requirements specified in the Service Agreement.

2. Qualifying Facilities and Reporting

Customer must certify that qualifying status has been granted by the FERC and any other agencies required to grant operating status to the facility. The Customer is required to file with the Company all publicly available reports, related to cogeneration operation, that are filed with State and Federal agencies.

3. Metering

Service supplied under this Service Classification shall be separately metered.

4. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 65

SERVICE CLASSIFICATION – GAS LIGHT SERVICE (GLS)

This Service Classification is limited to un-metered Gas Lights whose cost of maintenance and repair shall be the responsibility of Customer.

APPLICABLE TO USE OF SERVICE FOR:

Customers who have the gas supply for their outdoor lighting fixtures connected directly to the gas service pipe without being metered.

CHARACTER OF SERVICE:

Continuous.

CHARGE PER MONTH:

The Distribution Charge for this service shall be at the flat rate of \$6.47 per Mantel Equivalent, inclusive of taxes, for each .02 therms of hourly input rating of the lighting fixtures. Input ratings shall be those of the manufacturer of the gas lighting fixtures or as determined by actual test or calculation made by Gas Company. The rate set forth above will be adjusted for the Periodic Basic Gas Supply Service Charge (BGSS-P) of this Tariff as well as all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. Per Therm charges shall be determined by the Company using the following factors times the applicable rates noted above:

Mantel Equivalents = fixture input rating / .02 therms of hourly input
Un Metered Billing Therms = Mantel Equivalents *.02 * 24 hours * 365 / 12

MINIMUM MONTHLY CHARGE:

Flat rate as shown above.

TERM OF PAYMENT:

All bills are due upon presentation. Should a non-residential GLS Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

One year, and thereafter until terminated by five (5) days written notice.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 66

SERVICE CLASSIFICATION - COGENERATION SERVICE – INTERRUPTIBLE (CSI)
CLOSED TO NEW CUSTOMERS

This Service Classification is only available to qualifying cogeneration facilities served under this classification on or after January 1, 2010, as well as additional facilities added at these customers existing cogeneration sites after this date.

The signing of a Service Agreement and Federal Energy Regulatory Commission (FERC) certification of qualifying status are conditions precedent to receiving service under this Service Classification.

APPLICABLE TO USE OF SERVICE FOR:

The sequential production of electrical and/or mechanical energy and useful thermal energy from the same fuel source by a Qualifying Facility as defined in Section 201 of the Regulatory Policies Act of 1978.

Customer must certify that qualifying status has been granted by the FERC and will be required to sign a Service Agreement. Service will be restricted to the maximum annual and hourly requirements, and the location and equipment specified in the Agreement.

CHARACTER OF SERVICE:

Interruptible.

Gas will be available at the sole option of the Gas Company when peaking supplies are not required to meet the gas demands of customers served under firm service classifications or other system requirements.

Service may be discontinued or curtailed at the sole option of the Gas Company after not less than three (3) hours notice by telephone or otherwise.

*CHARGE PER MONTH:

	<u>Tax-Exempt</u>	<u>Taxable</u>
Service Charge	\$101.20	\$107.90
Quantity Charge	*	*

*The Quantity Charge shall be the monthly Basic Gas Supply Service Charge ("BGSS-M") plus \$0.0300 per therm pre taxes. In addition, the total monthly charge will be adjusted for all applicable riders or taxes of this tariff.

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 67

SERVICE CLASSIFICATION – COGENERATION SERVICE – INTERRUPTIBLE (CSI)
CLOSED TO NEW CUSTOMERS
(continued)

MINIMUM MONTHLY CHARGE:

Service Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

The term of the contract will be specified in the Service Agreement, but shall not be less than one year. Successive one-year term extensions shall be provided for thereafter, unless terminated by written notice prior to 60 days of the contract anniversary date.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS:

1. Reports

Customer is required to file with the Company all publicly available reports, related to cogeneration operation, that are filed with State and Federal agencies.

2. Metering

Service supplied under this Service Classification shall be separately metered.

3. FERC Status

Customer must certify that qualifying status has been granted by the FERC and will be required to sign a Service Agreement. Service will be restricted to maximum annual and hourly requirements, and the location and equipment specified in the agreement. Upon request by customer, Elizabethtown may deliver available volumes of gas in excess of maximum hourly requirements for limited periods. Such deliveries shall not be deemed to constitute a change in the requirements specified in the Agreement.

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SERVICE CLASSIFICATION – COGENERATION SERVICE – INTERRUPTIBLE (CSI)
CLOSED TO NEW CUSTOMERS
(continued)

SPECIAL PROVISIONS: (continued)

4. Standby Equipment and Fuel

It is the Customer's full responsibility to have standby equipment installed and maintained in operating condition and a fuel supply adequate for its operation at all times.

5. Interruption of Service

The Company reserves the right to physically curtail the gas service to any Customer if, in the Company's sole judgment, such action is necessary to protect the operation of its system.

6. Gas Day

A "day" shall be a period of twenty-four (24) consecutive hours, beginning as near as practical to 8 a.m., or as otherwise agreed upon by Customer and Gas Company.

7. Tax Exemption

The cogeneration facility must be in compliance with N.J.S.A. 54:30A-50 in order to be exempt from applicable taxes.

UNAUTHORIZED USE:

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

TREATMENT OF REVENUES:

Eighty (80%) percent of all revenues produced under this Service Classification, exclusive of: Service Charges, and applicable Riders, taxes and the BGSS-M component of the Quantity Charge which shall be credited to the BGSS, after removing applicable taxes, shall be credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

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SERVICE CLASSIFICATION – INTERRUPTIBLE SERVICE (IS)

The signing of a service agreement is a condition precedent to receiving service under this classification. The Service Agreement will include the Customer's maximum daily requirements.

APPLICABLE TO USE OF SERVICE FOR:

Industrial boiler and commercial boiler use customers having an alternate fuel capability with a daily demand of not less than 500 therms per day up to a maximum daily demand as set forth in the Service Agreement, providing the Gas Company facilities are suitable and when the Gas Company in its sole discretion deems sufficient gas supplies to be available for this service.

Gas delivered will be separately metered and shall not be used interchangeably with gas supplied under any other Service Classification.

CHARACTER OF SERVICE:

Interruptible

Gas will be available for interruptible service at the sole option of the Gas Company when peaking supplies are not required to meet the gas demands of customers served under firm service classifications or other system requirements. Service may be discontinued or curtailed at the sole option of the Gas Company after not less than three (3) hours notice by telephone or otherwise. See also Special Provision – Alternative Fuel Requirement.

*CHARGE PER MONTH:

Service Charge	\$355.20
Demand Charge per DCQ	\$0.081
Quantity Charge per Therm	**

*The charges set forth above include sales and use tax, unless noted tax exempt, and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company.

**The Quantity Charge shall be \$0.0516 per therm plus the BGSS-M Charge of Rider "A", plus all other applicable Riders of this Tariff and any additional taxes, or similar charges that are lawfully imposed by the Company. However, it may be adjusted at the sole discretion of the Company each month, upon five (5) days notice to the Board, to a price as described below:

A price equal to the estimated market price expressed in an equivalent rate per therm for No. 2 grade fuel oil using an average BTU content of 136,000 but not less than the floor price nor greater than the ceiling price as described as follows:

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 70

SERVICE CLASSIFICATION – INTERRUPTIBLE SERVICE (IS)
(continued)

CHARGE PER MONTH: (continued)

The floor price, as determined monthly, shall be the BGSS-M and an adjustment for applicable taxes plus applicable Riders of this tariff, plus \$0.016 per therm during the period April through October or \$0.032 per therm during the period November through March and any additional taxes or similar charges that are lawfully imposed by the Company.

The ceiling price shall be \$0.9405 per therm plus the BGSS-M Charge of Rider “A”, plus applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. The ceiling price will be reviewed for possible adjustment if the spot price for Futures Contract Crude Oil – Light Sweet, as published in the Wall Street Journal, exceeds \$130.00 per barrel.

DETERMINATION OF THE DEMAND CHARGE QUANTITY (“DCQ”):

The DCQ will be determined by the Customer’s maximum daily requirements in terms of therms per day and included in the Service Agreement.

The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer’s premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise DCQ shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April), normalized for weather, divided by the applicable number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer’s gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined. If the Customer’s maximum daily usage exceeds the DCQ as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement to the highest level experienced during the previous 12 months.

MINIMUM MONTHLY CHARGE:

The sum of the Service Charge and the Demand Charge.

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 71

SERVICE CLASSIFICATION – INTERRUPTIBLE SERVICE (IS)

(continued)

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

Not less than one (1) year, and for successive one (1) year terms thereafter unless terminated by written notice prior to sixty (60) days of the contract anniversary date.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS:

1. Standby Equipment and Fuel

It is the Customer's full responsibility to have standby equipment installed and maintained in operating condition and a fuel supply adequate for its operation at all times. The Customer shall provide the Gas Company with an affidavit certifying the grade and sulphur content of fuel oil that can be utilized in the facilities served under this service classification or a description of the alternate fuel used.

2. Pilot Gas

Any gas consumed for pilot lights shall be billed at the GDS rate schedule. Separate metering shall be used where practicable. Where such metering is not practical, a fixed monthly charge based upon the rated input of the pilot will be billed to the Customer.

3. Emergency Service

If an IS Customer requests gas on an emergency basis when gas service would otherwise be precluded under the terms of this service classification, the Gas Company may in its sole discretion tender gas if it determines that an emergency does exist and the Gas Company has the ability to provide the gas service. Gas consumed under the provision will be priced at a rate per therm equal to the greater of:

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SERVICE CLASSIFICATION – INTERRUPTIBLE SERVICE (IS)
(continued)

SPECIAL PROVISIONS: (continued)

3. Emergency Service (continued)

- a) the incremental cost of gas, as determined by the Gas Company, during the time such service is rendered adjusted for the applicable taxes plus five (5) cents per therm, or
- b) the Distribution Charge of the GDS Service Classification rate plus the BGSS-M charge of Rider “A”.

4. Plant Shutdown

In the event Customer is compelled to shut down operation of its manufacturing or commercial facilities because of a major disaster, major strike, or a lawful order of any court or administrative agency having jurisdiction, Gas Company, upon written request from Customer, may not apply or collect from Customer the minimum monthly charge established herein during the period Customer’s plant shall remain so shut down, and, upon receipt of such request, Gas Company shall have the right to terminate the contract as of the date when such request is received or at any other time during the period of suspension of said minimum monthly charge.

5. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

6. Alternative Fuel Requirement

As of November 1 of each year, interruptible Customers using No. 2 fuel oil, No. 4 fuel, jet fuel or kerosene are required to have seven (7) days of alternative fuel either on hand or, if a Customer’s on-site storage capacity is less than seven (7) days, then full storage capacity plus additional firm contractual supply arrangements to equal seven (7) days. On or before November 1st, Customers shall submit an “Alternative Fuel Certification” indicating they have met the above requirements and the alternative fuel used or will agree to suspend operations during an interruption. Customers who fail to discontinue natural gas use, consistent with the terms and conditions of the relevant interruptible tariff, shall be assessed a charge based on Unauthorized Use.

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520 Green Lane
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Dated June 22, 2018 in Docket No. GM17121309

SERVICE CLASSIFICATION – INTERRUPTIBLE SERVICE (IS)
(continued)

SPECIAL PROVISIONS: (continued)

7. Treatment of Revenues

Eighty (80%) percent of all revenues produced under this Service Classification, exclusive of: Service Charges, Demand Charges, applicable Riders; taxes and the floor price, which shall be credited to the BGSS, after removing applicable taxes shall be credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 74

SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)

This service classification is limited to those customers or their successors and assigns under contract on July 18, 1977.

APPLICABLE TO USE OF SERVICE FOR:

Large volume boiler or turbine fuel with connected load in excess of 35,000 therms per day. Terms of service including pressure, capital repayment, operation condition are separately set forth in individual agreements between the Gas Company and the customers.

Contracts in effect are with:

Service to Gilbert Generating Station and to Glen Gardner Generating Station per service initially begun with Jersey Central Power & Light Company.

CHARACTER OF SERVICE:

Gas will be available at the sole option of the Gas Company when peaking supplies are not required to meet the gas demands of customers served under firm service classifications or other system requirements.

The Gas Company reserves the right to interrupt this service upon three (3) hours notice by telephone or otherwise if in its sole discretion continuance of service would adversely impact on its ability to adequately serve other Customers or for other operational reasons.

RATE:

Jersey Central Power and Light Company – not to exceed \$0.0819 per therm plus the BGSS-M Charge, plus the applicable Riders of this Tariff, net of Sales and Use Tax, in effect at the time of rendering service, but not less than the floor price. The floor price, as determined monthly, shall be the BGSS-M plus pre tax rates of \$0.0150 per therm during the period April through October or \$0.0320 per therm during the period November through March, plus applicable Riders of this Tariff, plus an adjustment for any other charges lawfully imposed by the Company.

The rate to be charged will be determined solely by the Company within the range described above.

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)
(continued)

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

One year, and for successive one (1) year terms thereafter unless terminated by written notice prior to sixty (60) days of the contract anniversary date.

SPECIAL PROVISIONS:

1. BTU Adjustment

For purposes of billing, all gas volumes delivered under this service classification shall be converted to therms by multiplying the daily volume at standard conditions of pressure (14.73 psia) and temperature (60°F) by the average daily BTU value of the gas.

2. Emergency Service

Emergency service will be provided upon request if the Gas Company in its sole judgment has the facility capability and the gas supplies to render such service. The rate charged for such service shall be equal to the greater of: a) the incremental cost of gas required by the system at the time the emergency service is rendered plus five cents per therm or b) 145 percent of the “projected purchased gas cost used in determining the current BGSS-M Charge for the purposes of Rider A; plus an adjustment for applicable taxes or similar charges. Excess revenues derived from this provision (exclusive of any adjustments) will be applied to the BGSS Charge as recovered gas costs.

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520 Green Lane
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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)
(continued)

SPECIAL PROVISIONS: (continued)

3. Special Purchases

Gas purchased specifically for Service to Gilbert Generating Station and to Glen Gardner Generating Station shall be sold to the customer(s) incrementally subject to the following conditions as agreed to in writing by all parties and to be in effect for the entire transaction period as specified below:

- a) Type of Service
- b) Duration of Agreement
- c) If the rate agreed upon is to be based upon an oil parity, the following shall be specified in the agreement:
 - (1) Type of oil to be used for parity purposes
 - (2) The source from which oil prices will be taken and the method by which the oil parity rate will be computed
 - (3) The appropriate adjustments to be made to the oil parity rate
 - (4) The frequency with which the oil parity will be recomputed
- d) The rate when an oil parity rate is not used
- e) Special contract provisions

The BGSS Charge of this tariff shall not apply to the services provided under this provision. Similarly, all volumes shall be excluded from the calculations associated with the clause.

4. Transportation of Customer Gas

Gas purchased by the Customer and made available for Transportation through the Company system will be delivered to Customer subject to the terms and conditions of a Service Agreement signed by all parties.

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)
(continued)

SPECIAL PROVISIONS: (continued)

4. Transportation of Customer Gas (continued)

The Service Agreement shall specify the following:

- a) Type of Service
- b) Duration of Agreement
- c) Charges associated with the Service
- d) Special contract provisions

5. Storage Service

- a) Firm Storage

Availability of Storage Service will be announced by the Company by February 1 of each year. The Customer may subscribe for Firm Storage Service by March 1 of each year. If oversubscribed, the available level of service will be offered pro rata, based on the Customer's actual usage during the 12 months ended December 31. Firm Storage Service will be available for a contract year running May 1 through April 30.

The Storage Service will be available at a 100 day withdrawal rate or a 150 day withdrawal rate. Injections into storage may be made between May 1 and October 31 at a daily rate not to exceed 1/180 of the contracted storage capacity. Withdrawals may be made between November 1 and April 30 at a daily rate not to exceed contract amount as set forth in the Service Agreement. All storage gas must be taken out by April 30. The Company may at times relax these operating conditions if it determines such can be done without adversely affecting service to its sales customers.

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)
(continued)

SPECIAL PROVISIONS: (continued)

5. Storage Service (continued)

The charges for Firm Storage Service are as follows:

Customer Accounting Charge	\$69.55	per month
Injection Charge	\$0.086	per Dth
Withdrawal Charge	None	

Storage Demand Charge (Monthly Charge for 12 Months)

100 day withdrawal rate	\$0.152	per Dth of contracted storage capacity
150 day withdrawal rate	\$0.116	per Dth of contracted storage capacity

The Company and Customer will enter into a Service Agreement specifying the maximum daily delivery amount and total storage capacity amount. The Customer may not obtain a maximum daily delivery amount in excess of 50% of their maximum daily demand for gas and in no event greater than the maximum daily delivery amount in their Transportation Service Agreement.

b) Limited Storage Service

For the period May through October the Company may offer a limited Storage Service. The charges for such service shall be as follows:

Customer Accounting Charge	\$69.55	per month
Injection Charge	\$0.086	per Dth
Withdrawal Charge		None
Storage Demand Charge	\$0.041	per Dth of contracted storage capacity

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)

(continued)

SPECIAL PROVISIONS: (continued)

b) Limited Storage Service (continued)

The Company and Customer will enter into a Service Agreement specifying the maximum daily delivery amount and the total storage capacity amount. The Service Agreement will also describe when and how injection and withdrawals can be made. The Customer may not obtain storage capacity for more than 50% of their most recent historical gas consumption for the period of May to October, however that level of consumption may be adjusted upward if the Customer were using alternate fuel instead of gas.

6. Treatment of Revenues

All revenues produced under this Service Classification, exclusive of; Service Charges, and applicable Riders, taxes , and revenues resulting from service under Special Provisions 2, will be apportioned as follows:

a) Sales made under the Rate provision of this service classification:

All remaining revenues in excess of the floor price of gas, after removing applicable taxes , shall be subject to revenue sharing – 80% credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

b) Sales made under Special Provision 3 of this service classification:

All remaining revenues in excess of the costs associated with the special gas purchase shall be subject to revenue sharing – 80% credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

c) Services provided under Special Provision 4 of this service classification:

All remaining revenues in excess of any incremental administrative costs incurred in providing this service shall be subject to revenue sharing – 80% credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

d) Services provided under Special Provision 5 of this service classification:

All remaining revenues in excess of the Customer Accounting Charge shall be subject to revenue sharing – 80% credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)
(continued)

SPECIAL PROVISIONS: (continued)

7. Contract Review

To the extent that any new contracts with terms in excess of three (3) years are entered into under Special Provision 3, 4 and/or 5 of this service classification or any existing contracts under Special Provision 3, 4 and/or 5 with terms in excess of three (3) years are amended, the Company is required to submit such contracts or amendments to the Staff of the Board of Public Utilities for review thirty days prior to the effective date of such contract or amendment.

8. Societal Benefits Charge

The rates set forth above will be adjusted for the Societal Benefits Charge of this Tariff, Rider "D".

9. Applicable Taxes

The charges in this Rate Schedule will include provision for the New Jersey Sales and Use Tax. When billed to customers exempt from one or more of these taxes, such charges will be reduced by the relevant amount of such taxes included therein.

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SERVICE CLASSIFICATION – SUPPLEMENTAL INTERRUPTIBLE SERVICE (SIS)

This service classification is for a limited term. The signing of a service agreement by the customer with the Gas Company is a condition precedent to receiving service under this service classification.

APPLICABLE TO USE OF SERVICE FOR:

Customers under service classification EGF, CSI, LVD, IS or ITS up to a maximum daily demand as set forth in their existing service agreement, or as set forth in the service agreement under this service classification, providing that Gas Company facilities are suitable and gas supplies can be secured for this service.

CHARACTER OF SERVICE:

Gas will be made available for this service only to the extent that such gas supplies can be incrementally purchased or produced.

The Gas Company reserves the right to interrupt this service upon three (3) hours notice by telephone or otherwise if in its sole discretion continuance of service would adversely impact on its ability to adequately serve other customers or for other operational reasons.

RATE:

1. Service Charge

Upon initial request of SIS service, customer will be charged an amount equal to the monthly service charge of the customer's existing rate. This charge will be reassessed for subsequent initial requests made after June 30 of any year. In addition a \$50.00 daily charge will be assessed, pre-taxes, for each day SIS is utilized.

2. Quantity Charge

The rate per therm for gas used shall be set within a range computed to be (a) the incremental cost of purchasing or producing said gas plus all applicable taxes plus \$0.0755 per therm and (b) the effective IS rate.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

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SERVICE CLASSIFICATION – SUPPLEMENTAL INTERRUPTIBLE SERVICE (SIS)

(continued)

SPECIAL PROVISIONS:

1. Offering of Service

Unless otherwise agreed to in the service agreement:

- a) Any customer who does not accept gas offered under this rate schedule within the period of time allotted by the Company shall be deemed to have rejected such offer and waived all entitlements to the offered gas.
- b) Customers normally served under the IS service classification will be offered gas under this service classification only when Interruptible Gas Service does not satisfy total customer requirements. Any gas supplies available under this service classification shall be offered to qualified customers on a prorated basis utilizing the Daily Demand Requirements as set forth in the service agreements as the criteria for proration, subject to the operating capabilities and system requirements of the Company.

2. Basic Gas Supply Service Charge

Gas purchased for sale under this service classification shall not be included as part of the gas costs recoverable through the BGSS Charge.

3. Treatment of Revenues

The revenue (exclusive of any service charges and applicable riders, taxes and other similar charges) on a per therm basis produced under this service classification that exceeds the per therm cost of the incrementally purchased or produced gas including applicable taxes and other similar charges shall be subject to the revenue sharing formula associated with the customer's regular service classification.

4. Obligation To Take Requested Service

If the customer requests service be rendered under this service classification and if such gas when offered is not used by the customer, the customer will be subject to being charged a per therm rate equivalent to the difference between the average gas costs as shown in the then current BGSS Charge and the actual gas cost for all therms unsold by the Gas Company under this service classification during the applicable BGSS Charge period. These revenues will be applied to the BGSS Charge as recovered gas costs. The gas cost and volumes would be applied to the BGSS Charge as purchased gas costs and available volumes.

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SERVICE CLASSIFICATION – SUPPLEMENTAL INTERRUPTIBLE SERVICE (SIS)
(continued)

SPECIAL PROVISIONS: (continued)

5. Pricing Modification

The methodology and pricing set forth in the Rate section of this Service Classification may be modified in the service agreement, if agreed to by the Customer and the Company, in order to accommodate market conditions or special customer requirements (including special requirements if the customer commits to use gas for a suitable cogeneration facility).

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SERVICE CLASSIFICATION – FIRM TRANSPORTATION SERVICE (FTS)

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a third party are conditions precedent to receiving service under this Service Classification.

APPLICABLE TO USE OF SERVICE FOR:

Customers with a Demand Charge Quantity (DCQ) in excess of 2,000 therms per day.

CHARACTER OF SERVICE:

This service will be offered on a Firm basis subject to curtailment provisions as set forth in Section 17 of the Standard Terms and Conditions of this Tariff.

The availability of service to be offered for contract under this Service Classification shall be determined at the sole discretion of the Company and will be offered on a first come first served basis.

*CHARGE PER MONTH:

	<u>Tax-Exempt</u>	<u>Taxable</u>
Service Charge	\$257.01	\$274.04
Demand Charge per DCQ	\$0.966	\$1.030
Distribution Charge per Therm	\$0.0396	\$0.0422

*The charges set forth above include sales and use tax, unless noted tax exempt, and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company.

DETERMINATION OF THE DEMAND CHARGE QUANTITY (DCQ):

The DCQ will be determined by the Customer's maximum daily requirements in terms of therms per day and included in the Service Agreement.

The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer's premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise Daily Contract Demand shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April) divided by the applicable

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SERVICE CLASSIFICATION – FIRM TRANSPORTATION SERVICE (FTS)
(continued)

DETERMINATION OF THE DEMAND CHARGE QUANTITY (DCQ): (continued)

number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer's gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined.

If the Customer's maximum daily usage exceeds the DCQ as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement.

MINIMUM MONTHLY CHARGE:

The sum of the Service Charge and Demand Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

The term of the contract will be as specified in the individual Service Agreement, however, the term shall not be less than one year. The term of the contract will automatically renew unless the Customer notifies the Company in writing sixty (60) days prior to contract termination. In the event that a customer ceases operations completely or moves its operations to a location where the Company does not provide service, Customer shall not be liable for further charges under the Service Agreement upon notification to the Company in writing.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

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SERVICE CLASSIFICATION – FIRM TRANSPORTATION SERVICE (FTS)
(continued)

SPECIAL PROVISIONS:

1. Gas Commingling

Service under this classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

2. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service customers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

3. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customers total monthly requirements for that billing month.

4. Utilizing a Third Party Supplier

Customers utilizing brokers, marketers or other third party suppliers (collectively Third Party Suppliers ("TPS")) either as agents or as suppliers of gas into the Company's system, must notify the Company in writing of the TPS that will be used in any particular month. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by TPS. Any Customer or TPS that wishes to deliver gas into the Company's system prior to commencing deliveries must be a qualified TPS under the Company's TPS service classification.

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SERVICE CLASSIFICATION – FIRM TRANSPORTATION SERVICE (FTS)

(continued)

SPECIAL PROVISIONS: (continued)

5. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges the customers shall be billed directly by the Company for their direct portion, if by their non-compliance to Company directives to cease gas use, and/or a prorata share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas customers will first be credited with standby gas purchased by the TPS on their behalf.

6. Automatic Meter Reading (AMR) Equipment for Customers

In order to utilize this service, (AMR) equipment is required. Customer shall pay for all costs to install (AMR) equipment including power, communications and other equipment as specified by the Company and provide access for such equipment. The cost of any Company equipment may be paid by Customer over a one (1) year or some lesser period by means of a monthly surcharge designed to recover the cost of the equipment plus interest equal to the Company's overall rate of return as authorized from time to time by the New Jersey Board of Public Utilities. Payments made by the Customer shall not give the Customers ownership of the equipment, which shall remain the sole property of the Company.

7. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

8. Gas Supply Obligation

In the event that Customer's TPS fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service, except for those whose TPS contracted for Standby Service, limited to Essential Gas User customers. In the event that a Customer that is not covered by Standby Service seeks to purchase natural gas supplies from the Company, such sales may be made by the Company in its sole discretion under such terms and conditions as the Company may require.

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SERVICE CLASSIFICATION – FIRM TRANSPORTATION SERVICE (FTS)

(continued)

SPECIAL PROVISIONS: (continued)

9. Limitations on the Availability of Transportation Service

TPS Service is not available to Customers who are defined as “Essential Gas Users” under the curtailment provision as set forth in Section 16 of the Standard Terms and Conditions of this Tariff unless such Customers’ TPS, in an amount sufficient to meet such Customers’ DCQ, agrees to contract and pay for Standby Service as defined in the TPS Service Classification or for such Customers’ TPS demonstrates that it possesses Comparable Capacity as defined in the TPS Service Classification.

10. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company’s system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company’s system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas into Company’s system on behalf of transporting customer.

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 89

SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a third party are conditions precedent to receiving service under this Service Classification.

APPLICABLE TO USE OF SERVICE FOR:

Customers eligible for service under Service Classifications LVD, IS, or CSI and having clear title to gas that is made available for ITS on the Company's distribution system, except that such Customers need not comply with the alternate fuel requirement of those Service Classifications to receive service hereunder. However, the Customer must comply with the Alternate Fuel Requirement under this Service Classification.

CHARACTER OF SERVICE:

Interruptible Transportation Service will be available when system capacity is not required to meet the demands of customers served under all other Service Classifications or other system requirements, including, but not limited to, conditions that may be imposed on the Company by its suppliers. The availability of this service, and all determinations and interpretations hereunder, shall be at the sole judgment of the Company. Service may be discontinued or curtailed at the sole option of the Company after not less than three (3) hours notice by telephone or otherwise.

*CHARGE PER MONTH:

	<u>Tax-Exempt</u>	<u>Taxable</u>
Service Charge	\$589.50	\$628.55
Demand Charge per DCQ	\$0.293	\$0.312
Distribution Charge per Therm	**	**

*The charges set forth above include sales and use tax, unless noted tax exempt, and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company.

**The ceiling for the Distribution Charge shall be \$0.0843 per therm or \$0.0791 per therm, for tax-exempt customers, but may be reduced, upon five (5) days notice to the Board to a floor of \$0.0262 per therm or \$0.0246 for tax exempt customers, if the Company determines that, without a rate reduction, competitive pressures may result in the loss of load or the Customer. Rates for Customers without alternate fuel capability will be set monthly without reference to a ceiling or floor price. The above rates will be further adjusted to include all other charges set forth in the applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company.

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(continued)

DETERMINATION OF THE DEMAND CHARGE QUANTITY (DCQ):

DCQ will be determined by the Customer's maximum daily requirements in terms of therms per day and included in the Service Agreement.

The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer's premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise DCQ shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April), normalized for weather, divided by the applicable number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer's gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined.

If the Customer's maximum daily usage exceeds the DCQ as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement to the highest level experienced during the previous 12 months.

MINIMUM MONTHLY CHARGE:

The sum of the service charge and the demand charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

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520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated June 22, 2018 in Docket No. GM17121309

SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(continued)

TERM OF CONTRACT:

The term of the contract will be as specified in the individual Service Agreement; however, the term shall not be less than one year. The term of the contract will automatically renew unless the Customer notifies the Company in writing sixty (60) days prior to contract termination. In the event that a customer ceases operations completely or moves its operations to a location where the Company does not provide service, Customer shall not be liable for further charges under the Service Agreement upon notification to the Company in writing.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS:

1. Gas Commingling

Service under this classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas with other supplies. Moreover, the Company reserves the right to utilize Customer's gas, when necessary, in accordance with the applicable provisions of this Tariff.

2. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service Customers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

3. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customers the total monthly requirements for that billing month.

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(continued)

SPECIAL PROVISIONS: (continued)

4. Utilizing a Third Party Supplier

Customers utilizing brokers, marketers or other third party suppliers (collectively Third Party Suppliers, "TPS") either as agents or as suppliers of gas into the Company's system, must notify the Company in a manner acceptable to the Company of the TPS that will be used in any particular month. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by TPS. Any Customer or TPS that wishes to deliver gas into the Company's system prior to commencing deliveries must be a qualified TPS under the Company's TPS service classification.

5. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges the customers shall be billed directly by the Company for their direct portion, if by their non-compliance to Company directives to cease gas use, and/or a 95% share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas customers will first be credited with standby gas purchased by the TPS on their behalf.

6. Automatic Meter Reading (AMR) Equipment for Customers

In order to utilize this service, AMR equipment is required. Customer shall pay for all costs to install AMR equipment including power, communications and other equipment as specified by the Company and provide access for such equipment. The cost of any Company equipment may be paid by Customer over a one (1) year, or some lesser, period by means of a monthly surcharge designed to recover the cost of the equipment plus interest equal to the Company's overall rate of return as authorized from time to time by the New Jersey Board of Public Utilities. Payments made by the Customer shall not give the Customers ownership of the equipment which shall remain the sole property of the Company.

7. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)

(continued)

SPECIAL PROVISIONS: (continued)

8. Treatment of Revenues

Revenues under this Service Classification, exclusive of applicable taxes shall be accounted for as follows: All service charge revenues derived from IS, CSI and LVD customers shall be retained by the Company.

All demand charge revenues derived from LVD customers shall be retained by the Company. The first \$0.080 per therm of all demand charge revenues from IS customers shall be retained by the Company. All remaining demand revenues derived from IS customers shall be credited 80% to the OSMC in accordance with the Board's Order in Docket No. GO99030122 and 20% to the Company. All demand revenues derived from CSI customers shall be credited 80% to the OSMC in accordance with the Board's Order in Docket No. GO99030122 and 20% to the Company.

All distribution charge revenues from LVD customers shall be retained by the Company. All remaining distribution charge revenues from IS and CSI customers shall be credited 80% to the OSMC in accordance with the Board's Order in Docket No. GO99030122 and 20% to the Company.

Revenues derived from the application of Riders shall be accounted for in accordance with the respective Riders. Revenues derived from the payment of imbalance charges, imbalance cash outs, or unauthorized use charges shall be credited to the BGSS Charge.

9. Gas Supply Obligation

In the event that Customer's TPS fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service.

10. Limitations on the Availability of TPS Transportation Service

TPS Service is not available to Customers who are defined as "Essential Gas Users" under the curtailment provision as set forth in Section 16 of the Standard Terms and Conditions of this Tariff unless such Customers' TPS, in an amount sufficient to meet such Customers' DCQ, demonstrates that it possesses Comparable Capacity as defined in the TPS Service Classification. In addition, the TPS can serve such ITS Customers if they can demonstrate to the Company's satisfaction that they possess sufficient alternate fuel capability to meet their energy requirements for a period not less than fourteen (14) consecutive days.

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(continued)

SPECIAL PROVISIONS: (continued)

11. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company's system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company's system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas on behalf of transporting customer.

12. Availability of IS, LVD or CSI Service

ITS Customers who wish to do so may be made eligible to purchase sales service under the IS, LVD or CSI Service Classification also by designating the appropriate sales Service Classification in their ITS Service Agreements. Customer must meet the eligibility criteria applied to the designated sales Service Classification in order to obtain sales service. Customers may not designate more than one sales Service Classification. Customers that elect to purchase IS, LVD or CSI service may nominate sales or transportation service, but not both sales and transportation service, in any month. Customers who elect sales service under this provision shall remain subject to the Service and Demand Charges and the terms and conditions of this transportation Service Classification and in addition shall be liable for the Distribution and Rider Charges of the elected sales service.

13. Alternative Fuel Requirement

As of November 1 of each year, interruptible Customers using No. 2 fuel oil, No. 4 fuel, jet fuel or kerosene are required to have seven (7) days of alternative fuel either on hand or, if a Customer's on-site storage capacity is less than seven (7) days, then full storage capacity plus additional firm contractual supply arrangements to equal seven (7) days. On or before November 1st, Customers shall submit an "Alternative Fuel Certification" indicating they have met the above requirements and the alternative fuel used or will agree to suspend operations during an interruption. Customers who fail to discontinue natural gas use, consistent with the terms and conditions of the relevant interruptible tariff, shall be assessed a charge based on Unauthorized Use. Also see, Special Provision, Limitation of the Availability of TPS Transportation Service.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE

The provisions of this Service Classification shall apply to brokers, marketers, customers intending to act as their own gas supplier, and other third party suppliers (collectively “Third Party Suppliers”) of natural gas who wish to either act as agents for Transportation Customers or deliver natural gas supplies to Company’s City Gate for Transportation Customers. Third Party Suppliers wishing to sell and/or deliver gas on the Company’s system will be required to sign a Service Agreement in which they will agree to be bound by the terms and conditions of this Service Classification as well as other applicable terms and conditions of the Company’s Tariff. By entering into a Service Agreement, TPS certifies that it is in compliance with all current applicable provisions of law, including N.J.S.A. 48:3-7.3. and will take steps to remain in compliance with all future applicable provisions and all other requirements mandated by The Board of Public Utilities.

TERM OF CONTRACT:

The term of the contract shall be one (1) year and from month to month thereafter unless terminated on thirty (30) days written notice.

CREDITWORTHINESS:

Company shall not be required to permit any TPS who fails to meet Company’s standards for creditworthiness to sell or deliver gas on its system. Company may require that TPS provide the following information:

- a) Current audited financial statements (to include a balance sheet, income statement and statement of cash flow), annual reports, 10-K reports or other filings with regulatory agencies, a list of all corporate affiliates, parent companies and subsidiaries and any reports from credit agencies which are available. If audited financial statements are not available, then TPS also should provide an attestation by its chief financial officer that the information shown in the unaudited statements submitted is true, correct and a fair representation of Buyer’s financial condition.
- b) A bank reference and at least three trade references.
- c) A written attestation that TPS is not operating under any chapter of the bankruptcy laws and is not subject to liquidation or debt reduction procedures under state laws, such as an assignment for the benefit of creditors, or any informal creditor’s committee agreement. An exception can be made for a TPS who is a debtor in possession operating under Chapter XI of the Federal Bankruptcy Act but only with adequate assurances that any charges from the Company will be paid promptly as a cost of administration.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE

(continued)

CREDITWORTHINESS: (continued)

d) A written attestation that TPS is not subject to the uncertainty of pending litigation or regulatory proceedings in state or federal courts which could cause a substantial deterioration in its financial condition or a condition of insolvency.

e) A written attestation from TPS that no significant collection lawsuits or judgments are outstanding which would seriously reflect upon the business entity's ability to remain solvent.

If TPS has an ongoing business relationship with Company, no uncontested delinquent balances should be outstanding for natural gas sales, storage, transportation services or imbalances previously billed by Company, and TPS must have paid its account during the past according to the established terms, and not made deductions or withheld payment for claims not authorized by contract.

TPS shall furnish Company at least annually, and at such other time as is requested by Company, updated credit information for the purpose of enabling Company to perform an updated credit appraisal. In addition, Company reserves the right to request such information at any time if Company is not reasonably satisfied with TPS's creditworthiness or ability to pay based on information available to Company at that time.

Company shall not be required to permit and shall have the right to suspend permission to sell or deliver gas on its system to any TPS who is or has become insolvent, fails to demonstrate creditworthiness, fails to timely provide information to Company as requested, or fails to demonstrate ongoing creditworthiness as a result of credit information obtained; provided, however, TPS may continue to sell/deliver gas on the Company's system if Third Party Supplier elects one of the following options:

- (i) Payment in advance for up to three (3) months of TPS's obligations to Company.
- (ii) A standby irrevocable letter of credit in form and substance satisfactory to Company in a face amount up to three (3) months of Third Party Supplier's obligations to Company. The letter of credit must be drawn upon a bank acceptable to Company.
- (iii) A guaranty in form and substance satisfactory to Company, executed by a person that Company deems creditworthy, of TPS's performance of its obligations to Company.
- (iv) Such other form of security as TPS may agree to provide and as may be acceptable to Company.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE

(continued)

CREDITWORTHINESS: (continued)

In the event Third Party Supplier fails to immediately prepay the required three (3) months of revenue or furnish security, Company may, without waiving any rights or remedies it may have, and subject to any necessary authorizations, suspend Third Party Supplier until security is received.

The insolvency of a TPS shall be evidenced by the filing by TPS, or any parent entity thereof, of a voluntary petition in bankruptcy or the entry of a decree or order by a court having jurisdiction adjudging the Third Party Supplier, or any parent entity thereof, bankrupt or insolvent, or approving as properly filed a petition seeking reorganization, arrangement, adjustment or composition of the TPS, or any parent entity thereof, under the Federal Bankruptcy Act or any other applicable federal or state law, or appointing a receiver, liquidator, assignee, trustee, sequestrator, (or similar official) of the TPS or any parent entity thereof or of any substantial part of its property, or the ordering of the winding-up or liquidation of its affairs.

NOMINATIONS FOR SERVICE:

A Third Party Supplier shall provide to the Company in writing, or by other means as determined by the Company, at least 10 working days prior to the beginning of the calendar month an estimate of its deliveries into the Company's system for the month. These nominations must, in the aggregate, match the nominations of all Customers that are required to submit nominations to Company and to whom the Third Party Supplier will be delivering during the month plus the Average Daily Delivery Quantity that the TPS is obligated to deliver to the Company's system. Failure to provide nominations may result in suspension of service to Customers of offending Third Party Suppliers.

Company will notify Third Party Supplier of its ADDQ obligation for each day of the next succeeding month in writing to be delivered by facsimile or by other means as determined by the Company no later than the fifteenth (15th) day of the month immediately preceding the month in which Third Party Supplier will be obligated to deliver the ADDQ. If Third Party Supplier does not agree with Company's determination of Third Party Supplier's ADDQ, it must notify Company in writing to be delivered by facsimile no later than 5:00 p.m. Eastern Standard Time on the seventeenth (17th) of the month immediately preceding the gas flow month. Company and Third Party Supplier will reconcile any differences no later than 5:00 p.m. Eastern Standard Time on the twentieth (20th) of the month.

In addition, TPS must identify interstate pipeline, shipper names and interstate pipeline shipper contract number(s) on which deliveries will be made at least twenty-four (24) hours prior to the flow of gas. Failure to comply with the Company's nominating procedures may result in curtailment of third party gas deliveries or additional monthly cash-outs. The Company reserves the right to specify which pipeline a TPS will deliver gas as a percentage of the TPS total monthly deliveries.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

DETERMINATION OF AVERAGE DAILY DELIVERY QUANTITY (“ADDQ”):

The individual ADDQ for all RDS, SGS, GDS Customers with a DCQ under 500 therms, and NGV Customers shall be calculated as follows:

1. Unadjusted ADDQ – Customer’s weather normalized usage for each of the most recent billing periods, covering an annual period, prorated to calendar months, divided by the total number of days in each billing month. This quotient will be the Customer’s Initial ADDQ. For new Customers, Customer’s Initial ADDQ will be estimated by Company.
2. ADDQ Adjustment – At the end of each billing period, Company will calculate the difference between Customer’s actual usage and actual deliveries for the billing period, taking into account any adjustments from prior months, and will adjust the Initial ADDQ for the next succeeding month by that difference divided by the total number of days in the month.
3. Adjusted ADDQ – The sum of items 1 and 2 will be adjusted by 1.5% for Company use and unaccounted for gas to determine the individual customers Adjusted ADDQ.

Company may adjust Customer’s individual ADDQ at any time due to changes in Customer’s gas equipment or pattern of usage.

The TPS’s ADDQ shall be the total of the individual Adjusted ADDQs of all customers it serves that require an ADDQ delivery.

PIPELINE IMBALANCES:

Company and TPS recognize that Company may be subjected to imbalance charges from its interstate pipeline suppliers as a result of TPS’s failure to deliver confirmed quantities of gas. Company and TPS shall use their best efforts to avoid such imbalance penalties. However, in the event that Company is assessed penalties as a result of TPS’s actions or omissions, TPS shall reimburse Company for such penalties as may be attributable to TPS’s actions or omissions.

INDEMNIFICATION:

As between the Company and TPS, TPS warrants that it has clear title to any gas delivered into the Company’s system, and TPS shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company’s system for redelivery to Customer. TPS agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries on behalf of a transporting customer.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE

(continued)

ALLOCATION OF SUPPLIES:

If a TPS is delivering gas to Customers under more than one Service Classification, such as RDS, GDS, FTS and/or ITS, and does not provide the supply allocations, then gas received by the Company in that month from the Third Party Supplier shall be allocated as follows:

1. First, to the ADDQ of RDS customers
2. Second, to the ADDQ of SGS, GDS and NGV customers
3. Third, to the GDS customers not subject to ADDQ and FTS customers
4. Last, to ITS and special contract customers

However, a TPS may specify individual supply allocations for its GDS customers not subject to the ADDQ, FTS, ITS and special contract Customers no later than one (1) business day following the date the TPS receives final month end measurement data for these customers from the Company.

DAILY AND MONTHLY CONTRACT BALANCING:

All balancing charges shall be charged to the TPS and are in addition to any other charges under this Service Classification. The Distribution Charge in the Charge Per Month of the Customers Service Classification is based upon actual consumption not Third Party Supplier deliveries.

a) Daily Imbalance Charge:

The Company shall, within the existing limitations of its system, provide for balancing between gas requirements and actual gas deliveries, net of an adjustment for Company Use and Unaccounted for Gas, received by the Company for the account of the Customers served by the TPS that day. The Company shall not be obligated to provide gas service during an hourly, daily or monthly period in excess of the levels specified in the Service Classifications under which Customers of the TPS are served.

During the months of November through April, the TPS will be required to balance daily deliveries and daily takes of transported gas by the customers it serves on any day when the average temperature at Newark Airport is forecast to be 27°F or less. However, the Company reserves the right to waive this requirement. The Company reserves the right during the months of November through April to require daily balancing on any other day in which the Company, in the exercise of its reasonable judgment, determines that such balancing is necessary for operational reasons. The Company will provide the TPS in all instances with at least twenty-four (24) hours advance notice that daily balancing will be imposed daily.

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 100

SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

DAILY AND MONTHLY CONTRACT BALANCING: (continued)

a) Daily Imbalance Charge (continued):

In the event that daily balancing is imposed in accordance with this section, TPS shall be assessed the following charges for daily imbalances:

	Imbalance *	Charge **
	0% to 5%	\$0.00 per therm
	5% to 10%	\$0.11 per therm for imbalances in excess of 5%
Underdeliveries	> 10%	\$0.53 per therm for imbalances in excess of 10%
Overdeliveries	> 10%	\$0.11 per therm for imbalances in excess of 10%

* The Company reserves the right to limit daily imbalances to plus or minus 5% of the actual quantity received. If the Company limits daily imbalances to plus or minus 5%, all underdeliveries in excess of 5% shall be considered Unauthorized Use and shall be subject to the Unauthorized Use charges specified in Section I, Item 17.

**The Company may suspend overdelivery charges if it determines such overdeliveries would be beneficial to the systems operation.

All TPSs will automatically be placed in a non-discriminatory daily balancing pool. The Company will aggregate the deliveries and receipts of gas of all TPS customers participating in the pool for the purpose of determining whether imbalance charges will apply. In the event that charges are nonetheless assessed to certain TPSs, such charges will be no greater than the charges that otherwise would have been assessed if the Company did not have a daily balancing pool. TPSs trading imbalances will nonetheless have to set their own prices or methods by which over or under balances will be traded among individual TPSs.

b) Monthly Imbalance Cash-Out Charge:

At the conclusion of every month, the Company will cash out imbalances between TPS's deliveries and their Customers consumption made up of actual and or estimated volumes as follows:

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 101

SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

DAILY AND MONTHLY CONTRACT BALANCING: (continued)

b) Monthly Imbalance Cash-Out Charge: (continued)

<u>Imbalance</u>	<u>Overdeliveries</u>	<u>Underdeliveries</u>
0% to 5%	The Company's WACOG, defined as, the weighted average commodity cost of gas exclusive of peaking supplies as estimated by the Company for the month.	The monthly floor price for Interruptible Service tariff, less any Company margin embedded in the floor price.
>5% to 10%	90% of the Company's lowest cost supply for the month.	Higher of the: 1) The rate for the 0%-5% imbalance plus two (2) cents per therm <u>-or-</u> 2) The average of the month's four weekly prices published in <u>Natural Gas Week</u> for "Major Market Prices – New York City Gate" plus two (2) cents per therm.
>10%	75% of the Company's lowest cost supply for the month.	Higher of the: 1) The rate for the 0%-5% imbalance plus two (2) cents per therm times 125% <u>-or-</u> 2) The month's highest weekly price published in <u>Natural Gas Week</u> for "Major Market Prices – New York City Gate" plus two (2) cents per therm.

The offering of gas service above the 5% allowed imbalance for the month is at the sole discretion of the Company. If it determines that it cannot continue to provide such service or that it must limit such service, it will notify TPSs served under this Service Classification. The use of service above the level allowed by the Company after notification shall constitute Unauthorized Use and shall be subject to the Unauthorized Use charges specified in Section I, Item 17.

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ELIZABETHTOWN GAS COMPANY

B. P. U. NO. 16 – GAS

ORIGINAL SHEET NO. 102

SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

ADJUSTMENT FOR COMPANY USE AND UNACCOUNTED FOR GAS:

A 1.5% adjustment for Company use and unaccounted for gas shall be made to the quantity of gas received from the TPS to serve its Customers.

STANDBY BALANCING SERVICE:

A TPS cannot contract for a greater level of Standby than its Essential Gas User Customers (“EGU”) peak ADDQ month or Demand Charge Quantity (“DCQ”) as applicable for their RDS, GDS or FTS Customers. A TPS who does not use Comparable Capacity for their EGU natural gas requirements, must contract for Standby Service to serve these customers to assure continued gas service when their own gas supply is interrupted or underdelivered for any reason. This service is available for a minimum term of three (3) years and is payable even if EGU Customers are no longer served by the TPS per the Customers last DCQ. The charge for this service will consist of a demand charge of \$0.537 per therm of DCQ to be paid each month of the year whether or not Standby Service is used, and a commodity charge equal to: in the months October through April the greater of the Company’s monthly weighted average cost of gas plus three (3) cents per therm, or the average of the month’s four weekly prices published in Natural Gas Week for “Major Market Prices – New York City Gate,” and in the months May through September the lesser of the Company’s monthly weighted average cost of gas, or the average of the month’s four weekly prices published in Natural Gas Week for “Major Market Prices – New York City Gate” plus two (2) cents per therm, as applied to any gas service rendered. All standby service charges shall be in addition to the rates otherwise charged under this Service Classification.

All standby revenues, exclusive of taxes and other similar charges and the three (3) cent per therm commodity surcharge in the months of October through April, shall be credited to the BGSS.

DELIVERED QUANTITIES:

Quantities billed to the end-use Customers shall be considered actual quantities delivered, whether based on actual or estimated meter readings.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

SPECIAL PROVISIONS:

In addition to the preceding terms and conditions of this Service Classification, the following terms and conditions shall apply to all TPSs providing service to Customers receiving service from Company under Service Classifications RDS, GDS, FTS and ITS. If, and to the extent that, any portion of the following is in conflict with previous terms of this Service Classification, the terms that follow shall govern.

1.
Enrollment of RDS, SGS, GDS and NGV Customers

TPS must enroll RDS, SGS, GDS and NGV Customers in accordance with the Company electronic enrollment procedures. Customer consent is assumed if the TPS provides the Company with the Customer's account number and service address and any other information that may be required by the Company, RDS customers will receive a confirmation notice from the Company noting their choice of supplier and that the RDS customer will have seven (7) calendar days from the date of the confirmation notice to contact the Company and rescind its selection, after which, if not rescinded, the RDS customer's TPS enrollment shall be accepted by the Company. TPS supply service will commence for all enrollments received by the 10th of a month, inclusive of those RDS customers that are not rescinded, on the customer's next month's cycle meter reading date. TPS shall indemnify and hold Company harmless from any costs incurred by Company as a result of TPS's erroneous or improper enrollment of Customers.

The Company must comply with all Customer instructions verbal or written to rescind or change service with a TPS. TPS must initiate all transactions required by the Company to rescind service on the day such instructions are received by the TPS from the Company or Customer. A Customer returning to sales service will be effective on the Customer's first billing cycle meter read date following the date on which the Company has changed the TPS's ADDQ requirement. A Customer will be switched to another TPS effective on the cycle read date following the reassignment of the Customer's ADDQ for gas nominations.

2. Requirements for RDS and Essential Gas Use Customers

Any TPS seeking to serve such Customers must demonstrate that it possesses Comparable Capacity or Standby in a quantity sufficient to serve Customers' Unadjusted ADDQ or DCQ requirements during the months of November through March.

"Comparable Capacity" is a firm non-recallable service at Elizabethtown's city gate(s). The Company reserves the right to limit the service to 70% on Transcontinental Gas Pipe Line Corporation's ("Transco") system and the remaining 30% on Texas Eastern Transmission Corporation's ("Tetco") system.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE

(continued)

SPECIAL PROVISIONS: (continued)

2. Requirements for RDS and Essential Gas Use Customers (continued)

In order to demonstrate Comparable Capacity, TPS shall be required to provide, at the time the Customer is enrolled, an affidavit signed by an officer stating that Comparable Capacity is being provided for the November through March period. This affidavit must be refiled annually. The Company reserves the right to request TPS to submit copies of its Comparable Capacity contracts supporting its affidavits in the event that a TPS fails to deliver.

3. Capacity Assignment

TPS serving RDS Customers may, if they choose, accept an assignment of base load, long haul interstate pipeline capacity from Company in a quantity equal to the amount of base load, long haul capacity used by the Company to serve the Customer's anticipated design day demand. 70% of such capacity will consist of capacity on Transcontinental Gas Pipe Line Corporation and 30% of such capacity will consist of capacity on Texas Eastern Transmission Corporation. Such capacity will be assigned for a one year term on a basis prorated to the underlying contracts at the same maximum rates paid by the Company. Such capacity will be immediately recallable in the event that TPS fails to deliver the RDS Customer's ADDQ or no longer serves such RDS Customers. A TPS wishing to accept assignment of Company's interstate pipeline capacity must notify Company at the time that Customer is enrolled in RDS service.

To the extent that TPS wishes to take assignment of interstate pipeline capacity in addition to its RDS Customer's portion of base load, long haul capacity, it shall notify the Company in writing. To the extent that the Company, in its sole discretion, determines that it has additional capacity available for release, it shall notify any TPSs that have advised the Company that they wish to take assignment of such capacity prior to making such capacity available to third parties. Company reserves the right to release any interstate pipeline capacity to the highest bidder or on a non-discriminatory basis. The Company shall be permitted to retain 15% of all revenues derived from the release of pipeline capacity, with all remaining revenue to be credited to the BGSS Charge.

To the extent that Company releases capacity to TPS, TPS is responsible for utilizing the assigned capacity consistent with the terms and conditions of the interstate pipelines' tariffs. TPS is responsible for payment of all upstream pipeline charges associated with the assigned firm transportation capacity, including but not limited to demand and commodity charges, shrinkage, GRI charges, cash outs, transition cost, pipeline overrun charges, penalties assessed to Company, actual cost adjustments and all other applicable charges. These charges will be billed directly to the TPS by Transco and Texas Eastern.

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Issued by: Brian MacLean, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated June 22, 2018 in Docket No. GM17121309

SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

SPECIAL PROVISIONS: (continued)

3. Capacity Assignment (continued)

Capacity assignments will be effective for a one year period beginning on each annual period. Company reserves the right to recall capacity in the event and to the extent that TPS fails to deliver the sufficient volume to serve its customers on any day or days. Increases in assigned capacity will only be entertained by Company to become effective for annual periods.

If, and to the extent that, the TPS fails to deliver the required volume, and such failure is not excused as a result of a pipeline force majeure event that prevents the TPS from delivering the required volume, the TPS will be assessed an Unauthorized Use charge as specified in Section I, Item 18 for each therm that the TPS has failed to deliver and be subject to a recall of the interstate pipeline capacity that has been released by Company.

Assigned capacity may be reassigned by the TPS subject to recall by Company. The original TPS shall remain subject to all operational orders and recall provisions invoked or exercised by Company. If the TPS fails to pay any interstate pipeline for capacity released or assigned by Company, and Company is required to pay the pipeline for such capacity, TPS shall be liable to Company for any amounts Company is required to pay interstate pipeline for such capacity, as well as incidental and consequential damages and the costs of any reasonable collection efforts. Failure to pay Company within twenty (20) days of billing may result in suspension of service.

4. RDS Load Balancing Charge

A Load Balancing Charge of \$0.0552 per therm, which includes sales tax, shall be billed to the TPS for all metered quantities for RDS customers it serves. Amounts due from TPS shall be paid in full within 20 days of the billing date. Any disputed amounts will be resolved by the TPS and Company and adjustments if any will be reflected on future billings. Failure to pay this charge in full within the time specified above will result in all RDS Customers of the TPS being returned to BGSS supply service.

5. Treatment of Revenues

All revenues produced under this Service Classification derived from penalties, imbalances and Load Balancing charges shall be credited to the BGSS.

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Dated June 22, 2018 in Docket No. GM17121309

RIDER "A"

BASIC GAS SUPPLY SERVICE CHARGE ("BGSS")

This Rider sets forth the method of determining the BGSS which shall be calculated to four (4) decimal places on a per therm basis established in accordance with the Board Order in Docket No. GX01050304 dated January 6, 2003. The BGSS charge is either BGSS-Monthly ("BGSS-M") or BGSS-Periodic ("BGSS-P") and will be applied to a Customer's Service Classification as follows:

1. The BGSS-M shall be applicable to all GDS, NGV, LVD, and EGF customers receiving gas supply from the Company effective on the first of each month as determined below.
2. The BGSS-P shall be applicable to all RDS, SGS, and GLS customers receiving gas supply from the Company.

The BGSS Charge, as defined herein, is designed to recover the cost to the Company of purchased gas or fuel used as a substitute for or supplemental to purchased gas including the cost of storing or transporting said gases or fuel, the cost of financial instruments employed to stabilize gas costs, other charges or credits as may result from the operation of other tariff provisions, and taxes and other similar charges in connection with the purchase and sale of gas.

BGSS per therm rates:

<u>Effective Date</u>	<u>BGSS-M per therm</u>	<u>BGSS-P Per therm</u>
April 1, 2018	\$0.4667	\$0.4540
May 1, 2018	\$0.4809	\$0.4540
June 1, 2018	\$0.4867	\$0.4540
July 1, 2018	\$0.5000	\$0.4540
August 1, 2018	\$0.4810	\$0.4540
September 1, 2018	\$0.4890	\$0.4540
October 1, 2018	\$0.4920	\$0.4237
November 1, 2018	\$0.5139	\$0.4237
December 1, 2018	\$0.6814	\$0.4237
January 1, 2019	\$0.5639	\$0.4237
February 1, 2019	\$0.4882	\$0.4691
March 1, 2019	\$0.4778	\$0.4691
April 1, 2019	\$0.4622	\$0.4691

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RIDER "A"

BASIC GAS SUPPLY SERVICE CHARGE ("BGSS")
(continued)

I. The BGSS-P Commodity Charge shall be determined as follows:

The BGSS-P Commodity Charge shall consist of a Gas Cost Component ("GCC"), a Capacity Cost Component ("CCC"), a Prior Period Adjustment ("PPA") and a Tax Factor ("TF") as follows:

$$\text{BGSS-P} = (\text{GCC-P} + \text{CCC-P} + \text{PPA-P}) \times (\text{TF})$$

Where:

GCC-P rate per therm shall be sum of the weighted average price, including any applicable transaction costs, based on the projected monthly quantities to be utilized in the remaining period of the BGSS Year ("Period"), of the following categories of gas:

- a) Flowing gas, which will be equal to the arithmetic average of (i) the weighted-average, based on monthly sales, of the remaining New York Mercantile Exchange ("NYMEX") monthly prices for the Period as recorded on the close of trading for the forward contract month and (ii) the weighted average of the estimated Inside FERC prices for the respective locations where the Company purchases its gas for the remainder of the Period, as adjusted for the variable cost of transportation and fuel to the Company's city gate delivery points;
- b) Any gas supplies for the remainder of the Period whose price was previously set by hedges or other financial instruments, adjusted for the variable cost of transportation and fuel to the Company's city gate delivery points;
- c) The supplies of gas projected to be withdrawn from storage for the remainder of the Period, adjusted for the variable cost of transportation and fuel to the Company's city gate delivery points.

CCC-P shall be established each year in the Company's annual BGSS-P filing and shall consist of the Company's total estimated annual fixed pipeline costs, fixed supplier costs, and fixed storage costs, divided by the Company's projected annual BGSS firm gas sales.

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RIDER "A"

BASIC GAS SUPPLY SERVICE CHARGE ("BGSS")
(continued)

PPA-P shall be the Company's actual cumulative (over) or under recovery of gas costs associated with the operation of the BGSS divided by the projected BGSS-P firm gas sales for the remainder of the Period. In the initial transition to the BGSS-P, the per therm rate derived from the Company's estimated BGSS under or (over) recovery balance at May 31, 2003 with applicable interest thereon divided by the Company's projected BGSS firm sales for the period ending May 31, 2004, shall be the PPA-P. The over under recovery of gas costs shall be the cost of gas, as previously defined, less:

1. Supplier or Pipeline refunds;
2. Gas cost recoveries from the implementation of the BGSS-P;
3. Gas cost recoveries from the implementation of the BGSS-M;
4. Other gas cost recoveries or credits to the BGSS derived from sales or services as set forth in the applicable service classifications of the tariff;
5. Interest on the cumulative (over) under recovery of cost from the preceding BGSS Year ending September 30 but only when the interest is a credit. Interest being calculated on the cumulative (over) under recovery for each month of the prior period on the average of the beginning and ending monthly balance at a rate equivalent to the Company's allowed overall rate of return.

TF shall be the factors to adjust the calculated rate for appropriate taxes and other similar charges.

The BGSS-P shall be in effect until changed by succeeding BGSS-P rate filings.

The Company shall have the discretion to implement up to two (2) self-implementing BGSS-P rate changes, one to be implemented December 1 and the other to be implemented February 1 upon written notice to the Staff of the Board of Public Utilities and the Division of Rate Counsel of the approximate amount of that increase based on current market conditions by the first of the month preceding the self-implementation dates, November 1 and January 1 respectively. Each requested rate change shall not be for an increase of greater than five percent (5%) of the average rate based on a typical 100 therm per month residential total bill. The notice shall contain the information necessary to derive the components of the BGSS-P as set forth above. The Public Notice for the annual filing shall include the specific rate change sought to be implemented on October 1, a paragraph indicating that the rate is subject to self-implementing rate changes on December 1 and February 1 subject to the aforementioned 5% cap and an estimate of the impact

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RIDER "A"

BASIC GAS SUPPLY SERVICE CHARGE ("BGSS")
(continued)

from the two (2) possible five percent (5%) increases on a 100 therm residential bill. Upon establishing the initial BGSS-P, one self-implementing rate change to the BGSS-P for an increase not greater than five percent (5%) of the average rate based on a typical 100 therm per month residential total bill shall be permitted effective March 1, 2003 upon written notice made to the BPU and RC by February 1, 2003.

In accordance with the Board Order in Docket No. GX01050304 dated January 6, 2003 the Company shall have the discretion to return any over recovered balances to customers through a current bill credit or BGSS-P rate reduction upon five (5) days notice to the BPU and RC.

II. The BGSS-M Commodity Charge shall be determined as follows:

The BGSS-M Commodity Charge shall consist of a Gas Cost Component ("GCC"), a Capacity Cost Component ("CCC"), a Prior Period Adjustment ("PPA") and a Tax Factor ("TF") as follows:

$$\text{BGSS-M} = (\text{GCC-M} + \text{CCC-M} + \text{PPA-M}) \times (\text{TF})$$

Where:

GCC-M rate per therm shall be the arithmetic average of (i) the NYMEX Henry Hub gas contracts closing price for the last trading day prior to each respective month and (ii) the weighted-average of the estimated Inside FERC prices for the respective locations where purchases of gas for the ensuing month are projected to be made, as adjusted for the variable cost of fuel and transportation to the city gate delivery points of the Company.

CCC-M shall be the same as the CCC-P rate per therm as established each year in the Company's annual BGSS-P filing.

PPA-M rate per therm in the initial transition to the BGSS-M shall be the estimated BGSS under or (over) recovery balance at May 31, 2003 with applicable interest thereon divided by the projected BGSS firm sales for the period ending May 31, 2004. This rate shall continue in effect on a monthly basis until the deferred balance, which initially shall be set equal to the PPA-M times the projected BGSS-M firm sales for the period ending May 31, 2004, becomes positive as an over recovery at which time the PPA-M shall cease to be a component of the BGSS-M starting in the subsequent month, and any over recovery in the deferred balance shall be credited to the BGSS-P.

TF shall be the factors to adjust the calculated rate for appropriate taxes and other similar charges.

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RIDER "A"

BASIC GAS SUPPLY SERVICE CHARGE ("BGSS")
(continued)

The BGSS-M will be filed two (2) business days after the monthly close of the NYMEX Henry Hub gas contracts and shall be in effect for the entirety of the subsequent month and thereafter until changed by succeeding BGSS-M rate filings. The BGSS-M price shall be posted on the Company's WEB site within two (2) to four (4) days of the rate being filed with the BPU.

The Company shall make an annual BGSS filing on or before June 1 of each year. The filing shall provide for a review of the actual costs and recoveries for the previous period ending April 30 and projections of costs and recoveries through September 30. The filing shall also propose a new BGSS-P rate to be implemented on October 1. The proposed BGSS-P rate shall be based upon the projected cost of purchased gas and storage utilization to serve projected demand for gas service for the period October 1 through September 30 and an adjustment to recover or credit prior period under or over recovered gas costs as projected to exist on the preceding September 30. The Company shall provide the basis for its projected costs and the NYMEX projection of monthly gas prices for the projected period. In its annual filing the Company shall calculate the CCC-P component, as defined above, of the BGSS-P rate. Adjustments, if any, resulting from the Board's review of this filing shall be made following a Board Order.

The charges applicable under this Rider include provision for the New Jersey Sales and Use Tax, and when billed to customers exempt from this tax shall be reduced by the amount of such tax included therein.

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RIDER "B"

WEATHER NORMALIZATION CLAUSE ("WNC")

Applicable to all customers in service classifications RDS, SGS and GDS.

November 1, 2018 through May 31, 2019 \$0.0194 per therm

June 1 through September 30 of any year \$0.0000 per therm

The charges applicable under this Rider include provision for the New Jersey Sales and Use Tax, and when billed to customers exempt from this tax shall be reduced by the amount of such tax included therein. In the winter months, October through May, a weather normalization charge shall be applied to the rate quoted in this Tariff under the service classifications shown above, except as may be otherwise provided for in the individual service classification. The weather normalization charge applied in each winter period shall be based on the differences between actual and normal weather during the preceding winter period.

METHOD OF DETERMINING WEATHER NORMALIZATION CHARGE:

The weather normalization charge shall be determined as follows:

I. Definition of Terms as Used Herein

1. Degree Days (DD) - the difference between 65°F and the twenty-four point average temperature for the day, as determined from the records of the National Oceanic and Atmospheric Administration (NOAA) at its weather observation station located at Newark International Airport, when such average falls below 65°F. A day is defined as a period corresponding with the Company's gas sendout day of 10 am to 10 am.

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RIDER "B"

WEATHER NORMALIZATION CLAUSE ("WNC")
(continued)

METHOD OF DETERMINING WEATHER NORMALIZATION CHARGE: (continued)

I. Definition of Terms as Used Herein (continued)

2. Actual Calendar Month Degree Days - the accumulation of the actual Degree Days for each day of a calendar month.
3. Normal Calendar Month Degree Days - the level of calendar month degree days to which test year sales volumes were normalized in the base rate proceeding that established the current base rates for the service classifications to which this clause applies. The normal calendar month Degree Days used in this clause may be updated in base rate cases. The normal degree days for the defined winter months are as follows:

<u>Month</u>	<u>Normal Degree Days</u>	<u>Leap Year Normal Degree Days</u>
October	257	257
November	523	523
December	814	814
January	993	993
February.	837	862
March	678	668
April	353	344
May	<u>126</u>	<u>122</u>
Total	4,581	4,583

4. Winter Period - shall be the eight consecutive sales and calendar months from October of one calendar year through May of the following calendar year.
5. Degree Day Dead Band - shall be one-half ($\frac{1}{2}\%$) percent of the monthly Normal Calendar Degree Days for the Winter Period.

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RIDER "B"

WEATHER NORMALIZATION CLAUSE ("WNC") (continued)

METHOD OF DETERMINING WEATHER NORMALIZATION CHARGE: (continued)

I. Definition of Terms as Used Herein (continued)

6. Degree Day Consumption Factor ("DDCF") - the variable component (use per degree day) of the gas sendout for each month of the winter period normalized for weather and adjusted for lost and unaccounted for gas. The DDCF shall be updated annually in the Company's WNC reconciliation filing annualizing to reflect the change in number of customers that has occurred since the base rate proceeding that established the initial degree day consumption factor in base rate cases. The base number of customers used to establish the normalized use in therms per customer and the calculated DDCF approved in the Company's most recent base rate case are as follows:

<u>Month</u>	<u>Base Number of Customers</u>	<u>Therms per Degree Day</u>
October	282,731	51,117
November	283,538	59,513
December	284,438	61,218
January	285,027	65,699
February	285,683	67,497
March	285,934	64,432
April	285,804	55,258
May	285,854	54,844

7. Margin Revenue Factor - the weighted average of the Distribution Charges as quoted in the individual service classes to which this clause applies net of applicable taxes and other similar charges and any other revenue charge not retained by the Company that these rates may contain in the future. The weighted average shall be determined by multiplying the margin revenue component of the Distribution Charges from each service class to which this clause applies by each class's percentage of total consumption of all the classes to which this clause applies for the winter period and summing this result for all the classes to which this clause applies. The Margin Revenue Factor shall be redetermined each time base rates are adjusted. The current Margin Revenue Factor is \$0.2884 per therm.

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RIDER "B"

WEATHER NORMALIZATION CLAUSE ("WNC")
(continued)

METHOD OF DETERMINING WEATHER NORMALIZATION CHARGE (continued)

I. Definition of Terms as Used Herein (continued)

8. Annual Period: shall be the 12 consecutive months from October 1 of one calendar year through September 30 of the following calendar year.
9. Average 13 month common equity balance: shall be the common equity balance at the beginning of the Annual Period (i.e. October 1) and the month ending balances for each of the twelve months in the Annual Period divided by thirteen (13).

II. Determination of the Weather Normalization Rate

At the end of the Winter Period during the Annual Period, a calculation shall be made that determines for all months of the Winter Period the level by which margin revenues differed from what would have resulted if normal weather (as determined by reference to the Degree Day Dead Band) occurred.

The monthly calculation is made by multiplying the Degree Day Consumption Factor by the difference between Normal Calendar Month Degree Days as adjusted for the monthly Degree Day Dead Band, and Actual Calendar Month Degree Days and, in turn, multiplying the result by the Margin Revenue Factor. To the extent the Actual Calendar Month Degree Days exceeds Normal Calendar Month Degree Days as adjusted for the Degree Day Dead Band, an excess of margin revenues exist. To the extent Actual Calendar Month Degree Days were less than Normal Calendar Month Degree Days as adjusted for the Degree Day Dead Band, a deficiency of marginal revenue exists. In addition, the weather normalization clause shall not operate to permit the Company to recover any portion of a margin revenue deficiency that will cause the Company to earn in excess of 9.6% for the Annual Period; any portion which is not recovered shall not be deferred. For purposes of this section, the Company's rate of return on common equity shall be calculated by dividing the Company's regulated jurisdictional net income for the Annual Period by the Company's average 13-month common equity balance for such Annual Period, all as reflected in the Company's monthly reports to the BPU. The Company's regulated jurisdictional net income shall be calculated by subtracting from total net income (1) margins

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RIDER "B"

WEATHER NORMALIZATION CLAUSE ("WNC")
(continued)

METHOD OF DETERMINING WEATHER NORMALIZATION CHARGE (continued)

II. Determination of the Weather Normalization Rate (continued)

retained by the Company from non-firm sales and transportation services, net of associated taxes, (2) margins retained in the provision of sales in accordance with the Board Order pertaining to Docket No. GR90121391J and GM90090949, net of associated taxes and (3) net income derived from unregulated activities conducted by Elizabethtown.

The Company's average thirteen-month common equity balance for any Annual Period shall be the Company's average total common equity less the Company's average common equity investment in unregulated subsidiaries.

The balance of margin revenue excess or deficiency at September 30 of the Annual Period shall be divided by the estimated applicable sales from the classes subject to this clause for the Winter Period over which this charge will be in effect, multiplied by a factor to adjust for increases in taxes and other similar charges. The product of this calculation shall be the Weather Normalization Charge. However, the Weather Normalization Charge will at no time exceed three (3%) percent of the then applicable Residential Distribution Service rate plus the BGSS. To the extent that the effect of this rate cap precludes the Company from fully recovering the margin deficiency for the Annual Period, the unrecovered balance will be added to or subtracted from the margin deficiency or margin excess used to calculate the weather normalization charge for the next Winter Period. The Weather Normalization Charge, so calculated, will be in effect for the Winter Period immediately following the Annual Period used in such calculation.

III. Tracking the Operation of the Weather Normalization Clause

The revenues billed, or credits applied, net of taxes and other similar charges, through the application of the Weather Normalization Rate shall be accumulated for each month when this rate is in effect and applied against the margin revenue excess or deficiency from the immediately preceding Winter Period and any cumulative balances remaining from prior Winter Periods.

The annual filing for the adjustment to the weather normalization rate shall be concurrent with the annual filing for the Rider "D" Societal Benefits Charge.

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RIDER "C"

ON-SYSTEM MARGIN SHARING CREDIT ("OSMC")

Applicable to all Service Classifications that pay the BGSS of Rider A and RDS customers that receive gas supply from a TPS in accordance with the Board's Order in Docket No. GO99030122.

The OSMC is subject to change to reflect the Company's actual recovery of such margins and shall be adjusted annually in its BGSS filing.

(\$0.0007) per therm

The charges applicable under this Rider include provision for the New Jersey Sales and Use Tax, and when billed to customers exempt from this tax shall be reduced by the amount of such tax included therein.

Determination of the OSMC

On or about July 31 of each year, the Company shall file with the Board an OSMC rate filing based on the credits generated from on-system margin sharing during the previous OSMC year July 1 through June 30.

The OSMC shall be calculated by taking the current year's credits, plus the prior year's OSMC over or under recovery balance and dividing the resulting sum by the annual forecasted volumes for the service classifications set forth above. The resulting rate shall be adjusted for all applicable taxes and other similar charges.

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")

Applicable to all tariff Service Classifications except those Customers under special contracts that explicitly do not permit the Company to apply increased charges as filed and approved by the BPU and those customers exempted pursuant to the Long-Term Capacity Agreement Pilot Program ("LCAPP"), P.L. 2011, c.9, codified as N.J.S.A. 48:3-60.1. See the LCAPP Exemption Procedures at the end of this Rider.

The SBC is designed to recover the components listed below and any other new programs which the Board determines should be recovered through the Societal Benefits Charge.

	<u>SBC Rate Components:</u>	<u>Per Therm</u>
I.	New Jersey Clean Energy Program ("CEP")	\$0.0215
II.	Remediation Adjustment Charge ("RAC")	(\$0.0128)
III.	<u>Universal Service Fund and Lifeline:</u>	
	1. Universal Service Fund ("USF")	\$0.0049
	2. Lifeline	<u>\$0.0054</u>
	TOTAL	\$0.0190

The charges applicable under this Rider include provision for the New Jersey Sales and Use Tax, and when billed to customers exempt from this tax shall be reduced by the amount of such tax included therein.

I. New Jersey Clean Energy Program Component ("CEP")

The Comprehensive Resource Analysis ("CRA") name was changed to the Clean Energy Program - CEP per Board Order dated January 22, 2003 in Docket No. EX99050347 *et.al.* The CEP is a mechanism that will (1) establish a rate to recover the costs of the Core and Standard Offer Programs in the Company's CEP Plan which was approved by the BPU in Docket No. GE92020104, and (2) compensate the Company for the revenue erosion resulting from conservation savings created by the Standard Offer Program. The annual recovery period for the CEP is from October 1 through September 30. The CEP recovers program costs and revenue erosion incurred during the previous CEP year ended June 30.

1. CEP program costs include the costs of core programs, standard offer payments and any administrative costs not recovered directly from standard offer providers.

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")
(continued)

I. New Jersey Clean Energy Program Component ("CEP") (continued)

2. The Standard Offer Program will reduce the volumes of gas sold by the Company and will reduce revenues corresponding to volumes of gas saved. This revenue loss will occur because the rates set in the Company's base rate case do not reflect a decrease in revenues resulting from program measures which will be implemented during the period in which the Company's CEP Plan is in effect. Consequently, the Company will not recover those fixed costs in base rates corresponding to the volumes of gas saved by the Standard Offer Program.
3. The CEP rate shall be determined as follows:
 - (a) The Company will project all program costs not recoverable directly from standard offer providers and revenue erosion, based upon current, approved rates, both of which elements are not currently collected through base rates for the annual period ("current annual period").
 - (b) The Company will include with the above projection, a statement of the prior annual period of any (over-) or under-recoveries, including interest at the rate applicable to the RAC component of the SBC. This statement will include estimated data for those months that occur after the date of filing but which correspond to the prior annual period. The CEP may be adjusted for material differences between estimates and actual results in the prior annual period.
 - (c) The sum of the program costs and recoveries for the CEP year ending June 30 plus the projected spending for the succeeding twelve month period, including interest calculated at a rate equal to that applied to the RAC component of the SBC, will be divided by the estimated sales and transportation throughput to all Customers subject to the SBC during the succeeding October 1 through September 30 period.

The formula for calculating the CEP rate is as follows:

$$\frac{PC + RE + [RB * (1+i)]}{AV}$$

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")
(continued)

I. New Jersey Clean Energy Program Component ("CEP") (continued)

3. The CEP rate shall be determined as follows: (continued)

(c) where:

PC = all projected program costs not recoverable directly from standard offer providers

RE = cumulative annual margin revenue erosion from the date of effectiveness of the Plan until the time that new base rates take effect. Margin revenue erosion is determined by multiplying the actual measured annual decrease in firm sales attributable to implementation of certain CEP programs per Board Order EX99050347 *et.al.* and the DSM legacy standard offer programs by the net margin revenue associated with that decrease in each affected service classification.

RB = prior period recovery balance, the net of actual costs and recoveries.

i = interest rate applicable to recovery balance

AV = projected annual quantity for sales and transportation throughput to all Customers subject to the SBC.

4. There will be a reconciliation of over- or under-recovery of actual program costs not recovered directly from standard offer providers and revenue erosion, based upon approved rates in effect during the prior annual period, with the revenues collected through the CEP by maintaining an account showing the cumulative balance of the (over-) or under-recoveries. Any prior annual period balance will be included, with interest, along with current annual period projected costs and amortized over the current annual recovery period. Interest is calculated on the cumulative (over-) or under-recovery of the prior annual period on the average beginning and ending monthly balance at a rate equivalent to the rate applied to the RAC component of the SBC.

Date of Issue: July 10, 2018

Effective: Service Rendered
on and after July 1, 2018

Issued by: Brian MacLean, President
520 Green Lane
Union, New Jersey 07083

RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")
(continued)

I. New Jersey Clean Energy Program Component ("CEP") (continued)

5. The annual filing for the adjustment on or about October 1 of each year shall be made on or about July 31 of each year and shall be based on actual figures and experiences then available with estimates of remaining requirements.

II. Remediation Adjustment Clause Component ("RAC")

The RAC is a mechanism that will establish a rate to recover remediation costs, as defined herein. On or about July 31 of each year, the Company shall file with the Board a RAC rate component as part of the Societal Benefits Charge based on remediation costs and third party expenses/claims in the preceding remediation years.

The RAC will be determined as follows:

A. Definition of Terms Used Herein

1. Remediation Costs - all investigation, testing, land acquisition if appropriate, remediation and/or litigation costs/expenses or other liabilities excluding personal injury claims and specifically relating to former gas manufacturing facility sites, disposal sites, or sites to which material may have migrated, as a result of the earlier operation or decommissioning of gas manufacturing facilities.
2. Interest Rate - for carrying costs and deferred tax benefit calculation shall be the rate paid on seven year constant maturities treasuries as shown in the Federal Reserve Statistical Release on or closest to August 31st of each year plus 60 basis points.
3. Carrying Cost - the Interest Rate applied to the unamortized balance of remediation costs.
4. Recovery Year - each October 1 to September 30 year and is the time period over which the amortized expenses incurred during the Remediation Year shall be recovered from Customers.
5. Remediation Year - each July 1 to June 30 year and is the time period over which the remediation costs and recoveries are incurred.

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Effective: Service Rendered
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Issued by: Brian MacLean, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated June 22, 2018 in Docket No. GM17121309

RIDER "D"
SOCIETAL BENEFITS CHARGE ("SBC")
(continued)

II. Remediation Adjustment Clause Component ("RAC")

A. Definition of Terms Used Herein (continued)

6. Third Party Claims - all claims brought by the Company against any entity, including insurance companies, from which recoveries may be received and will be charged through the RAC factor as follows:
- a. Fifty percent of the reasonable transaction costs and expenses in pursuing Third Party Claims shall be included as Remediation Costs and shall be recovered as part of the Remediation Adjustment Clause. The remaining 50% shall be deferred.
 - b. In the event that the Company is successful in obtaining a reimbursement from any Third Party, the Company shall be permitted to retain the deferred 50% as specified in 5a. The balance of the reimbursement, if any, shall be applied against the Remediation Costs starting in the year it is received and will be amortized over seven years.
 - c. The Company is not required to account for transaction costs and expenses in pursuing third party claims on a claim-by-claim basis.
7. Deferred Tax Benefit (DTB) - the unamortized portion of actual remediation costs multiplied by the Company's effective statutory federal and state income tax rate, and the Interest Rate.

$$DTB_{n,yr} = ARC_n * [(7-X)/7] * IR_{yr} * TR_{yr}$$

$DTB_{n,yr}$ = Deferred Tax Benefit in recovery year (yr) to be subtracted from one seventh the amount of the remediation costs incurred in remediation year (n).

ARC_n = Actual Remediation Costs incurred in remediation year (n).

X = Number of years that the ARC incurred in year n have been subject to amortization ($X = 1,2,3,4,5,6$)

IR_{yr} = Interest Rate

TR_{yr} = Effective combined Federal and State income tax rate.

Date of Issue: July 10, 2018

Effective: Service Rendered
on and after July 1, 2018

Issued by: Brian MacLean, President
520 Green Lane
Union, New Jersey 07083

RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")
(continued)

II. Remediation Adjustment Clause Component ("RAC")

A. Definition of Terms Used Herein (continued)

8. Sale of Property shall be calculated by taking the proceeds over book value of any sale of a former manufacturing gas plant site, less all reasonable expenses associated with selling the site, and subtracting the total costs that were incurred in cleaning up the site and amortized through rates. The proceeds associated with the total costs that were incurred in cleaning up the site will be included as a credit to the remediation costs incurred in the year of the sale. The remainder shall be equally shared between the Company and ratepayers.

B. Determination of the Remediation Adjustment

At the end of the remediation year, the Company shall file with the Board (1) copies of all bills and receipts relating to the amount of any remediation costs incurred in the preceding remediation year(s) for which it seeks to begin recovery; (2) similar material and information to support any expenses and/or recoveries resulting from Third Party claims; (3) a computation of the carrying cost on the unamortized balance of remediation cost; (4) a projection of remediation costs for the following remediation year.

The RAC factor shall be calculated by taking one seventh of the Actual Remediation Costs, plus applicable Third Party Claims and Sale of Property allocations incurred each year, until fully amortized, less the Deferred Tax Benefit plus the prior years' RAC over or underrecovery plus appropriate carrying costs. This amount is then divided by all applicable forecasted quantities to all Service Classifications for the upcoming recovery year.

The total annual charge to the Company's ratepayers for remediation costs during any recovery year shall not exceed five (5%) percent of the Company's total revenues from sales, transportation and storage services during the preceding Remediation Year. If this limitation results in the Company recovering less than the amount that would otherwise be recovered in a particular Recovery Year then the Company will continue to accumulate carrying costs which will be recovered by the Company from its ratepayers in a subsequent RAC proceeding.

Date of Issue: July 10, 2018

Effective: Service Rendered
on and after July 1, 2018

Issued by: Brian MacLean, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated June 22, 2018 in Docket No. GM17121309

RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")
(continued)

II. Remediation Adjustment Clause Component ("RAC") (continued)

C. Tracking the Operation of the Remediation Adjustment Clause

The revenues billed, net of taxes and other similar charges through the application of the Remediation Adjustment factor shall be accumulated for each month and be applied against the total amortized Remediation Costs calculated for that year. Any over or under collection at the end of the Recovery Year will be included in the determination of the following year's RAC factor.

III. Universal Service Fund ("USF") and Lifeline Components

An interim USF program was approved by the BPU in Docket No. EX00020091 dated November 21, 2001. A permanent USF program and Lifeline charge was approved by the BPU in Docket No. EX00020091 dated April 30, 2003. The Orders authorized the Company to collect costs associated with the program through the Societal Benefits Charge ("SBC"). The USF and Lifeline rate components of the SBC will be determined as follows:

A. Definition of Terms

1. Program Costs includes all costs incurred in connection with the implementation of Board ordered services, inclusive of carrying costs.
2. Program Year is the period October 1 to September 30 as approved by the BPU in Docket No. EX00020091 dated June 22, 2005.

B. Determination of the USF and Lifeline Components

The USF and Lifeline Components will be determined and issued by the Board and shall remain in effect until changed. The USF true up between credits given customers and amounts recovered will be made annually in accordance with the Board's directives.

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Effective: Service Rendered
on and after July 1, 2018

Issued by: Brian MacLean, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated June 22, 2018 in Docket No. GM17121309

RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")
(continued)

III. Universal Service Fund ("USF") and Lifeline Components (continued)

C. Carrying Costs

Per Board Order dated October 21, 2008 in Docket No. ER08060455, the interest rate on USF under and over recoveries shall be the interest rate based on a two-year constant maturity Treasuries as published in the Federal Reserve Statistical Release on the first day of each month (or the closest day thereafter on which rates are published), plus sixty basis points, but shall not exceed the overall rate of return for each utility as authorized by the Board. The calculation shall be based on the net of tax beginning and end average monthly balance, accruing simple interest with an annual roll-in at the end of each reconciliation period.

IV. LCAPP Exemption Procedures

The following procedures to obtain the LCAPP exemption from the SBC charge shall apply:

A customer seeking an SBC rate exemption for all or part of its usage must submit an Annual Certification form, provided by the Company, declaring and certifying, for any applicable meter, the percentage of natural gas purchased and used for the generation of electricity sold for resale during the previous calendar year. For facilities with less than twelve months of history, estimates supported by engineering and operational plans may be used.

A. Annual Procedures

In December of each year the Company will mail an Annual Certification form to customers currently receiving the exemption, addressed to the customer's designated representative, to be returned to the Company's designated representative by the following January 15th.

The certified percentage will be used to determine the SBC rate to be charged for the twelve (12) month period beginning February 1st, for example:

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on and after July 1, 2018

Issued by: Brian MacLean, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated June 22, 2018 in Docket No. GM17121309

RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")
(continued)

IV. LCAPP Exemption Procedures (continued)

A. Annual Procedures (continued)

If the full SBC rate to be charged equaled \$0.0400 per therm pre tax and other similar charges and the certified percentage was seventy-five percent (75%) then the rate charged and applied to the metered volume would be calculated as: $\$0.0400 * (1.00 - .75) = \$0.0100$ per therm before any applicable taxes and other similar charges.

If the customer fails to return the form by January 15th then the full SBC rate will be assessed on all of the customer's natural gas usage until a completed Annual Certification form is received. Any exemption will become effective after the customer's next subsequent meter reading.

Notwithstanding the foregoing, the Company will provide customers that it reasonably believes may be eligible for the exemption with a certification form for the period of January 28, 2011 through January 31, 2012 on which the customer may certify the percentage of natural gas purchased and used for the generation of electricity sold for resale during the calendar year 2010. Any adjustments to the customer's bill associated with this exemption period shall be billed or credited to the customer in the billing period following the adjustment determination.

B. Interim Period Procedures

Customers may obtain the exemption at any time during a year by obtaining and submitting to the Company's designated representative a completed Annual Certification form. The certified percentage will be used to determine the exemption which will become effective after the next subsequent meter reading. Customers will be required to re-certify for the subsequent period beginning February 1 in accordance with the Annual Procedures.

Date of Issue: July 10, 2018

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on and after July 1, 2018

Issued by: Brian MacLean, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated June 22, 2018 in Docket No. GM17121309

RIDER "E"

ENERGY EFFICIENCY PROGRAM ("EEP")

Applicable to all customers except those customers under special contracts as filed and approved by the BPU and those customers exempted pursuant to the Long-Term Capacity Agreement Pilot Program ("LCAPP"), P.L. 2011 c.9, codified as N.J.S.A. 48:3-60.1. See the LCAPP Exemption Procedures at the end of the Societal Benefits Charge ("SBC") Rider "D."

The EEP shall be collected on a per therm basis and shall remain in effect until changed by order of the BPU. The applicable EEP rate is as follows:

\$0.0020 per therm

The rate applicable under this Rider includes provision for the New Jersey Sales and Use Tax, and when billed to customers exempt from this tax shall be reduced by the amount of such tax included therein.

In the "Global Warming Act," N.J.S.A.26-2C-45. or "RGGI Legislation" the State Legislature determined that global warming is a pervasive and dangerous threat that should be addressed through the establishment of a statewide greenhouse gas emissions reduction program. On May 8, 2008, the Board issued an Order (the "RGGI Order") pursuant to N.J.S.A. 48:3-98.1(c). The RGGI Order allowed electric and gas public utilities to offer energy efficiency and conservation programs on a regulated basis. The Company's energy efficiency programs were first authorized pursuant to Board orders issued in Docket Nos. EO09010056 and GO09010060. They were subsequently extended pursuant to Board orders issued in GO10070446, GO11070399, GO12100946, GO15050504 and GR16070618. The Company's current energy efficiency programs are effective through December 31, 2018 and described below.

The EEP enables the Company to recover all costs associated with the following energy efficiency programs approved by the Board order dated April 21, 2017 in BPU Docket Nos. GR16070618 and GO15050504:

1. Residential gas HVAC and hot water heater incentive programs;
2. Residential home energy assessment program;
3. Residential home weatherization for income qualified customers program;
4. Commercial steam trap survey and repair program; and
5. Enhanced customer education and outreach initiatives designed to encourage customers to conserve energy and lower their gas bills.

Date of Issue: August 30, 2018

Effective: Service Rendered
on and after September 1, 2018

Issued by: Brian MacLean, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated August 29, 2018 in Docket No. GR17111146

RIDER "E"

ENERGY EFFICIENCY PROGRAM ("EEP")
(continued)

Determination of the EEP

On or about July 31 of each year, the Company shall file with the Board an EEP rate filing based on the costs and recoveries incurred during the previous EEP year ending June 30th as well as estimates, if applicable, through the upcoming calendar year to develop the EEP rate to be effective October 1st as follows:

The EEP monthly recoverable expenditure amounts shall be derived from taking the average of the cumulative beginning and end of month expenditures associated with the EEP investments less accumulated amortization and accumulated deferred income tax credits times the after tax weighted average cost of capital grossed up for the Company's revenue factor, as directed in the Board's August 21, 2013 Order in Docket No. GO12100946, plus monthly amortization using a four year amortization period.

The EEP rate shall be calculated by summing the (i) prior year's EEP over or under recovery balance, plus (ii) current year monthly recoverable expenditure amounts, less (iii) current year recoveries, plus (iv) current year carrying costs based on the monthly average over or under recovered balances, at a rate equal to the rate obtained on the Company's weighted average of its commercial paper and bank credit lines, if both sources have been utilized, not to exceed the weighted average cost of capital after tax as described above, plus (v) an estimated amount to recover the upcoming year's recoverable expenditures amount and dividing the resulting sum by the annual forecasted per therm quantities for the applicable customers set forth above. The resulting rate shall be adjusted for all applicable taxes. The EEP rate shall be self-implementing on a refundable basis as directed by the BPU.

Date of Issue: August 30, 2018

Effective: Service Rendered
on and after September 1, 2018

Issued by: Brian MacLean, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated August 29, 2018 in Docket No. GR17111146

RATE SUMMARIES

Per Therm

	<u>RDS</u> <u>(sales)</u>	<u>RDS</u> <u>(transportation)</u>
Service Charge	8.19	8.19
Distribution Charges	0.3625	0.3625

Riders:

A	BGSS	BGSS-P	per TPS
B	WNC*	WNC*	WNC*
C	OSMC	(0.0007)	(0.0007)
D	SBC	0.0190	0.0190
E	EEP	0.0020	0.0020

* The WNC will apply to customers during the months of October through May.

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

Date of Issue: March 8, 2019

Effective: Service Rendered
on and after March 9, 2019

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated February 27, 2019 in Docket No. GR18080852

ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

5th REVISED SHEET NO. 129

RATE SUMMARIES
(continued)

Per Therm

	SGS (sales)	SGS (transportation)¹
Service Charge	21.92	21.92
Distribution Charges	0.3175	0.3175
<u>Riders:</u>		
A BGSS	BGSS-P	Per TPS
B WNC	WNC*	WNC*
C OSMC	(0.0007)	(0.0007)
D SBC	0.0190	0.0190
E EEP	0.0020	0.0020

¹ Balancing Charge of \$0.0171 per therm applies to customers November to March with a DCQ under 500 therms.

* The WNC will apply to customers during the months of October through May.

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

Date of Issue: March 8, 2019

Effective: Service Rendered
on and after March 9, 2019

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated February 27, 2019 in Docket No. GR18080852

RATE SUMMARIES
(continued)

Per Therm

	<u>GDS (sales)</u>	<u>GDS (transportation)¹</u>	<u>GDS SP #2 May – October</u>
Service Charge	28.90	28.90	28.90
Demand Charge, per DCQ	0.806	0.806	0.806
Distribution Charges	0.1893	0.1893	0.0589
<u>Riders:</u>			
A Commodity Charge	BGSS-M	per TPS	BGSS-M
B WNC	WNC*	WNC*	na
C OSMC	(0.0007)	na	na
D SBC	0.0190	0.0190	0.0190
E EEP	0.0020	0.0020	0.0020

¹ Balancing Charge of \$0.0171 per therm applies to customers November to March with a DCQ under 500 therms.

*The WNC will apply to customers during the months of October through May.

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

" na " rider not applicable

Date of Issue: March 8, 2019

Effective: Service Rendered
on and after March 9, 2019

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated February 27, 2019 in Docket No. GR18080852

RATE SUMMARIES
(continued)

Per Therm

	<u>LVD</u>
Service Charge	274.04
Demand Charge, per DCQ	1.030
Distribution Charges	0.0422

Riders:

A	BGSS	BGSS-M
B	WNC	na
C	OSMC	(0.0007)
D	SBC	0.0190
E	EEP	0.0020

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

" na " rider not applicable

Date of Issue: March 8, 2019

Effective: Service Rendered
on and after March 9, 2019

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated February 27, 2019 in Docket No. GR18080852

ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

5th REVISED SHEET NO. 132

RATE SUMMARIES
(continued)

Per Therm	IS	ITS	ITS
	<u>(ceiling)</u>	<u>(ceiling)</u>	<u>(ceiling)</u>
Service Charge	355.20	589.50	628.55
Demand Charge, per DCQ	0.081	0.293	0.312
Distribution Charges	0.9405	0.0791	0.0843
<u>Riders:</u>			
A Commodity Charge	BGSS-M	per TPS	per TPS
B WNC	na	na	na
C OSMC	na	na	na
D SBC	0.0190	0.0179	0.0190
E EEP	0.0020	0.0019	0.0020

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

" na " rider not applicable

Date of Issue: March 8, 2019

Effective: Service Rendered
on and after March 9, 2019

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated February 27, 2019 in Docket No. GR18080852

ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

5th REVISED SHEET NO. 133

RATE SUMMARIES
(continued)

Per Therm	EGF <u>(exempt)</u>	EGF <u>(taxable)</u>
Service Charge	52.27	55.73
Demand Charge, per DCQ	0.421	0.449
Distribution Charges	0.0405	0.0432
<u>Riders:</u>		
A BGSS	BGSS-M	BGSS-M
B WNC	na	na
C OSMC	(0.0007)	(0.0007)
D SBC	0.0179	0.0190
E EEP	0.0019	0.0020

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

" na " rider not applicable

Date of Issue: March 8, 2019

Effective: Service Rendered
on and after March 9, 2019

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated February 27, 2019 in Docket No. GR18080852

ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 16 – GAS

5th REVISED SHEET NO. 134

RATE SUMMARIES
(continued)

	FTS (<u>exempt</u>)	FTS (<u>taxable</u>)
Per Therm		
Service Charge	257.01	274.04
Demand Charge, per DCQ	0.966	1.030
Distribution Charges	0.0396	0.0422
<u>Riders:</u>		
A Commodity Charge	per TPS	per TPS
B WNC	na	na
C OSMC	na	na
D SBC	0.0179	0.0190
E EEP	0.0019	0.0020

Rates shown include taxes if applicable, rates that are tax exempt are noted "exempt."

" na " rider not applicable

Date of Issue: March 8, 2019

Effective: Service Rendered
on and after March 9, 2019

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated February 27, 2019 in Docket No. GR18080852

Elizabethtown Gas Company

**Notice of Public Hearings Regarding
Proposed Gas Base Rate Increases, Changes in Depreciation Rates and
Other Tariff Revisions**

On April 18, 2019, Elizabethtown Gas Company ("Elizabethtown" or "Company") filed a Petition with the New Jersey Board of Public Utilities ("Board") in Docket No. GR19_____ for approval of a request to increase base tariff rates and charges for gas service and implement other rate design and tariff revisions. The Company is also proposing to change its depreciation rates. The Company is proposing that these changes become effective May 19, 2019, or such other date as the Board may determine. The new base rates proposed herein would increase annual revenues by approximately \$65 million or 21.4%.

Set forth below are the current rates, inclusive of taxes and assessments and proposed rates, inclusive of taxes, that will permit customers to determine the effect upon them of the proposed increased rates. Any assistance required by customers in this regard will be furnished by the Company upon request.

		<u>Current Base Tariff Rates</u>			<u>Proposed Base Tariff Rates</u>		
		<u>Service</u>	<u>Demand</u>	<u>Distribution</u>	<u>Service</u>	<u>Demand</u>	<u>Distribution</u>
RDS	Residential Delivery Service	8.19	-	0.3625	13.06	-	0.4835
SGS	Small General Service	21.92	-	0.3175	35.19	-	0.4006
GDS	General Delivery Service	28.90	0.806	0.1893	47.98	0.960	0.2814
NGV	Public Station, per therm	-	-	0.9780	-	-	1.0875
LVD	Large Volume Demand *	274.04	1.030	0.0422	323.86	1.546	0.0489
EGF	Electric Generation Firm	55.73	0.449	0.0432	85.30	0.640	0.0565
GLS	Unmetered Gas Light, per mantle	-	-	6.47	-	-	9.05
CSI	Interruptible Cogeneration Srv.	107.90	-	0.0320	150.79	-	0.0320
IS	Interruptible Service	355.20	0.081	0.0516	628.55	0.113	0.0843
FTS	Firm Transportation Srv. *	274.04	1.030	0.0422	323.86	1.546	0.0489
ITS	Interruptible Transportation Srv.	628.55	0.312	0.0843	628.55	0.427	0.1233

* Proposed to become a combined sales / transportation service class.

The Effect Of The Proposed Increase On Typical Residential Monthly Bills (RDS Customers)

<u>Consumption in Therms</u>	<u>Present Bill</u>	<u>Proposed Bill</u>	<u>Proposed Change</u>	<u>Percent Change</u>
10	\$16.90	\$22.98	\$6.08	36.0%
50	\$51.76	\$62.68	\$10.92	21.1%
100	\$95.32	\$112.29	\$16.97	17.8%
250	\$226.02	\$261.14	\$35.12	15.5%

The actual percentage increase applicable to specific customers will vary according to the usage. Moreover, any rate relief found by the Board to be just and reasonable may be allocated by the Board and applied by the Company to any class or classes of customers or any rate schedules as the Board may determine, so that final rates approved by the Board in this proceeding for any specific customer class or rate schedule may be higher or lower than those set forth herein.

Copies of the Petition are available for inspection at the Company offices located at 520 Green Lane, Union, New Jersey 07083 or

Exhibit P-1
Schedule B

online at Elizabethtown's website: www.elizabethtowngas.com or at the New Jersey Board of Public Utilities, 44 S. Clinton Avenue, 3rd Floor, Suite 314, Trenton, New Jersey 08625.

PLEASE TAKE NOTICE that the New Jersey Office of Administrative Law has scheduled public hearings on the aforementioned petition at the following times and places:

[Dates, Times and Locations TBD]

The public is invited to attend and interested persons will be permitted to testify and/or make a statement of their views on the proposed increases. Information provided at the public hearings will become part of the record of this case and will be considered by the Board in making its decision. In order to encourage full participation in this opportunity for public comment, please submit requests for needed accommodations, including interpreter, listening devices and/or mobility assistance, 48 hours prior to the Hearing. In addition, members of the public may submit written comments concerning the Petition to the BPU regardless of whether they attend the Hearing by addressing them to: Aida Camacho-Welch, Secretary, Board of Public Utilities, 44 S. Clinton Avenue, 3rd Floor, Suite 314, Trenton, New Jersey 08625. Hearings will continue, if necessary, on such additional dates and at such locations as the Office of Administrative Law may designate in order to ensure that all interested persons may be heard.

Deborah M. Franco
Regulatory Affairs Counsel
Elizabethtown Gas Company

(add date)

To: County Clerk, Municipal Clerk and County Administrator

IN THE MATTER OF THE PETITION OF :
ELIZABETHTOWN GAS COMPANY FOR : BPU DOCKET NO. _____
APPROVAL OF INCREASED BASE TARIFF :
RATES AND CHARGES FOR GAS SERVICE, : OAL DOCKET NO. _____
CHANGES TO DEPRECIATION RATES AND :
OTHER TARIFF REVISIONS :

Pursuant to law, Elizabethtown Gas Company ("Elizabethtown" or the "Company") is providing you with notice of a filing made on April 18, 2019 with the New Jersey Board of Public Utilities for an increase in base rates, changes in the Board approved depreciation rates and changes to the Elizabethtown tariff. You may download the filing from the Company's website at www.elizabethtowngas.com.

A public hearing related to this request has been scheduled for **(add date)** and Elizabethtown hereby serves upon you the notice of that hearing related to the above referenced matter. As noted on the attached copy of the public notice, the subject hearings are scheduled for **(add date)** in **(add location)**, New Jersey and for **(add date)** in **(add location)**, New Jersey.

Hard copies of the filing are available for review at the Company's Customer Service Offices and at the New Jersey Board of Public Utilities, 44 South Clinton Street, 3rd Floor, Suite 314, P.O. Box 350 Trenton, New Jersey 08450-0350.

Very truly yours,

Deborah M. Franco
Regulatory Affairs Counsel

Enclosure

**STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES**

**IN THE MATTER OF THE PETITION OF :
ELIZABETHTOWN GAS COMPANY : BPU DOCKET NO.
FOR APPROVAL OF INCREASED BASE :
TARIFF RATES AND CHARGES FOR : AGREEMENT OF NON-DISCLOSURE
GAS SERVICE, CHANGES TO : OF INFORMATION CLAIMED TO BE
DEPRECIATION RATES AND OTHER : CONFIDENTIAL
TARIFF REVISIONS**

It is hereby AGREED, as of the ____ day of April 2019, by and among Elizabethtown Gas Company (“Elizabethtown” or “Petitioner”), the Staff of the New Jersey Board of Public Utilities (“Board Staff”) and Division of Rate Counsel (“Rate Counsel”) (collectively, the “Parties”), who have agreed to execute this Agreement of Non-Disclosure of Information Claimed to be Confidential (“Agreement”) and to be bound thereby, that:

WHEREAS, in connection with the above-captioned proceeding before the Board of Public Utilities (the “Board”), Petitioner and/or another party (“Producing Party”) may be requested or required to provide petitions, pre-filed testimony, other documents, analyses and/or other data or information regarding the subject matter of this proceeding that the Producing Party may claim constitutes or contains confidential, proprietary or trade secret information, or which otherwise may be claimed by the Producing Party to be of a market-sensitive, competitive, confidential or proprietary nature (hereinafter sometimes referred to as “Confidential Information” or “Information Claimed to be Confidential”); and

WHEREAS, the Parties wish to enter into this Agreement to facilitate the exchange of information while recognizing that under Board regulations at N.J.A.C. 14:1-12.1 to -12.18, a request for confidential treatment shall be submitted to the Custodian who is to rule on requests made pursuant to the Open Public Records Act (“OPRA”), N.J.S.A. 47:1A-1 to -13,

unless such information is to be kept confidential pursuant to court or administrative order (including, but not limited to, an Order by an Administrative Law Judge sealing the record or a portion thereof pursuant to N.J.A.C. 1:1-14,1, and the parties acknowledge that an Order by an Administrative Law Judge to seal the record is subject to modification by the Board), and also recognizing that a request may be made to designate any such purportedly confidential information as public through the course of this administrative proceeding; and

WHEREAS, the Parties acknowledge that unfiled discovery materials are not subject to public access under OPRA; and

WHEREAS, the Parties acknowledge that, despite each Party's best efforts to conduct a thorough pre-production review of all documents and electronically stored information ("ESI"), some work product material and/or privileged material ("protected material") may be inadvertently disclosed to another Party during the course of this proceeding; and

WHEREAS, the undersigned Parties desire to establish a mechanism to avoid waiver of privilege or any other applicable protective evidentiary doctrine as a result of the inadvertent disclosure of protected material;

NOW, THEREFORE, the Parties hereto, intending to be legally bound thereby, DO HEREBY AGREE as follows:

1. The inadvertent disclosure of any document or ESI which is subject to a legitimate claim that the document or ESI should have been withheld from disclosure as protected material shall not waive any privilege or other applicable protective doctrine for that document or ESI or for the subject matter of the inadvertently disclosed document or ESI if the Producing Party, upon becoming aware of the disclosure, promptly requests its return and takes reasonable precautions to avoid such inadvertent disclosure.

2. Except in the event that the receiving party or parties disputes the claim, any documents or ESI which the Producing Party deems to contain inadvertently disclosed protected material shall be, upon written request, promptly returned to the Producing Party or destroyed at the Producing Party's option. This includes all copies, electronic or otherwise, of any such documents or ESI. In the event that the Producing Party requests destruction, the receiving party shall provide written confirmation of compliance within thirty (30) days of such written request. In the event that the receiving party disputes the Producing Party's claim as to the protected nature of the inadvertently disclosed material, a single set of copies may be sequestered and retained by and under the control of the receiving party until such time as the Producing Party has received final determination of the issue by the Board of Public Utilities or an Administrative Law Judge, provided that the Board has not modified or rejected an order by the Administrative Law Judge.

3. Any such protected material inadvertently disclosed by the Producing Party to the receiving party pursuant to this Agreement shall be and remain the property of the Producing Party.

4. Any Information Claimed to be Confidential that the Producing Party produces to any of the other Parties in connection with the above-captioned proceeding and pursuant to the terms of this Agreement shall be specifically identified and marked by the Producing Party as Confidential Information when provided hereunder. If only portions of a document are claimed to be confidential, the producing party shall specifically identify which portions of that document are claimed to be confidential. Additionally, any such Information Claimed to be Confidential shall be provided in the form and manner prescribed by the Board's regulations at N.J.A.C. 14:1-12.1 to -12.18, unless such information is to be kept confidential

pursuant to court or administrative order. However, nothing in this Agreement shall require the Producing Party to file a request with the Board's Custodian of Records for a confidentiality determination under N.J.A.C. 14:1-12.1 to -12.18 with respect to any Information Claimed to be Confidential that is provided in discovery and not filed with the Board.

5. With respect to documents identified and marked as Confidential Information, if the Producing Party's intention is that not all of the information contained therein should be given protected status, the Producing Party shall indicate which portions of such documents contain the Confidential Information in accordance with the Board's regulations at N.J.A.C. 14:1-12.2 and 12.3. Additionally, the Producing Party shall provide to all signatories of this Agreement full and complete copies of both the proposed public version and the proposed confidential version of any information for which confidential status is sought.

6. With respect to all Information Claimed to be Confidential, it is further agreed that:

(a) Access to the documents designated as Confidential Information, and to the information contained therein, shall be limited to the Party signatories to this Agreement and their identified attorneys, employees, and consultants whose examination of the Information Claimed to be Confidential is required for the conduct of this particular proceeding.

(b) Recipients of Confidential Information shall not disclose the contents of the documents produced pursuant to this Agreement to any persons) other than their identified employees and any identified experts and consultants whom they may retain in connection with this proceeding, irrespective of whether any such expert is retained specially and is not expected to testify, or is called to testify in this proceeding. All consultants or experts of any Party to this Agreement who are to receive copies of documents produced pursuant to this

Agreement shall have previously executed a copy of the Acknowledgement of Agreement attached hereto as "Attachment 1," which executed Acknowledgement of Agreement shall be forthwith provided to counsel for the Producing Party, with copies to counsel for Board Staff and the Rate Counsel.

(c) No other disclosure of Information Claimed to be Confidential shall be made to any person or entity except with the express written consent of the Producing Party or their counsel, or upon further determination by the Custodian, or order of the Board, the Government Records Council or of any court of competent jurisdiction that may review these matters.

7. The undersigned Parties have executed this Agreement for the exchange of Information Claimed to be Confidential only to the extent that it does not contradict or in any way restrict any applicable Agency Custodian, the Government Records Council, an Administrative Law Judge of the State of New Jersey, the Board, or any court of competent jurisdiction from conducting appropriate analysis and making a determination as to the confidential nature of said information, where a request is made pursuant to OPRA, N.J.S.A. 47:1 A-1 to -13 . Absent a determination by any applicable Custodian, Government Records Council, an Administrative Law Judge, the Board, or any court of competent jurisdiction that a documents) is to be made public, the treatment of the documents exchanged during the course of this proceeding and any subsequent appeals is to be governed by the terms of this Agreement.

8. In the absence of a decision by the Custodian, Government Records Council, an Administrative Law Judge, or any court of competent jurisdiction, the acceptance by the undersigned Parties of information which the Producing Party has identified and marked as Confidential Information shall not serve to create a presumption that the material is in fact entitled to any special status in these or any other proceedings. Likewise, the affidavits)

submitted pursuant to N.J.A.C. 14:1-12.8 shall not alone be presumed to constitute adequate proof that the Producing Party is entitled to a protective order for any of the information provided hereunder.

9. In the event that any Party seeks to use the Information Claimed to be Confidential in the course of any hearings or as part of the record of this proceeding, the Parties shall seek a determination by the trier of fact as to whether the portion of the record containing the Information Claimed to be Confidential should be placed under seal. Furthermore, if any Party wishes to challenge the Producing Party's designation of the material as Confidential Information, such Party shall provide reasonable notice to all other Parties of such challenge and the Producing Party may make a motion seeking a protective order. In the event of such challenge to the designation of material as Confidential Information, the Producing Party, as the provider of the Information Claimed to be Confidential, shall have the burden of proving that the material is entitled to protected status. However, all Parties shall continue to treat the material as Confidential Information in accordance with the terms of this Agreement, pending resolution of the dispute as to its status by the trier of fact.

10. Confidential Information that is placed on the record of this proceeding under seal pursuant to a protective order issued by the Board, an Administrative Law Judge, provided that the Board has not modified or rejected an order by the Administrative Law Judge, or any court of competent jurisdiction shall remain with the Board under seal after the conclusion of this proceeding. If such Confidential Information is provided to appellate courts for the purposes of an appeals) from this proceeding, such information shall be provided, and shall continue to remain, under seal.

11. This Agreement shall not:

(a) Operate as an admission for any purpose that any documents or information produced pursuant to this Agreement are admissible or inadmissible in any proceeding;

(b) Prejudice in any way the right of the Parties, at any time, on notice given in accordance with the rules of the Board, to seek appropriate relief in the exercise of discretion by the Board for violations of any provision of this Agreement.

12. Within forty five (45) days of the final Board Order resolving the above-referenced proceeding, all documents, materials and other information designated as “Confidential Information,” regardless of format, shall be destroyed or returned to counsel for the Producing Party. In the event that such Board Order is appealed, the documents and materials designated as “Confidential Information” shall be returned to counsel for the Producing Party or destroyed within forty-five (45) days of the conclusion of the appeal.

Notwithstanding the above return requirement, Board Staff and Rate Counsel may maintain in their files copies of all pleadings, briefs, transcripts, discovery and other documents, materials and information designated as “Confidential Information,” regardless of format, exchanged or otherwise produced during these proceedings, provided that all such information and/or materials that contain Information Claimed to be Confidential shall remain subject to the terms of this Agreement. The Producing Party may request consultants who received Confidential Information who have not returned such material to counsel for the Producing Party as required above to certify in writing to counsel for the Producing Party that the terms of this Agreement have been met upon resolution of the proceeding.

13. The execution of this Agreement shall not prejudice the rights of any Party to seek relief from discovery under any applicable law providing relief from discovery.

14. The Parties agree that one original of this Agreement shall be created for each of the signatory parties for the convenience of all. The signature pages of each original shall be executed by the recipient and transmitted to counsel of record for the Petitioner, who shall send a copy of the fully executed document to all counsel of record. The multiple signature pages shall be regarded as, and given the same effect as, a single page executed by all Parties.

IN WITNESS THEREOF, the undersigned Parties do HEREBY AGREE to the form and execution of this Agreement.

ELIZABETHTOWN GAS COMPANY

By: _____
Deborah M. Franco
Regulatory Affairs Counsel

**GURBIR S. GREWAL
ATTORNEY GENERAL
OF NEW JERSEY
Attorney for the Staff of the
New Jersey Board of Public Utilities**

By: _____
Deputy Attorney General

**STEFANIE BRAND, ESQ.
DIRECTOR
NEW JERSEY
DIVISION OF RATE COUNSEL**

By: _____
Assistant Deputy Rate Counsel

Company Name:

**IN THE MATTER OF THE PETITION OF
ELIZABETHTOWN GAS COMPANY FOR APPROVAL OF
INCREASED BASE TARIFF RATES AND CHARGES
FOR GAS SERVICE, CHANGES TO DEPRECIATION
RATES AND OTHER TARIFF REVISIONS**

BPU DOCKET NO. GR19_____

DIRECT TESTIMONY

OF

CHRISTIE MCMULLEN

President and Chief Operations Officer

**On Behalf Of
Elizabethtown Gas Company**

Exhibit P-2

April 18, 2019

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**ELIZABETHTOWN GAS COMPANY
DIRECT TESTIMONY OF
CHRISTIE MCCMULLEN**

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 **A.** My name is Christie McMullen. My business address is 520 Green Lane, Union, New
4 Jersey 07083.

5 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

6 **A.** I am President and Chief Operations Officer (“COO”) of Elizabethtown Gas Company
7 (“Elizabethtown” or the “Company”) and Elkton Gas Company.

8 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL RESPONSIBILITIES.**

9 **A.** As President and COO of Elizabethtown, I am responsible for its day-to-day operations
10 including promoting and ensuring safety, reliability, compliance, operational excellence
11 and financial integrity. I oversee all aspects of Elizabethtown’s operations.

12 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND INDUSTRY
13 RELATED EXPERIENCE.**

14 **A.** I am a graduate of the University of Maryland at College Park with a Bachelor of Science
15 degree in electrical engineering. I also have a Masters of Business Administration from
16 Loyola University Maryland. Prior to assuming my present responsibilities in December
17 2018, I was employed by Baltimore Gas & Electric Company (“BGE”) where I served as
18 Vice President of Gas Distribution from 2015-2018. I also served as the Vice President
19 of Support Services and Chief Safety Officer (2011-2015) and Vice President of Business
20 Transformation (2009-2011). I am a Six Sigma Master Black Belt with significant
21 experience leading process improvement and business transformation programs. An

active member of the American Gas Association (“AGA”), I serve on the Leadership Council and Operations Section Managing Committee.

Q. HAVE YOU PREVIOUSLY TESTIFIED OR SUBMITTED TESTIMONY BEFORE THE NEW JERSEY BOARD OF PUBLIC UTILITIES (“BOARD” or “BPU”) OR OTHER REGULATORY COMMISSION?

A. Yes. I have previously testified before the Maryland Public Service Commission regarding BGE’s strategic infrastructure development and enhancement (“STRIDE”) program.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my direct testimony in this proceeding is to provide an overview of Elizabethtown’s filing with the Board seeking authority to increase the Company’s base rates, modify its existing depreciation rates, and implement other tariff changes. Specifically, I will (i) provide a general summary of the Company’s base rate filing and explain why Elizabethtown is seeking to increase base rates at this time, (ii) describe the corporate structure and mission of Elizabethtown and its parent, SJI Utilities, Inc. (“SJIU”), (iii) explain how the South Jersey Industries, Inc. (“SJI”) family of companies is assisting, and will continue to assist, Elizabethtown in providing safe, reliable utility service at just and reasonable rates, (iv) discuss SJI’s compliance with certain acquisition related commitments, (v) describe Elizabethtown’s investments in the local communities it serves, (vi) explain SJI’s philosophy for managing utility operations, including Elizabethtown’s operational and customer service performance, and (vii) introduce the other witnesses who are sponsoring testimony in this proceeding.

1 **III. DISCUSSION**

2 **Q. WHY IS ELIZABETHTOWN SEEKING TO INCREASE ITS BASE RATES AT**
3 **THIS TIME?**

4 **A.** This filing is primarily driven by the significant capital investments that the Company has
5 made and will continue to make since its last base rate proceeding. Since the Company's
6 last base rate case in 2017, Elizabethtown has made approximately \$83 million of net
7 plant additions that are not currently reflected in rates, and projects that an additional
8 \$263 million will be added to its plant in service balance by February 29, 2020. These
9 capital investments have been and will be made to enhance the safety, reliability and
10 resiliency of Elizabethtown's distribution system, support customer needs, and enhance
11 customer service. The Company must be provided a reasonable opportunity to earn a fair
12 return on the investments it makes to ensure it can continue to attract the necessary
13 capital to support further investments that enable it to provide safe and reliable service to
14 its customers. Our continuing investments play a significant role in contributing to
15 maintaining employment, job creation and the economy of the State.

16 **Q. DOES THE COMPANY HAVE A REGULATORY OBLIGATION TO FILE A**
17 **BASE RATE CASE?**

18 **A.** The Company has a regulatory requirement to file a base rate case no later than June
19 2020. That requirement was established in the Board's June 22, 2018 Order in BPU
20 Docket No. GM17121309 ("June 22 Order")¹ approving SJI's acquisition of the
21 Elizabethtown assets from Pivotal Utility Holdings, Inc. d/b/a Elizabethtown Gas , an

¹ Certain other requirements established by the June 22 Order are addressed by Company witnesses Stefany Graham, Nickolaos Ntelekos and Robert Hevert.

1 indirect subsidiary of the Southern Company (“Southern”). That acquisition was
2 completed July 1, 2018.

3 Although Elizabethtown is not obligated to file a base rate case until June 2020,
4 the decision to file now was based on the significant capital investments made to support
5 its natural gas distribution system and the need to earn a fair and reasonable return on
6 those investments and to continue to attract capital at reasonable rates.

7 **Q. PLEASE BRIEFLY DESCRIBE ELIZABETHTOWN’S FILING IN THIS**
8 **PROCEEDING.**

9 **A.** Elizabethtown is seeking to increase its base delivery rates by approximately \$65 million
10 annually or approximately 21.4 percent above adjusted post-test year revenues. This
11 request is based on a proposed after tax return on invested capital of 7.60 percent, with a
12 capital structure that includes a common equity component of 52.50 percent and a return
13 on common equity of 10.40 percent. The proposed base rate increase will provide the
14 Company with the opportunity to recover its reasonable cost of service and earn a fair
15 return on the capital invested in Elizabethtown’s distribution system. Elizabethtown and
16 its parent companies, SJI and SJIU, are fully committed to continued investment in
17 Elizabethtown’s utility operations in a manner and at a level that will allow the Company
18 to continue to provide its customers with safe and reliable service.

19 **Q. HOW DO CUSTOMER BILLS THAT WOULD RESULT FROM THIS FILING**
20 **COMPARE TO THE BILLS CHARGED BY ELIZABETHTOWN IN THE PAST?**

21 **A.** Even with the rate increase proposed in this filing, average monthly bills would be
22 approximately 10.1 percent lower for a residential heat customer using 100 therms than
23 they were a decade ago. In 2009, our overall bill for a residential heat customer using

100 therms was \$124.93. By contrast, the rates proposed here would result in a 100 therm bill of \$112.29. Stated another way, the rates proposed in this proceeding, while reflecting substantial capital investments made since our last rate case, nonetheless result in an overall bill that is \$12.64 less than it was in 2009.

Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE COMPANY AND ITS MISSION.

A. Elizabethtown provides natural gas distribution service to approximately 295,000 residential, commercial and industrial customers in New Jersey in parts of Union, Middlesex, Sussex, Warren, Hunterdon, Morris and Mercer counties. Elizabethtown's service territory covers approximately 1,500 square miles and its distribution system consists of over 3,200 miles of mains.

Q. PLEASE DESCRIBE ELIZABETHTOWN'S POSITION WITHIN THE SJI FAMILY OF COMPANIES.

A. Elizabethtown is a wholly owned subsidiary of SJIU, which in turn is a wholly owned subsidiary of SJI. SJI is a publicly traded energy services holding company. As I noted above, on July 1, 2018, SJI acquired the assets of Elizabethtown. Under SJI's management structure, the President of Elizabethtown reports to the President of SJIU, but Elizabethtown retains a great deal of autonomy to manage its day-to-day operations.

Q. PLEASE DESCRIBE SJI'S PHILOSOPHY FOR MANAGING ITS UTILITY OPERATIONS, INCLUDING THOSE OF ELIZABETHTOWN.

A. SJI is committed to providing its customers with superior, reliable utility service while contributing to New Jersey's social and environmental needs. In managing its utility businesses, SJI acts to ensure that its individual utilities are focused on three core values:

1 an overriding commitment to excellent customer service; robust investment in utility
2 infrastructure to ensure safety, reliability and resiliency; and the consistent provision of
3 safe and reliable service at just and reasonable rates. SJI believes that the best way to
4 promote this focus is to afford its individual utilities the ability to make local operational
5 decisions, including preparing their own capital and operations and maintenance expense
6 budgets. SJI's role is to offer strategic direction and assistance, whether financial,
7 operational or otherwise, to ensure that each of its utilities performs in a consistently
8 excellent manner. As we continue to integrate Elizabethtown into SJI, we believe that
9 our management approach will benefit Elizabethtown and its customers.

10 **Q. HAS THE ACQUISITION OF ELIZABETHOWN BY SJI PRODUCED ANY**
11 **BENEFITS FOR ELIZABETHTOWN'S CUSTOMERS?**

12 **A.** Yes, our customers experienced an immediate and quantifiable benefit as a result of the
13 acquisition. In the stipulation approved by the June 22 Order, SJI agreed to enable
14 Elizabethtown to provide a one-time bill credit to all its customers totaling \$15 million.
15 The provision of that credit to all customers was completed in September 2018.

16 **Q. WERE THE EMPLOYEE-RELATED COMMITMENTS MADE BY SJI IN**
17 **CONNECTION WITH THE ACQUISITION SATISFIED?**

18 **A.** Yes. Prior to closing, SJI extended offers of employment to all then current
19 Elizabethtown employees and we have honored all of the collective bargaining
20 agreements that were in effect at the time of closing of the acquisition. It has been my
21 privilege to welcome the Elizabethtown employees into the SJI family and I am very
22 pleased with how they have integrated into the organization.

1 **Q. HAS ELIZABETHTOWN HIRED ANY EMPLOYEES TO PERFORM**
2 **FUNCTIONS PREVIOUSLY PERFORMED BY THE SOUTHERN SERVICE**
3 **COMPANY?**

4 **A.** As part of the acquisition, SJI agreed that, subject to operational needs, it would add new
5 employees to perform functions previously performed by employees of Southern in the
6 areas of customer experience, dispatch, engineering, compliance and construction
7 operations. That hiring process has begun and by the end of the post-test year period we
8 expect to have onboarded new full time employees that will fill positions previously held
9 by Southern employees out of State. Relatedly, we are bringing the utility dispatch
10 function back to New Jersey. This timeline dovetails with our exit off the Transition
11 Services Agreement (“TSA”) that is currently in place with Southern. To effectuate a
12 smooth transition of Elizabethtown’s operations from Southern to the SJI family, SJI
13 entered into the TSA under which Southern provides certain services to Elizabethtown at
14 cost. These services include Information Technology (“IT”), finance, gas control, gas
15 supply, gas operations, supply chain, dispatch customer experience (*i.e.* billing/credit and
16 collections) and claims management services. SJI and SJIU will assume responsibility
17 for providing these services to Elizabethtown by January 2020. Elizabethtown also
18 receives or will receive various shared services from SJI and SJIU. These services
19 include administrative, corporate communications, government and community relations,
20 human resources, insurance, IT, legal, accounting, auditing, rates/regulatory and gas
21 supply management services.

1 **Q. HOW DOES SJI SUPPORT ELIZABETHTOWN'S ACTIVE ROLE IN THE**
2 **COMMUNITIES IT SERVICES?**

3 **A.** SJI recognizes that local natural gas utilities such as Elizabethtown have a unique
4 responsibility to their customers, employees, communities and the public. SJI believes in
5 commitment to the community and has provided significant financial support to local
6 nonprofit, civic, and business and commerce organizations. Since January 2018, SJI and
7 its subsidiaries, including Elizabethtown, have provided over \$1 million dollars in
8 support to these types of organizations. A culture based on safety, reliability, customer
9 service and giving back to the community is woven throughout Elizabethtown and the
10 rest of the SJI family of companies. This culture is exemplified by the substantial
11 investments that have and will be made to modernize and improve the safety, reliability
12 and resiliency of Elizabethtown's natural gas distribution system. This culture is further
13 exemplified by SJI and Elizabethtown's continued involvement in, and financial
14 contributions to the communities we serve. In accordance with the commitment made in
15 connection with the BPU's approval of the acquisition, Elizabethtown will continue to
16 provide community support contributions of at least \$190,000 per year for the next five
17 years and Elizabethtown employees have continued to participate actively in many
18 different community and non-profit organizations in the communities we serve. For
19 example, this year, Elizabethtown has financially supported the Union County College
20 Foundation and the Union County Performing Arts Center and has committed funds to
21 Groundwork Elizabeth, a local non-profit organization that works to enhance the quality
22 of life for underserved populations. Since the acquisition, Elizabethtown has also
23 engaged in many community activities, including providing support to food banks and

1 participating in holiday food, clothing and toy drives. Indeed, our contributions were
2 recently recognized by The Gateway Regional Chamber of Commerce, which awarded
3 Elizabethtown Large Company of the Year at its 106th Annual Awards Gala.

4 **Q. DOES ELIZABETHTOWN PROVIDE SUPPORT TO LOW INCOME**
5 **CUSTOMERS?**

6 **A.** Yes, Elizabethtown partners with providers to promote financial assistance to those in
7 need through low income assistance programs, including the Low-Income Home Energy
8 Assistance Program (“LIHEAP”), Payment Assistance for Gas and Electric (“PAGE”),
9 Lifeline, Comfort Partners and NJ SHARES, as well as other grants and relief funds
10 administered by our State and Federal agency partners. These programs provided over
11 24,000 eligible households served by Elizabethtown with nearly six million dollars in
12 2018. This year, our Energy Assistance Outreach team hosted a series of Enrollment
13 Days at Elizabethtown, bringing energy assistance and weatherization programs together
14 to screen customers for multiple programs in one visit. Elizabethtown introduced a pilot
15 program to increase LIHEAP emergency assistance participation in 2018. The pilot
16 focused on proactive communications with eligible customers. As a result, 1,478
17 Elizabethtown customers were able to maintain or restore their natural gas service – a
18 42% increase in participation, compared to the prior year.

19 Elizabethtown offers energy assistance training to all customer-facing employees.
20 The Company also promotes energy assistance, along with money saving efficiency
21 measures, through its website, customer newsletters, bill inserts, press releases and social
22 media accounts. To complement this effort, our Energy Assistance Outreach team hosted
23 or participated in 62 outreach events in 2018 to help raise awareness concerning energy

1 assistance efforts and availability. These critically important initiatives offer a path to
2 utility bill relief for our customers and neighbors in need – keeping them connected to the
3 natural gas service that supports their heating, hot water and cooking needs.

4 **Q. WHAT IS ELIZABETHTOWN’S OPERATIONAL FOCUS?**

5 **A.** The three core values discussed earlier in my testimony are Elizabethtown’s operational
6 focus. Consistent with this focus, over the past several years, Elizabethtown has
7 undertaken a number of accelerated infrastructure replacement projects with the
8 cooperation and consideration of the Board to ensure the continued safe and reliable
9 operation of the Company’s distribution system. The Company proposes to continue
10 these efforts through both the investments discussed in this filing as well as through the
11 implementation of its proposed Infrastructure Investment Program (“IIP”) under which
12 the Company plans, once approved by the Board, to invest approximately \$518 million
13 over the next five years to replace the Company’s vintage, at-risk infrastructure.

14 **Q. CAN YOU PROVIDE AN EXAMPLE OF HOW SJI ENCOURAGES ITS**
15 **UTILITIES TO ACHIEVE OPERATIONAL EXCELLENCE?**

16 **A.** Elizabethtown’s parent, SJIU, participates in the AGA Best Practices Benchmarking
17 Program which provides a means for gas utilities to survey other members on specific
18 operational issues and evaluate themselves internally. SJIU also participates in the AGA
19 Peer Review Program, which is a voluntary peer-to-peer safety and operational practices
20 review program that allows local natural gas utilities throughout the nation to observe
21 their peers, share best practices and identify opportunities to better serve their customers
22 and communities. As part of the Peer Review Program, subject matter experts from peer
23 companies evaluate other participating companies with the objective of gaining an

1 understanding of the utility's practices, procedures and standards in an effort to identify
2 strengths and leading indicators, as well as to identify areas that could be improved where
3 appropriate.

4 **Q. WHAT ARE SOME NOTABLE ACHIEVEMENTS AND AWARDS RELATED**
5 **TO ELIZABETHTOWN'S OPERATIONAL PERFORMANCE?**

6 **A.** Elizabethtown is a recognized leader in delivering customer satisfaction. Annually, since
7 2015, Elizabethtown has been ranked first in customer satisfaction by JD Power and
8 Associates for gas utilities in the East Region Midsize Segment. In addition, in 2017
9 Elizabethtown was provided a "Partner of the Year Award" from the City of Perth
10 Amboy in which Elizabethtown was recognized for providing safe and reliable service to
11 customers throughout the region.

12 **Q. HAS THE QUALITY OF ELIZABETHTOWN'S OPERATIONAL**
13 **PERFORMANCE BEEN ACKNOWLEDGED BY ITS PEERS?**

14 **A.** Elizabethtown was recognized for admirable performance in support of the Columbia
15 Gas regional incident that occurred in the Fall of 2018. Over 30 utility employees from
16 Elizabethtown deployed to Massachusetts for four weeks on a mutual aid request from
17 the Northeast Gas Association. Employees assisted with safety inspections and
18 restoration of gas service to thousands of residents in the Merrimack Valley region of
19 Massachusetts. Both Columbia Gas and the Northeast Gas Association officials
20 recognized the professionalism and commitment of our employees. In addition, in
21 January 2019 Elizabethtown deployed several employees to Rhode Island to assist
22 National Grid with a mass outage effort. Utility employees assisted National Grid with

1 restoration of gas services to affected customers for 3 days. Both National Grid and the
2 Northeast Gas Association recognized Elizabethtown for the excellent support.

3 **Q. WHAT ARE SOME OTHER INDICATORS OF ELIZABETHTOWN'S**
4 **CUSTOMER SERVICE PERFORMANCE?**

5 **A.** Elizabethtown has consistently performed well in the area of reading meters in a timely
6 manner, and it consistently has had very low rebills per one thousand customers. The
7 response to leak calls has also been at or near a 95 percent benchmark since the
8 Company's last rate case and the percent of customer service appointments met has also
9 been consistently high. The Company's field representatives also continually receive
10 high marks in the customer satisfaction surveys conducted by the Company for both
11 courtesy and knowledge. Overall customer service agent quality scores, which are based
12 on 19 customer service and functional expertise criteria, have also been at high levels and
13 continue to improve.

14 **Q. PLEASE INTRODUCE THE OTHER WITNESSES PROVIDING TESTIMONY**
15 **IN SUPPORT OF ELIZABETHTOWN'S FILING IN THIS PROCEEDING.**

16 **A.** The other witnesses and the subjects addressed in their testimony are as follows:

- 17 • Stefany Graham, Manager, Rates and Regulatory Initiatives, SJI Utilities, Inc.,
18 addresses revenue requirement and related items;
- 19 • Michael P. Scacifero, Director, Engineering Services, Elizabethtown Gas
20 Company, addresses capital expenditures;
- 21 • Nickolaos Ntelekos, Director of Accounting, South Jersey Industries, Inc.,
22 sponsors certain accounting and related information;

- Leonard Brinson, Jr., Vice President and Chief Information Officer, South Jersey Industries, Inc., discusses IT initiatives and investments by the Company;
- Robert B. Hevert of ScottMadden, Inc. discusses cost of capital issues including the proposed return on equity, capital structure and overall cost of capital;
- Timothy S. Lyons of ScottMadden, Inc. sponsors the Company's lead/lag study;
- Alan D. Felsenthal of PricewaterhouseCoopers LLP addresses certain tax issues;
- Dane A. Watson of Alliance Consulting Group presents the Company's depreciation proposals;
- Thomas P. Kaufmann, Manager of Rates and Tariffs, Elizabethtown Gas Company, presents the Company's revenue forecast and sponsors the Company's revised tariff; and
- Daniel P. Yardley of Yardley and Associates presents the Company's embedded cost of service study and proposed rate design.

IV. CONCLUSION

Q. DO YOU HAVE ANY CONCLUDING REMARKS?

A. Yes. Elizabethtown has and continues to manage its operations responsibly and effectively to uphold its commitment to provide superior service to our customers at reasonable rates. We must now be afforded the opportunity to earn a reasonable return on investments made since the Company's last base rate case proceeding. The Company has made significant and prudent investments to our system, which will ensure ongoing reliable natural gas service to our customers. I respectfully request that the Board provide Elizabethtown with the opportunity to earn a fair return on its investments and grant our requested rate relief at this time.

1 **Q.** **DOES THIS CONCLUDE YOUR TESTIMONY?**

2 **A.** Yes. It does.

**IN THE MATTER OF THE PETITION OF
ELIZABETHTOWN GAS COMPANY FOR APPROVAL OF
INCREASED BASE TARIFF RATES AND CHARGES
FOR GAS SERVICE, CHANGES TO DEPRECIATION
RATES AND OTHER TARIFF REVISIONS**

BPU DOCKET NO. GR19_____

DIRECT TESTIMONY

OF

STEFANY M. GRAHAM

**Manager, Rates and Regulatory Initiatives
SJI Utilities, Inc.**

**On Behalf of
Elizabethtown Gas Company**

Exhibit P-3

April 18, 2019

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**ELIZABETHTOWN GAS COMPANY
DIRECT TESTIMONY OF
STEFANY M. GRAHAM**

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, AFFILIATION AND BUSINESS ADDRESS.

A. My name is Stefany M. Graham and I am Manager, Rates and Regulatory Initiatives for SJI Utilities (“SJIU”). My business address is One South Jersey Place, Atlantic City, NJ 08401.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND INDUSTRY RELATED EXPERIENCE.

A. I received a Bachelor of Science Degree in Accounting from Pennsylvania State University in 2011 and obtained a Masters in Business Administration Degree with a concentration in Finance from Drexel University in 2015. In October 2014, I joined the Internal Audit Department at South Jersey Industries, Inc. (“SJI”), and subsequently accepted the role of Senior Rate Analyst in the Rates and Revenue Requirement Department in May 2015. In December 2017, I was promoted to Manager, Rates and Regulatory Initiatives for South Jersey Gas Company (“SJG”) and most recently appointed to my current role as Manager, Rates and Regulatory Initiatives for SJIU overseeing Rates and Regulatory Initiatives for Elizabethtown Gas Company (“Elizabethtown” or the “Company”) and its sister New Jersey public utility, SJG as well as Elkton Gas Company in Maryland. In my current role, I manage the Company’s Rate Department activities, including the preparation and coordination of all rate case, revenue-related and other filings before the New Jersey Board of Public Utilities (“BPU” or the “Board”). Prior to my employment at SJI, I worked for the Big Four public accounting firm of Deloitte, LLP as an auditor for a diverse client base,

as well as in the Internal Audit Department at Virtua Health. I am a member of the American Gas Association (“AGA”) and the New Jersey Utilities Association (“NJUA”), where I serve on the Finance and Regulations Committee.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to support the Company’s revenue requirement calculation in this case, which is based on a test year ending August 31, 2019, including *pro forma* adjustments to the test year Income Statement and Statement of Rate Base. In support of the revenue requirement, I explain *pro forma* adjustments to test year revenues, cost of gas and operations and maintenance (“O&M”) expense, as well as the rate base calculation. I will also address Elizabethtown’s compliance with requirements from the Board’s Order approving SJI’s acquisition of the assets of Elizabethtown.

Q. DO YOU SPONSOR ANY SCHEDULES IN YOUR DIRECT TESTIMONY?

A. Yes. I am sponsoring the following Schedules, supporting the Company’s calculation of its revenue requirement and rate base:

- Schedule SMG-1 – Revenue Requirement;
- Schedule SMG-2 – Statement of Rate Base;
- Schedule SMG-3 – Operating Income Statement;
- Schedule SMG-4 – Summary of *Pro Forma* Adjustments to Operating Income; and
- Schedule SMG-5 – Derivation of Revenue Expansion Factor.

The *pro forma* adjustments to the test year income statement and statement of rate base are also reflected on my Schedules as follows:

- Schedule SMG-6 – Summary of Revenue and Cost of Gas Adjustments;

- Schedule SMG-7 – Rider Adjustment;
- Schedule SMG-8 – Summary of O&M Adjustments;
- Schedule SMG-9 – Payroll Expense;
- Schedule SMG-10 – Employee Benefits Expense;
- Schedule SMG-11 – Allocated Service Company Expense;
- Schedule SMG-12 – Rate Case Expense;
- Schedule SMG-13 – Other O&M Expense;
- Schedule SMG-14 – Inflation Adjustment;
- Schedule SMG-15 – Revenue Taxes;
- Schedule SMG-16 – Customer Deposits;
- Schedule SMG-17.1 – Cash Working Capital (Test Year);
- Schedule SMG-17.2 – Cash Working Capital (Post-Test Year); and
- Schedule SMG-18 – Inventories.

III. TEST YEAR

Q. WHAT TEST YEAR PERIOD IS ELIZABETHTOWN USING TO DETERMINE THE REVENUE REQUIREMENT IN THIS PROCEEDING?

A. Elizabethtown’s test year is the twelve months ending August 31, 2019. This filing utilizes six months of actual data ending February 28, 2019 and six months of estimated data through August 31, 2019. The actual data has been obtained from the Company’s books and records. Generally, the estimated data has been extracted from the Company’s operating and capital budgets and forecasts. The estimated data will be replaced with actual data as the case progresses, ultimately containing all actual results in the 12-month update.

1 **Q. HAS ELIZABETHTOWN INCLUDED ANY POST-TEST YEAR ADJUSTMENTS**
2 **IN THE DETERMINATION OF THE PROPOSED REVENUE REQUIREMENT?**

3 **A.** Yes. Elizabethtown is proposing to reflect changes in certain capital expenditures through
4 February 29, 2020 and changes in certain revenues and expenses through May 31, 2020,
5 as described later in my testimony as well as in the Direct Testimony of Messrs. Michael
6 P. Scacifero (Exhibit P-4) and Thomas Kaufmann (Exhibit P-11). Including these post-
7 test year adjustments is consistent with standards previously adopted by the Board and
8 provides for an annualization and/or adjustment of revenues, expenses and capital
9 expenditures through the time period in which rates are expected to be in effect.
10 Specifically, the Board's policy concerning post-test year adjustments, as set forth in its
11 order *Re Elizabethtown Water Company*, Docket No. WR8504330, is that utilities are
12 afforded an opportunity to make a record concerning known and measurable changes to
13 expenses and revenues that are nine months beyond the test year and for changes in rate
14 base items that are six months beyond the test year. The post-test year adjustments included
15 in this case are within these parameters. The post-test year adjustments to rate base and
16 operating income are provided in Schedules SMG-2 and SMG-3, respectively.

17 **Q. PLEASE DESCRIBE THE CORPORATE RELATIONSHIP BETWEEN**
18 **ELIZABETHTOWN AND SJI.**

19 **A.** Elizabethtown is a wholly owned subsidiary of SJIU, which in turn is a wholly owned
20 subsidiary of SJI. SJIU owns and operates three utilities, including Elizabethtown. SJIU
21 and SJI provide a variety of shared administrative services to Elizabethtown and other
22 affiliates. Elizabethtown was authorized by the Board to enter into services agreements
23 with SJIU and SJI when the Board approved SJI's acquisition of Elizabethtown's assets.

Shared services costs are assessed to Elizabethtown by SJIU and SJI in accordance with the cost assignment methodologies set forth in the services agreement.

Q. WERE THE COSTS INCURRED FROM SJIU AND SJI THAT ARE INCLUDED IN ELIZABETHTOWN'S REVENUE REQUIREMENT PROJECTED IN A MANNER CONSISTENT WITH THE PROJECTIONS FOR ELIZABETHTOWN?

A. Yes. All affiliate costs reflected in Elizabethtown's filing were based on six months of actual financial information for the period ending February 28, 2019 and six months of estimated data through August 31, 2019. The Company also included post-test year adjustments for known and measurable changes in costs by applying the same criteria used to determine such adjustments for Elizabethtown itself.

IV. REVENUE REQUIREMENT

Q. HOW HAVE YOU CALCULATED THE REVENUE REQUIREMENT AND THE ASSOCIATED REVENUE DEFICIENCY?

A. Schedule SMG-1, attached hereto, reflects the calculation of Elizabethtown's requested additional operating revenue of \$65,027,481, as supported by Company witnesses in this case.

Schedule SMG-1, Line 2, reflects the adjusted rate base of \$1,103,568,748, which is calculated on Schedule SMG-2. Schedule SMG-2 reflects the adjustments made to specific rate base elements and provides a reference to the Schedules sponsored by each witness supporting the adjustment. The proposed rate of return on rate base of 7.60% is sponsored by Mr. Robert B. Hevert (Exhibit P-7).

Schedule SMG-1, Line 8, reflects the adjusted net operating income of \$37,671,088, which is calculated on Schedule SMG-3. Schedule SMG-4 summarizes the

1 *pro forma* adjustments to net operating income, including references for each adjustment
 2 as sponsored by a Company witness in this case.

3 Schedule SMG-1, Line 10, shows an income deficiency of \$46,224,967, which is
 4 grossed up for taxes by a revenue expansion factor of 1.406761, shown in line 12, resulting
 5 in net operating revenue requirement increase of \$65,027,481, shown in line 14.

6 **Q. HOW IS THE REVENUE EXPANSION FACTOR CALCULATED?**

7 **A.** Schedule SMG-5 depicts the derivation of the revenue expansion factor of 1.406761 used
 8 to convert the income deficiency into the revenue requirement of \$65,027,481. The
 9 revenue factor includes adjustments for BPU and Rate Counsel (“RC”) Assessments, bad
 10 debt allowance (“Uncollectibles”), State Income Tax, and Federal Income Tax. Each of
 11 these components must be reflected in this factor in order for the Company to recover each
 12 incremental dollar of income from the required revenue increase.

13 **V. OPERATING INCOME**

14 **Q. PLEASE OUTLINE AND EXPLAIN THE REVENUE AND COST OF GAS**
 15 **ADJUSTMENTS THE COMPANY IS PROPOSING TO MAKE IN THIS FILING.**

16 **A. Pro Forma Revenue and Cost of Gas Adjustments:** Schedule SMG-6 summarizes the *pro*
 17 *forma* revenue and cost of gas adjustments supported by various witnesses in this case and
 18 provides a reference to the schedules sponsored by each witness. The sum of the revenue
 19 adjustments, (\$5,412,533), is reflected in line 1 of Schedule SMG-3 (Operating Income
 20 Statement). The sum of the cost of gas adjustments, (\$5,708,680), is reflected in line 5 of
 21 Schedule SMG-3.

22 **Rider Adjustment:** Schedule SMG-7 reflects the adjustment to revenues and cost of gas
 23 for the Company’s Tariff Riders including the Energy Efficiency Program (“EEP”),

1 Remediation Adjustment Clause (“RAC”), Clean Energy Program (“CLE”), and On-
2 system Margin Clause (“OSMC”). These programs and the associated riders are designed
3 to be adjusted outside of a base rate case. As such, we have removed the revenue and cost
4 of gas associated with these riders from the *pro forma* income statement in this case. The
5 revenue adjustment of (\$7,392,448) and the cost of gas adjustment of (\$7,160,342) million
6 are summarized on Schedule SMG-6.

7 **Customer Annualization:** The methodologies used for annualization and normalization
8 adjustments are discussed in further detail in the Direct Testimony of Mr. Kaufmann
9 (Exhibit P-11). Schedule TK-2.1 reflects an adjustment to annualize revenues based on the
10 projected customer count as of the end of the proposed post-test year -- May 31, 2020. The
11 result of this annualization is an increase in revenue of \$2,044,612 and an increase in the
12 cost of gas of \$1,451,662. The adjustments to revenue and cost of gas are summarized on
13 Schedule SMG-6.

14 **Weather Normalization Clause (WNC):** The WNC revenue adjustment and proposed
15 WNC Rider are discussed in further detail by Company Witness Mr. Kaufmann. Schedule
16 TK-5 reflects a calculation to adjust the actual WNC revenues from 20 year normalized
17 weather to the Company’s proposed 10 year normalized weather. The result of this
18 adjustment is a decrease in revenue of (\$64,697), which is summarized on Schedule
19 SMG-6.

20 **Q. PLEASE OUTLINE AND EXPLAIN THE O&M ADJUSTMENTS THE**
21 **COMPANY IS PROPOSING TO MAKE IN THIS FILING.**

22 **A. Summary of Pro Forma O&M Expense Adjustments:** Schedule SMG-8 provides a
23 summary of *pro forma* O&M expense adjustments, as well as associated Schedule

1 references. The sum of the O&M expense adjustments, \$6,748,029, is reflected on line 7
2 of Schedule SMG-3 (Operating Income Statement).

3 **Payroll Expense:** Schedule SMG-9 identifies the Company's *pro forma* adjustments for
4 employee payroll changes and employee annualization. The resulting increase to fixed
5 compensation expense based on anticipated additions and separations during the test year
6 period, as well as projected post-test year wage increases, totals \$1,827,870 and is
7 summarized on Schedule SMG-8. The payroll expense for all non-union and union
8 employees of Elizabethtown is expected to increase by 3 percent effective February 1,
9 2020. The FICA adjustment of \$139,832 reflected on Schedule SMG-9, line 7, is included
10 in Taxes other than Income shown on Schedule SMG-3, line 11.

11 **Employee Benefits Expense:** Schedule SMG-10 reflects the *pro forma* adjustment to
12 annualize healthcare benefits based on the anticipated net additions and separations
13 identified in the payroll expense adjustment discussed above. The total employee benefit
14 expense adjustment of \$642,985 is summarized on Schedule SMG-8.

15 **Allocated Service Company Salaries and Benefit Expense:** Schedule SMG-11 identifies
16 the Company's *pro forma* adjustment to annualize salaries and benefits allocated directly
17 from the service companies, SJI and SJIU. The resulting increase to allocated expense
18 based on anticipated additions and separations during the test year period, as well as
19 projected post-test year wage increases, totals \$2,746,420 and is summarized on Schedule
20 SMG-8. The payroll expense for all employees of SJI and SJIU reflects a 3 percent
21 increase.

22 **Rate Case Expense:** Schedule SMG-12 reflects the *pro forma* adjustment made for
23 expenses related to this proceeding. This adjustment includes the projected costs of legal

1 and consultant expenses, newspaper notices, court reporting, postage and other
2 miscellaneous expenses. These expenses are projected to total \$1,609,100. Consistent
3 with Board policy, the Company proposes to amortize fifty percent of these expenses, or
4 \$804,550, over a three-year period. This adjustment equates to \$268,183 and is
5 summarized on Schedule SMG-8.

6 **Other O&M Expense:** Schedule SMG-13 reflects *pro forma* adjustments for an increase
7 in costs related to lease expense associated with the cost of a new lease for the
8 Elizabethtown payment center in Elizabeth, as well as an increase in vendor costs
9 associated with the maintenance and support of Electronic Data Interchange (“EDI”)
10 processes. The sum of these adjustments is \$230,592 and is summarized on Schedule
11 SMG-8.

12 **Inflation Adjustment:** Schedule SMG-14 reflects a *pro forma* adjustment for inflation on
13 residual O&M expenses. The residual amount of O&M expense is calculated as the total
14 post-test year O&M expense, less expenses that are subsequently adjusted for known and
15 measurable items or that otherwise are not subject to inflation, such as uncollectibles
16 expense. The resulting residual O&M expense was multiplied by an inflation factor of
17 2.68 percent to develop the known and measurable inflation allowance. The inflation factor
18 was developed based on the Energy Information Administration’s average projected Gross
19 Domestic Product-Price Index (“GDP-PI”) for the end of the post-test year period
20 compared to the GDP-PI at the mid-point of the test year. The total inflation adjustment is
21 \$1,031,978 and is summarized on Schedule SMG-8.

1 **Q. PLEASE DESCRIBE THE DEPRECIATION ADJUSTMENTS THE COMPANY IS**
2 **PROPOSING TO MAKE IN THIS FILING.**

3 **A.** The *pro forma* adjustments to depreciation and amortization expense, Schedule SMG-3
4 line 9, and accumulated depreciation and amortization, Schedule SMG-2 line 2, are set
5 forth on Schedule NN-8 and discussed in further detail in the Direct Testimony of Mr.
6 Nickolaos Ntelekos (Exhibit P-5). The changes to depreciation rates reflected in the
7 proposed depreciation expense are based on the results of a study prepared by Company
8 witness Mr. Dane Watson (Exhibit P-10).

9 **Q. PLEASE OUTLINE AND EXPLAIN THE TAXES OTHER THAN INCOME TAX**
10 **ADJUSTMENTS THE COMPANY IS PROPOSING TO MAKE IN THIS FILING.**

11 **A.** The sum of the Taxes Other Than Income Tax adjustment, \$125,503, is reflected on line
12 11 of Schedule SMG-3 (Operating Income Statement) and described in more detail below.

13 **Payroll Taxes:** As discussed above, Schedule SMG-9 calculates the projected increase in
14 payroll taxes based on anticipated employee payroll changes and employee annualization.
15 The total adjustment is \$139,832.

16 **Revenue Taxes:** Schedule SMG-15 reflects the Public Utility Assessment (“PUA”) tax
17 adjustments as a result of revenue adjustments related to Tariff Rider adjustments,
18 customer annualization, and WNC, which are summarized in Schedule SMG-6. The total
19 proposed revenue adjustment is multiplied by the proposed PUA assessment rate of
20 \$0.002647, which is the sum of the BPU and RC assessments reflected in the revenue
21 expansion factor shown on Schedule SMG-5. The total adjustment is a decrease of
22 (\$14,329) to Taxes Other than Income.

1 **Q. PLEASE EXPLAIN THE RATEMAKING ADJUSTMENT FOR INTEREST ON**
2 **CUSTOMER DEPOSITS.**

3 **A.** The adjustment for interest on customer deposits is detailed on Schedule SMG-16. Interest
4 expense, in accordance with Generally Accepted Accounting Principles, is booked below
5 the line, but interest on customer deposits has been moved above the line for ratemaking
6 purposes. This adjustment is appropriate when customer deposits are used to reduce rate
7 base as a customer supplied source of capital, as we have done in this case. The projected
8 test year interest to be paid to customers is \$54,755, based on a 0.87% 2018 interest rate
9 and a 1.87% 2019 interest rate. These rates are contained in the current Board regulations
10 *N.J.A.C. 14:3-3.5(d)*. Based on the anticipated customer deposits at post-test year end May
11 2020, and utilizing the interest rate of 1.87%, the projected annualized interest on customer
12 deposits is \$68,824, as reflected on Schedule SMG-16, line 30. When compared to the test
13 year projected interest, as summarized on Lines 36-40, a *pro forma* adjustment in the
14 amount of \$14,069 is necessary and included on Schedule SMG-3, line 22.

15 **Q. PLEASE EXPLAIN THE EXCESS DEFERRED TAX AMORTIZATION**
16 **ADJUSTMENTS REFLECTED ON SCHEDULE SMG-3.**

17 **A.** The Excess Deferred Tax Amortization shown on Schedule SMG-3, line 13, reflects the
18 Company's refund of excess deferred taxes resulting from the 2017 Tax Cuts and Jobs Act.
19 The excess deferred tax balance and related amortizations are discussed in further detail in
20 the Direct Testimony of Company witness Mr. Alan Felsenthal (Exhibit P-9).

1 Q. PLEASE EXPLAIN THE FEDERAL AND STATE INCOME TAX
2 ADJUSTMENTS REFLECTED ON SCHEDULE SMG-3.

3 A. The *pro forma* adjustment to Federal and State Income Tax expense, Schedule SMG-3 line
4 15, includes an interest synchronization adjustment as well as the income tax effect on all
5 *pro forma* adjustments identified previously and reflected on Schedule SMG-4. The
6 interest synchronization adjustment is calculated on Schedule NN-11 and discussed in
7 further detail by Company witness Mr. Ntelekos.

8 VI. RATE BASE

9 Q. PLEASE OUTLINE AND EXPLAIN THE RATE BASE ADJUSTMENTS THE
10 COMPANY IS PROPOSING TO MAKE IN THIS FILING.

11 A. Schedule SMG-2 summarizes the *pro forma* rate base adjustments supported by all
12 witnesses in this case and provides a reference to the schedules sponsored by each witness.

13 Utility Plant in Service (“UPIS”): The balance for UPIS was calculated starting with the
14 actual balance as of February 28, 2019. Forecast plant additions for the period March 2019
15 through August 2019 were then added and estimates for plant retirements for the same time
16 period were deducted to develop the estimated test year ending balance as of August 31,
17 2019. The Company also included forecast plant additions, reduced for plant retirements,
18 for the six-month post-test year period ending February 2020. The forecast plant additions
19 are discussed in further detail in the Direct Testimony of Company witness Mr. Scacifero
20 (Exhibit P-4) and Company witness Mr. Leonard Brinson (Exhibit P-6) and summarized
21 on Schedules MPS-1 through MPS-4.

22 Accumulated Depreciation & Amortization: The balance for accumulated depreciation
23 and amortization was calculated starting with the actual balance as of February 28, 2019,

1 as well as an acquisition adjustment discussed more fully by Company witness Mr.
2 Ntelekos. The balance was then adjusted by adding estimated depreciation expense and
3 subtracting estimated plant retirements and cost of removal for the period March 2019
4 through August 2019 to develop the estimated test year ending balance as of August 31,
5 2019. The Company also included a post-test year period adjustment to reflect estimated
6 depreciation expense, less projected plant retirements and cost of removal related to the
7 post-test year capital expenditures included in UPIS for the period September 2019 through
8 February 2020. The *pro forma* post-test year accumulated depreciation adjustment is
9 calculated on Schedule NN-8 and discussed in further detail by Company witness Mr.
10 Ntelekos.

11 **Pension and Other Post-Employment Benefits (“OPEB”):** The balance reflected on
12 SMG-2, line 6, reflects the accrued pension and OPEB balances, as well as the unamortized
13 pension and OPEB regulatory asset acquired from the Southern Company and established
14 in Elizabethtown’s prior rate case in Docket No. GR16090826. The pension and OPEB
15 adjustment is calculated on Schedule NN-12 and discussed in further detail by Mr.
16 Ntelekos.

17 **Cash Working Capital:** The test year and post-test year cash working capital balances are
18 calculated on Schedules SMG-17.1 and SMG-17.2, respectively, based on the lead-lag
19 study sponsored by Mr. Timothy Lyons (Exhibit P-8). Additionally, a 13-month average
20 of materials and supplies, stored gas inventory, liquefied natural gas inventory, and propane
21 inventory is set forth on Schedule SMG-18 and also included in the cash working capital
22 balance reflected on SMG-2, line 7. Utilizing a 13-month average for inventories allows
23 the Company to include a full year of activity and appropriately reflect seasonal

1 fluctuations in the account balance. The total adjusted cash working capital balance of
2 \$38,441,378 reflected on SMG-2, line 7, is calculated as the sum of the post-test year cash
3 working capital balance of \$22,333,239 (Schedule SMG-17.2) and the post-test year
4 inventory balance of \$16,108,139 (Schedule SMG-18).

5 **Customer Deposits:** Schedule SMG-2, line 8, reflects the Company's projected 13-month
6 average customer deposits for test year and post-test year periods. Projected customer
7 deposits are the product of the average deposit per customer and the number of customers
8 with deposits. Customer deposit adjustments are also summarized on Schedule SMG-16
9 lines 36-40 and are shown as a reduction to rate base on Schedule SMG-2, line 8.

10 **Deferred Income Taxes:** The test year deferred income tax balances were estimated using
11 the balances as of February 28, 2019 and then projected through August 31, 2019 for
12 changes to the components of the deferred income tax balances. Schedules NN-9 and NN-
13 10, sponsored by Company witness Mr. Ntelekos, reflect the post-test year rate base
14 adjustment to capture the increase in Federal and State deferred taxes for the period through
15 February 29, 2020. The Company has also included the Excess Deferred Income Tax
16 balance reflected on its books through February 29, 2020, as described by Company
17 witness Mr. Felsenthal. Deferred income tax adjustments are discussed in further detail in
18 the Direct Testimony of Company witness Mr. Ntelekos.

19 **Consolidated Tax Adjustment ("CTA"):** The Company's proposed statement of rate base
20 reflects a CTA of \$0 as described in further detail in the Direct Testimony of Mr. Felsenthal
21 (Exhibit P-9).

VII. REGULATORY ASSETS

Q. IS THE COMPANY PROPOSING TO ESTABLISH ANY NEW REGULATORY ASSETS IN THIS FILING THAT ARE NOT REFLECTED IN THE TEST YEAR?

A. Yes. As set forth in the Direct Testimony of Mr. Scacifero, there are currently certain federal pipeline safety regulations that are pending enactment that may significantly impact gas distribution operating costs involving transmission integrity management. Because these costs are not reflected in the test year or post-test year O&M expenditures, we are proposing to establish a regulatory asset in which the incremental costs associated with our transmission integrity management program ("TIMP") between rate cases will be tracked and deferred for later review and recovery in rates.

VIII. JUNE 22 ORDER REQUIREMENTS

Q. PLEASE DESCRIBE THE ACQUISITION TRANSACTION THAT OCCURRED SINCE ELIZABETHTOWN'S LAST RATE CASE.

A. In July 2018, SJI, through its affiliate, acquired substantially all of the assets of Pivotal Utility Holdings, Inc. d/b/a Elizabethtown Gas. That transaction (the "Acquisition") was approved in the Board's June 22, 2018 order in BPU Docket No. GM17121309 ("June 22 Order").

Q. DID THE JUNE 22 ORDER IMPOSE ANY CONDITIONS ON THE COMPANY'S FILING THAT YOU WILL BE ADDRESSING?

A. Yes. I will address the following conditions that were imposed by the June 22 Order:

- i. Any net savings realized by Elizabethtown through the Acquisition integration process will be flowed through to the Company's customers through the normal base rate case process;

1 ii. Elizabethtown will not seek recovery in rates of (a) any acquisition premium
2 associated with the Acquisition or any previous acquisition, (b) any costs
3 associated with goodwill arising from the Acquisition or any previous
4 acquisition, or (c) any Transaction Costs¹ incurred in connection with the
5 Acquisition;

6 iii. For a period of five (5) years following the Acquisition, the amount of costs
7 assessed to Elizabethtown or services provided by an affiliate shall be no greater
8 than they would have been had the Acquisition not occurred, regardless of
9 whether such services are provided directly or indirectly by SJI, SJIU, or any
10 other SJI affiliate.

11 Additional commitments not addressed here are described in the Direct Testimony of
12 witnesses Ms. McMullen and Mr. Hevert.

13 **Q. HAS ELIZABETHTOWN FLOWED THROUGH TO CUSTOMERS ANY NET**
14 **SAVINGS ARISING FROM THE ACQUISITION IN THE RATES PROPOSED IN**
15 **THIS PROCEEDING?**

16 **A.** Elizabethtown has not realized specific savings arising from the Acquisition. Therefore,
17 the Company has not made any adjustment to its cost of service related thereto.

18 **Q. IS ELIZABETHTOWN SEEKING TO RECOVER ANY ACQUISITION**
19 **PREMIUM OR TRANSACTION COSTS IN THIS PROCEEDING?**

¹ “Transaction Costs” are defined as (i) consultant, investment banker, legal and regulatory support fees (internal as well as external), and printing and similar expenses, (ii) change in control payments or (iii) any severance or retention costs. Transaction Costs also include SJI flotation expense (such as Underwriters fees) associated with common stock issuances undertaken to finance the Acquisition.

1 A. No. In addition, as discussed in the Direct Testimony of Mr. Hevert, Elizabethtown is not
2 seeking to recover goodwill arising from the Acquisition.

3 Q. PLEASE DESCRIBE THE REQUIREMENT RELATED TO AFFILIATE COSTS
4 ORDERED BY THE BOARD IN THE JUNE 22 ORDER.

5 A. Pursuant to the Stipulation approved by the June 22 Order, for a period five years following
6 the Acquisition, the amount of costs assessed to Elizabethtown for services provided by an
7 affiliate shall be no greater than they would have been had the Acquisition not occurred.

8 Q. IS THE COMPANY IN COMPLIANCE WITH THIS COMMITMENT?

9 A. Yes. The affiliate costs reflected in Elizabethtown's proposed cost of service total \$17.6
10 million. At the time of the Acquisition, Elizabethtown was incurring over \$20 million of
11 costs for services provided by affiliates.

12 IX. CONCLUSION

13 Q. PLEASE SUMMARIZE THE PRIMARY REASONS FOR ELIZABETHTOWN'S
14 ANNUAL REVENUE DEFICIENCY.

15 A. Since the Company's last base rate case, we have invested approximately \$83 million in
16 net plant additions that are not currently reflected in rates and are projecting that an
17 additional \$263 million will be added to the plant in service balance by February 29, 2020
18 to ensure that our customers continue to receive safe and reliable natural gas service. A
19 primary driver for rate relief in this proceeding is the value of Elizabethtown's investments
20 in our infrastructure and the Company's ability to earn a reasonable return on those
21 investments. Additionally, an increase in depreciation expense associated with a change
22 in depreciation rates as recommended by Company witness Mr. Watson contributes to the
23 incremental revenues requested herein. The Company's proposals in this case are just and

1 reasonable and should be adopted by the Board. Doing so will send a proper signal to the
2 financial community regarding New Jersey's regulatory environment and the financial
3 health and stability of the Company.

4 **Q. DOES THIS CONCLUDE YOUR PREPARED DIRECT TESTIMONY?**

5 **A. Yes, it does.**

ELIZABETHTOWN GAS COMPANY
REVENUE REQUIREMENT

<u>Line No.</u>			<u>REFERENCE</u>
1			
2	Adjusted Rate base	\$1,103,568,748	SMG-2
3			
4	Rate of Return	<u>7.60%</u>	
5			
6	Required Operating income	83,896,055	
7			
8	Adjusted Net Operating Income	<u>37,671,088</u>	SMG-3
9			
10	Income Deficiency	46,224,967	
11			
12	Revenue Factor	<u>1.406761</u>	SMG-5
13			
14	Requested Additional Operating Revenue	<u><u>\$65,027,481</u></u>	

ELIZABETHTOWN GAS COMPANY
STATEMENT OF RATE BASE

Line No.		ACTUAL RATE BASE 2/28/19	ADJUSTMENT 3/1/19-8/31/19	PROJECTED RATE BASE 8/31/19	PRO FORMA ADJUSTMENT	ADJUSTED RATE BASE 2/29/20	REFERENCE TO RATEMAKING ADJUSTMENTS
1	Utility Plant In Service	\$1,356,168,012	\$ 106,835,527	\$1,463,003,539	\$ 156,080,309	\$1,619,083,848	MPS-1
2	Accumulated Depreciation & Amortization	(467,321,229)	(1,918,641)	(\$469,239,870)	(9,456,722)	(\$478,696,592)	NN-8
3							
4	Net Utility Plant	888,846,783	104,916,886	993,763,669	146,623,587	1,140,387,256	
5							
6	Pension/OPEB	38,114,346	(1,164,311)	36,950,035	(1,164,311)	\$35,785,724	NN-12
7	Cash Working Capital	0	0	30,626,490	7,814,888	\$38,441,378	SMG-17, SMG-18
8	Customer Deposits ⁽¹⁾	(4,550,705)	898,212	(3,652,493)	5,186	(\$3,647,307)	SMG-16
9	Customer Advances ⁽¹⁾	(1,169,958)	0	(1,169,958)	0	(\$1,169,958)	
10	Deferred Income Taxes:						
11	Excess Protected ADIT	(82,578,177)	825,502	(81,752,675)	720,063	(\$81,032,611)	ADF-3
12	Federal Income Tax	(7,143,644)	(5,124,363)	(12,268,006)	(4,860,791)	(\$17,128,797)	NN-9
13	NJ CBT	(3,364,353)	(2,413,358)	(5,777,711)	(2,289,226)	(\$8,066,937)	NN-10
14	Consolidated Tax Adjustment	0	0	0	0	\$0	ADF-2
15							
16	Total Rate Base	\$828,154,292	\$97,938,569	\$956,719,351	\$146,849,397	\$1,103,568,748	

⁽¹⁾ Represents Thirteen Month Averages of Account Balances

ELIZABETHTOWN GAS COMPANY
OPERATING INCOME STATEMENT

Line No.		6 MONTHS ACTUAL DATA	6 MONTHS PROJECTED DATA	TEST YEAR ENDED 8/31/2019	PRO FORMA ADJUSTMENTS	POST TEST YEAR ENDED 5/31/2020	REVENUE DEFICIENCY	PRO FORMA POST TEST YEAR ENDED 5/31/2020
1	Operating Revenues	\$208,252,685	\$101,692,797	\$309,945,481	(\$5,412,533)	\$304,532,948	\$65,027,481	\$369,560,429
2								
3	Operating Expenses:							
4								
5	Purchased Gas	\$102,092,426	\$41,524,992	\$143,617,417	(\$5,708,680)	\$137,908,737	\$0	\$137,908,737
6								
7	Operation & Maintenance Exps.	\$38,147,634	\$34,823,447	\$72,971,080	6,748,029	\$79,719,109	\$555,755	\$80,274,864
8								
9	Depreciation & Amortization Exps.	\$15,157,785	\$16,088,341	\$31,246,127	\$11,881,049	\$43,127,176	\$0	\$43,127,176
10								
11	Taxes Other Than Income Taxes	\$1,830,019	\$1,915,639	\$3,745,658	\$125,503	\$3,871,161	\$172,148	\$4,043,309
12								
13	Excess Deferred Tax Amortization	(\$1,026,261)	(\$1,245,746)	(\$2,272,006)	(\$114,044)	(\$2,386,051)	\$0	(\$2,386,051)
14								
15	Federal Income Taxes & NJ CBT	\$11,038,114	(\$2,216,399)	\$8,821,715	(4,268,811)	\$4,552,903	\$18,074,611	\$22,627,515
16								
17	Total Operating Expenses	\$167,239,717	\$90,890,274	\$258,129,991	\$8,663,045	\$266,793,036	\$18,802,514	\$285,595,550
18								
19	Net Operating Income	\$41,012,968	\$10,802,523	\$51,815,490	(\$14,075,578)	\$37,739,912	\$46,224,967	\$83,964,879
20								
21	Ratemaking Adjustment:							
22	Interest on Customer Deposits	\$20,458	\$34,297	\$54,755	\$14,069	\$68,824	\$0	\$68,824
23								
24								
25	Adjusted Net Operating Income	\$40,992,510	\$10,768,226	\$51,760,735	(\$14,089,647)	\$37,671,088	\$46,224,967	\$83,896,055
26								
27	Total Rate Base			\$956,719,351		\$1,103,568,748		\$1,103,568,748
28								
29	Return on Rate Base			5.41%		3.41%		7.60%
30								
31	Adjusted Net Income			\$31,265,415		\$14,029,887		\$60,254,853
32								
33	Return on Equity			6.22%		2.42%		10.40%

ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENTS TO AUGUST 31, 2019 OPERATING INCOME

	Pro Forma Adjustments
1. Operating Revenues (SMG-6)	
(a) Remove Rider Revenues (SMG-7)	\$ (7,392,448)
(b) Adjust Revenues to Annualized Post Test Year (TK-2.1)	\$ 2,044,612
(c) Adjust Revenues for WNC (TK-5)	\$ (64,697)
	<u>(5,412,533)</u>
2. Purchased Gas Costs (SMG-6)	
(a) Remove Rider Amortizations (SMG-7)	\$ (7,160,342)
(b) Adjust Purchased Gas Cost to Annualized Post Test Year (TK-2.1)	\$ 1,451,662
	<u>(5,708,680)</u>
3. Operation and Maintenance expenses (SMG-8)	
(a) Annualization of Payroll (SMG-9)	\$ 1,827,870
(b) Annualization of Benefits (SMG-10)	\$ 642,985
(c) Annualization of Allocated Service Company Salaries & Benefits (SMG-11)	\$ 2,746,420
(d) Amortization of Rate Case expenses (SMG-12)	\$ 268,183
(e) Other Operations and Maintenance Expenses (SMG-13)	\$ 230,592
(f) Inflation Adjustment (SMG-14)	\$ 1,031,978
	<u>6,748,029</u>
4. Depreciation Expense (NN-8)	
(a) Annualize Test Year Depreciation Expense as of 8/31/2019 with proposed depreciation rates	\$ 4,974,900
(b) Annualize Post Test Year Depreciation Expense as of 2/29/2020 with proposed depreciation expense	\$ 6,906,150
	<u>11,881,049</u>
5. Taxes Other Than Income	
(a) Payroll Tax Adjustment (SMG-9)	\$ 139,832
(b) Adjustment for PUA (SMG-15)	\$ (14,329)
	<u>125,503</u>
6. Interest (SMG-16)	
(a) Adjust Interest on Customer Deposits by Average Yield on 6 month Treasury Bill	\$ 14,069
	<u>14,069</u>
7. Taxes - Income - Current	
(a) Interest Synchronization (NN-11)	\$ 923,809
(b) Income Tax effect of adjustments 1 - 6	\$ (5,192,620)
	<u>(4,268,811)</u>

ELIZABETHTOWN GAS COMPANY
DERIVATION OF REVENUE EXPANSION FACTOR

**Line
No.**

1	Additional Required Revenue Percentage		100.000%
2			
3	Percentage Adjustment for Uncollectibles		0.854646%
4	BPU Assessments		0.211768%
5	Rate Counsel Assessments		<u>0.052963%</u>
6			
7	Percentage of Income Before State Income Tax		98.88062%
8			
9	State Income Tax Percentage	9%	<u>8.8993%</u>
10			
11	Percentage of Income Before Federal Income Tax		89.9814%
12			
13	Federal Income Tax Percentage	21%	<u>18.896%</u>
14			
15	Revenue Expansion Factor - Percent		71.0853%
16			
17	Revenue Expansion Factor - Whole Number		<u><u>1.406761</u></u>

ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENT TO AUGUST 31, 2019 OPERATING INCOME
SUMMARY OF REVENUE & COST OF GAS ADJUSTMENTS

<u>Line No.</u>		<u>Therm Adjustments</u>	<u>Revenue Adjustments</u>	<u>Cost of Gas Adjustments</u>	<u>Reference</u>
1	Rider Adjustment	N/A	(\$7,392,448)	(\$7,160,342)	SMG-7
2	Customer Annualization	7,981,448	\$2,044,612	\$1,451,662	TK-2.1
3	WNC Revenue Adjustment	N/A	(\$64,697)	N/A	TK-5
4	Total Firm Revenue and Cost of Gas Adjustments	7,981,448	(5,412,533)	(5,708,680)	

ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENT TO AUGUST 31, 2019 OPERATING INCOME
RIDER ADJUSTMENTS: EEP, RAC, CLE, OSMC

Line No.	2018 Actual	2018 Actual	2018 Actual	2018 Actual	2019 Actual	2019 Actual	2019 Projected	2019 Projected	2019 Projected	2019 Projected	2019 Projected	2019 Projected	TOTAL
	September	October	November	December	January	February	March	April	May	June	July	August	
1 EEP Revenue Adjustment	\$ 824	\$ 2,007	\$ 4,056	\$ 234,416	\$ 135,399	\$ 145,725	\$ 69,074	\$ 70,033	\$ 71,313	\$ 72,642	\$ 74,685	\$ 85,209	\$ 965,383
2 RAC Revenue Adjustment	\$ (209,358)	\$ (273,444)	\$ (521,812)	\$ (795,668)	\$ (882,916)	\$ (1,000,244)	\$ 265,376	\$ 76,918	\$ (43,280)	\$ (80,728)	\$ (74,531)	\$ (70,223)	\$ (3,609,909)
3 CLE Revenue Adjustment	\$ 408,800	\$ 536,801	\$ 932,023	\$ 1,338,383	\$ 1,483,884	\$ 1,681,730	\$ 1,265,955	\$ 757,782	\$ 463,387	\$ 343,865	\$ 352,108	\$ 345,945	\$ 9,910,660
4 OSMC Revenue Adjustment	\$ 7,343	\$ 8,115	\$ 8,741	\$ 9,846	\$ 10,741	\$ 14,241	\$ 9,467	\$ 8,732	\$ 9,967	\$ 12,640	\$ 14,392	\$ 12,089	\$ 126,314
5 Total Revenue Adjustment	\$ 207,609	\$ 273,479	\$ 423,008	\$ 786,977	\$ 747,108	\$ 841,452	\$ 1,609,872	\$ 913,465	\$ 501,387	\$ 348,419	\$ 366,654	\$ 373,020	\$ 7,392,448
6 EEP Amortization Adjustment	\$ -	\$ -	\$ -	\$ 220,405	\$ 123,064	\$ 132,129	\$ 59,812	\$ 60,602	\$ 61,717	\$ 62,885	\$ 64,774	\$ 74,203	\$ 859,591
7 RAC Amortization Adjustment	\$ (209,358)	\$ (273,444)	\$ (521,812)	\$ (795,668)	\$ (882,916)	\$ (1,000,244)	\$ 265,376	\$ 76,918	\$ (43,280)	\$ (80,728)	\$ (74,531)	\$ (70,223)	\$ (3,609,909)
8 CLE Amortization Adjustment	\$ 408,800	\$ 536,801	\$ 932,023	\$ 1,338,383	\$ 1,483,884	\$ 1,681,730	\$ 1,265,955	\$ 757,782	\$ 463,387	\$ 343,865	\$ 352,108	\$ 345,945	\$ 9,910,660
9 Total Amortization Adjustment	\$ 199,442	\$ 263,357	\$ 410,211	\$ 763,120	\$ 724,032	\$ 813,615	\$ 1,591,143	\$ 895,302	\$ 481,824	\$ 326,022	\$ 342,351	\$ 349,925	\$ 7,160,342

ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENT TO AUGUST 31, 2019 OPERATING INCOME
SUMMARY OF O&M ADJUSTMENTS

<u>Line No.</u>		<u>Amount</u>	<u>Reference</u>
1	Payroll Expense Adjustment	\$ 1,827,870	SMG-9
2	Employee Benefits Expense Adjustment	\$ 642,985	SMG-10
3	Allocated Service Company Salaries & Benefits Expense Adj	\$ 2,746,420	SMG-11
4	Rate Case Expense Adjustment	\$ 268,183	SMG-12
5	Other O&M Expense	\$ 230,592	SMG-13
6	Inflation Adjustment	\$ 1,031,978	SMG-14
7	Total O&M Adjustments	\$ 6,748,029	

ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENT TO AUGUST 31, 2019 OPERATING INCOME
PAYROLL EXPENSE

Line No.			<u>Annualized</u> <u>Test Year</u>	<u>Annualized</u> <u>Post Test Year</u>	<u>Pro Forma</u> <u>Adjustment</u>
1	<u>Payroll Expenses:</u>	<u>Test Year</u>			
2					
3	Total Fixed Compensation Expense	\$24,274,499	\$25,342,107	\$26,102,370	\$1,827,870
4	Total Variable Compensation Expense	\$664,312	\$664,312	\$664,312	\$0
5	Pro Forma Payroll Adjustment (O&M)	<u>\$ 24,938,811</u>	<u>\$ 26,006,418</u>	<u>\$ 26,766,682</u>	<u>\$ 1,827,870</u>
6					
7	Pro Forma FICA Adjustment (Taxes Other than Income)				139,832
8					
9	Total Pro Forma Adjustment				<u>\$ 1,967,702</u>

ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENT TO AUGUST 31, 2019 OPERATING INCOME
EMPLOYEE BENEFITS EXPENSE

Line
No.

1	<u>Employee Benefits Expenses:</u>		
2			
3	Annualized Employee Benefits Expense	\$5,058,177	
4	Less: Test Year Employee Benefits Expense	<u>\$4,415,192</u>	
5			
6	Pro Forma Benefits Adjustment		<u>\$ 642,985</u>

ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENT TO AUGUST 31, 2019 OPERATING INCOME
ALLOCATED SERVICE COMPANY SALARIES & BENEFITS EXPENSE

Line
No.

1	<u>Allocated Service Company Salaries & Benefits Expenses:</u>	
2		
3	Annualized Expenses	\$5,149,803
4	Less: Test Year Expenses	<u>\$2,403,383</u>
5		
6	Pro Forma Allocated Expense Adjustment	<u>\$ 2,746,420</u>

**ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENT TO AUGUST 31, 2019 OPERATING INCOME
RATE CASE EXPENSES**

Line No.	Category	Expense
1	Legal Expenses	\$ 800,000
2	Consultant Expenses	\$ 486,000
3	Newspaper Notices	\$ 2,600
4	Court Reporting	\$ 1,000
5	Postage	\$ 10,000
6	Office Supplies	\$ 7,500
7	Miscellaneous Expenses	\$ 2,000
8	Contingency/Rebuttal Witnesses	\$ 300,000
9	Total Rate Case Expenses	<u>\$ 1,609,100</u>
10		50% \$ 804,550
11	Pro Forma Adjustment - Three Year Amortization	<u>\$ 268,183</u>

ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENTS TO AUGUST 31, 2019 OPERATING INCOME
OTHER O&M EXPENSE

Line
No.

1	<u>Lease Expense:</u>	
2		
3	Current Lease Cost (Per Month)	\$1
4		
5	Estimated New Lease Cost	\$5,000
6		
7	Increase in Lease Cost	<u>\$4,999</u>
8		
9	Annual	12
10		
11	Pro Forma Adjustment to Lease Expense	<u>\$59,988</u>
12		
13		
14	<u>EDI Costs:</u>	
15		
16	Current Costs (per Month)	\$833
17		
18	Estimated New Cost	\$13,800
19		
20	Increase in EDI Cost	<u>\$12,967</u>
21		
22	Annual	12
23		
24	Annual Increase in EDI Costs	\$155,604
25		
26	Additional testing costs (Avg 5 per year)	\$15,000
27		
28	Pro Forma Adjustment to EDI Expense	<u>\$170,604</u>
29		
30		
31	Total Pro Forma Adjustment - Other O&M Expense	<u>\$230,592</u>

ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENT TO AUGUST 31, 2019 OPERATING INCOME
O&M INFLATION ADJUSTMENT

<u>Line</u> <u>No.</u>	<u>Description</u>	<u>Index</u>
1	<u>Calculation of Inflation Rate</u>	
2		
3	GDPIPD Index Value at the Midpoint of the Test Year:	
4	February 2019 Index-GDP	111.7
5	March 2019 Index-GDP	111.9
6	February 28, 2019 Index-GDP (Midpoint)	<u>111.8</u>
7		
8	GDPIPD Index Value at the End of the Post-Test Year:	
9	May 2020 Index-GDP	114.7
10	June 2020 Index-GDP	114.9
11	May 31, 2020 Index-GDP (Midpoint)	<u>114.8</u>
12		
13	Projected Inflation Rate	2.68%
14		
15	<u>Calculation of O&M Inflation Adjustment</u>	
16		
17	Post-Test Year Total O&M Expenses	\$ 79,719,109
18		
19	Less: Normalizing Adjustments	
20	(a) Annualization of Payroll	\$ 26,766,682
21	(b) Annualization of Benefits	5,058,177
22	(c) Annualization of Allocated Service Company Costs	5,149,803
23	(d) Amortization of Rate Case expenses	268,183
24	(e) Other Operations and Maintenance Expenses	240,600
25	Total Normalizing Adjustments	<u>\$ 37,483,445</u>
26		
27	Less: Items Not Subject to Inflation	
28	Pension / OBEP	\$ 1,509,742
29	Uncollectibles	2,267,535
30	Total Items Not Subject to Inflation	<u>\$ 3,777,277</u>
31		
32	Residual O&M Expenses	\$ 38,458,388
33		
34	Inflation Rate	2.68%
35		
36	Pro Forma Adjustment to O&M Expense	<u><u>\$ 1,031,978</u></u>

ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENTS TO AUGUST 31, 2019 OPERATING INCOME
OTHER EXPENSES - REVENUE TAXES

Line No.		
1	<u>PUA Adjustments</u>	
2	Rider Adjustment	(\$7,392,448)
3	Customer Annualization	\$2,044,612
4	WNC Revenue Adjustment	<u>(\$64,697)</u>
5	Total Revenue Adjustment	(\$5,412,533)
6	PUA Tax Rate	<u>0.002647</u>
7	Pro Forma Adjustment to PUA Taxes	<u><u>(\$14,329)</u></u>

ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENTS TO OPERATING INCOME AND RATE BASE
CUSTOMER DEPOSITS

Line No.									
	Month	Actual and Projected Data	Number of Customers	Number of Customers with Deposits	Percentage of Customers with Deposits	Average Deposit Per Customer	Rate Base for Customer Deposits	Current Interest Rate	Monthly Interest
1									
2									
3									
4									
5	Aug-18	Actual	290,818	24,964	8.58%	\$157	\$3,927,329	0.87%	\$3,231
6	Sep-18	Actual	291,008	23,958	8.23%	\$156	\$3,738,740	0.87%	\$2,897
7	Oct-18	Actual	291,619	23,143	7.94%	\$155	\$3,576,808	0.87%	\$2,656
8	Nov-18	Actual	292,688	23,421	8.00%	\$153	\$3,578,914	0.87%	\$2,797
9	Dec-18	Actual	293,672	23,609	8.04%	\$152	\$3,588,921	0.87%	\$900
10	Jan-19	Actual	294,258	23,820	8.09%	\$152	\$3,615,481	1.87%	\$5,743
11	Feb-19	Actual	294,600	23,828	8.09%	\$152	\$3,626,566	1.87%	\$5,465
12	Mar-19	Projected	296,136	23,957	8.09%	\$152	\$3,646,262	1.87%	\$5,791
13	Apr-19	Projected	296,034	23,949	8.09%	\$152	\$3,645,006	1.87%	\$5,602
14	May-19	Projected	295,596	23,914	8.09%	\$152	\$3,639,613	1.87%	\$5,781
15	Jun-19	Projected	295,330	23,892	8.09%	\$152	\$3,636,337	1.87%	\$5,589
16	Jul-19	Projected	295,009	23,866	8.09%	\$152	\$3,632,385	1.87%	\$5,769
17	Aug-19	Projected	294,819	23,851	8.09%	\$152	\$3,630,046	1.87%	\$5,765
18	Sep-19	Projected	294,991	23,865	8.09%	\$152	\$3,632,163	1.87%	\$5,583
19	Oct-19	Projected	295,733	23,925	8.09%	\$152	\$3,641,299	1.87%	\$5,783
20	Nov-19	Projected	296,854	24,015	8.09%	\$152	\$3,655,102	1.87%	\$5,618
21	Dec-19	Projected	298,023	24,110	8.09%	\$152	\$3,669,496	1.87%	\$5,828
22	Jan-20	Projected	298,680	24,163	8.09%	\$152	\$3,677,585	1.87%	\$5,841
23	Feb-20	Projected	299,130	24,200	8.09%	\$152	\$3,683,126	1.87%	\$5,472
24	Mar-20	Projected	299,476	24,228	8.09%	\$152	\$3,687,386	1.87%	\$5,856
25	Apr-20	Projected	299,359	24,218	8.09%	\$152	\$3,685,946	1.87%	\$5,665
26	May-20	Projected	298,911	24,182	8.09%	\$152	\$3,680,430	1.87%	\$5,845
27									
28	<u>Post-Test Year Annualization of Interest</u>								
29									
30	May-20	Projected	298,911	24,182	8.09%	\$152	\$3,680,430	1.87%	\$68,824
31									
32									
33	<u>Rate Base Test Year Adjustment</u>			<u>Rate Base PTY Pro-Forma Adjustment</u>			<u>Income Statement Interest Pro-Forma Adjustment</u>		
34									
35			13 mo average			13 mo average			
36	Actual Ending February 28, 2019		\$4,550,705	Projected ending August 31, 2019		\$3,652,493	Projected Test Year Interest		\$54,755
37									
38	Projected ending August 31, 2019		\$3,652,493	Actual Ending February 28, 2020		\$3,647,307	Post Test Year Annualized Interest		\$68,824
39									
40	Test Year Adjustment		<u>(\$898,212)</u>	Pro-Forma PTY Adjustment		<u>(\$5,186)</u>	Pro-Forma Adjustment		<u>\$14,069</u>

Elizabethtown Gas Company
Lead-Lag Study
Working Capital Requirement
Test Year

Line	Description	Test Year Expenses	Average Daily Expenses	Revenue Lag	Ref.	Expense Lag	Ref.	Net (Lead)/Lag Days	Working Capital Requirement
1	Operations and Maintenance Expenses								
2	Purchased Gas Costs	\$ 143,617,417	393,472	51.03	A	(40.24)	B	10.78	\$ 4,242,470
3	Regular Payroll	24,274,499	66,505	51.03	A	(9.94)	C-1	41.09	2,732,606
4	Variable Compensation	664,312	1,820	51.03	A	(139.75)	C-2	(88.72)	(161,482)
5	Pension/OPEB	1,509,742	4,136	51.03	A	0.00		51.03	211,054
6	Retirement Savings Plan	890,381	2,439	51.03	A	(18.69)	C-5	32.34	78,881
7	Group Insurance	3,230,390	8,850	51.03	A	(46.15)	C-6	4.87	43,103
8	Uncollectible Expense	1,711,780	4,690	51.03	A	76.66	A	127.68	598,804
9	Service Company Charges	14,907,484	40,842	51.03	A	(46.00)	C-7	5.03	205,239
10	Other Third-Party O&M Expenses	25,782,493	70,637	51.03	A	(59.85)	C-8	(8.82)	(623,110)
11	Total O&M Expenses	\$ 216,588,498							\$ 7,327,565
12	Income Taxes								
13	Excess Deferred Tax Amortization	\$ (2,272,006)	(6,225)	51.03		0.00		51.03	(317,615)
14	Federal Income Taxes	5,997,260	16,431	51.03	A	(38.25)	D-1	12.78	209,906
15	State Income Tax	2,824,455	7,738	51.03	A	(38.50)	D-2	12.53	96,922
16	Total Federal Income Taxes	\$ 6,549,708							\$ (10,786)
17	Taxes Other Than Income Taxes	\$ 3,745,658	10,262	51.03	A	(12.39)	E	38.64	\$ 396,492
18	Depreciation and Amortization Expense	\$ 31,246,127	85,606	51.03	A	0.00		51.03	\$ 4,368,049
19	Interest Expense								
20	Interest on Long-Term Debt	\$ 26,927,610	73,774	51.03	A	(81.05)	F-1	(30.02)	\$ (2,214,714)
21	Interest on Short-Term Debt	-	-	51.03	A	2.84	F-2	53.86	-
22	Interest on Customer Deposits	54,755	150	51.03	A	(236.39)	F-3	(185.36)	(27,807)
23	Total Interest Expense	\$ 26,982,365							\$ (2,242,521)
24	Return	\$ 24,833,126	68,036	51.03	A	0.00		51.03	\$ 3,471,545
25	Other Adjustments								
26	Incidental collections								\$ 1,559,855
27	Employee deductions								(149,481)
28	Total Other Adjustments	\$ -	\$ -						\$ 1,410,374
29	Total	\$ 309,945,481	\$ 163,904						\$ 14,720,718

Elizabethtown Gas Company
Lead-Lag Study
Working Capital Requirement
Post Test Year

Line	Description	Adjusted Test Year Expenses	Average Daily Expenses	Revenue Lag	Ref.	Expense Lag	Ref.	Net (Lead)/Lag Days	Working Capital Requirement
1	Operations and Maintenance Expenses								
2	Purchased Gas Costs	\$ 137,908,737	377,832	51.03	A	(40.24)	B	10.78	\$ 4,073,835
3	Regular Payroll	26,102,370	71,513	51.03	A	(9.94)	C-1	41.09	2,938,372
4	Variable Compensation	664,312	1,820	51.03	A	(139.75)	C-2	(88.72)	(161,482)
5	Pension/OPEB	1,509,742	4,136	51.03	A	0.00		51.03	211,054
6	Retirement Savings Plan	890,381	2,439	51.03	A	(18.69)	C-5	32.34	78,881
7	Group Insurance	3,873,375	10,612	51.03	A	(46.15)	C-6	4.87	51,682
8	Uncollectible Expense	2,267,535	6,212	51.03	A	76.66	A	127.68	793,214
9	Service Company Charges	17,653,904	48,367	51.03	A	(46.00)	C-7	5.03	243,050
10	Other Third-Party O&M Expenses	27,313,246	74,831	51.03	A	(59.85)	C-8	(8.82)	(660,105)
11	Total O&M Expenses	\$ 218,183,601							\$ 7,568,502
12	Income Taxes								
13	Excess Deferred Tax Amortization	\$ (2,386,051)	(6,537)	51.03		0.00		51.03	(333,558)
14	Federal Income Taxes	15,382,846	42,145	51.03	A	(38.25)	D-1	12.78	538,406
15	State Income Tax	7,244,669	19,848	51.03	A	(38.50)	D-2	12.53	248,604
16	Total Federal Income Taxes	\$ 20,241,464							\$ 453,452
17	Taxes Other Than Income Taxes	\$ 4,043,309	11,078	51.03	A	(12.39)	E	38.64	\$ 427,999
18	Depreciation and Amortization Expense	\$ 43,127,176	118,157	51.03	A	0.00		51.03	\$ 6,028,960
19	Interest Expense								
20	Interest on Long-Term Debt	\$ 23,641,202	64,770	51.03	A	(81.05)	F-1	(30.02)	\$ (1,944,417)
21	Interest on Short-Term Debt	-	-	51.03	A	2.84	F-2	53.86	-
22	Interest on Customer Deposits	68,824	189	51.03	A	(236.39)	F-3	(185.36)	(34,952)
23	Total Interest Expense	\$ 23,710,026							\$ (1,979,369)
24	Return	\$ 60,254,853	165,082	51.03	A	0.00		51.03	\$ 8,423,322
25	Other Adjustments								
26	Incidental collections								\$ 1,559,855
27	Employee deductions								(149,481)
28	Total Other Adjustments	\$ -	\$ -						\$ 1,410,374
29	Total	\$ 369,560,429	\$ 294,316						\$ 22,333,239

Line															
1	Gas Stored Underground														
2		<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	13 Month
3		2/28/2018	3/31/2018	4/30/2018	5/31/2018	6/30/2018	7/31/2018	8/31/2018	9/30/2018	10/31/2018	11/30/2018	12/1/2018	1/1/2019	2/2/2019	AVERAGE
4	Actual - As of Feb 2019	5,881,601	2,201,205	4,656,739	8,052,296	10,870,937	13,762,628	17,018,247	20,126,470	23,458,171	21,467,392	17,430,854	12,299,707	7,373,480	12,661,517
5															
6		<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	13 Month
7		8/31/2018	9/30/2018	10/31/2018	11/30/2018	12/31/2018	1/31/2019	2/28/2019	3/31/2019	4/30/2019	5/31/2019	6/30/2019	7/31/2019	8/31/2019	AVERAGE
8	Forecast - TY End Aug 2019	17,018,247	20,126,470	23,458,171	21,467,392	17,430,854	12,299,707	7,373,480	3,559,442	6,814,859	10,006,468	13,261,784	16,590,990	19,951,707	14,566,121
9															
10		<u>Actual</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	13 Month
11		2/28/2019	3/31/2019	4/30/2019	5/31/2019	6/30/2019	7/31/2019	8/31/2019	9/30/2019	10/31/2019	11/30/2019	12/31/2019	1/31/2020	2/29/2020	AVERAGE
12	Forecast - PTY End Feb 2020	7,373,480	3,559,442	6,814,859	10,006,468	13,261,784	16,590,990	19,951,707	23,307,934	26,608,314	24,222,718	19,860,896	13,250,316	7,645,715	14,804,202
13															
14															
15	Liquefied Natural gas	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	13 Month
16		2/28/2018	3/31/2018	4/30/2018	5/31/2018	6/30/2018	7/31/2018	8/31/2018	9/30/2018	10/31/2018	11/30/2018	12/31/2018	1/31/2019	2/28/2019	AVERAGE
17	Actual - As of Feb 2019	1,382,174	1,382,174	1,349,032	1,311,740	1,257,626	1,204,014	1,156,727	1,144,340	1,296,541	1,772,089	1,646,671	878,081	787,457	1,274,513
18															
19		<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	13 Month
20		8/31/2018	9/30/2018	10/31/2018	11/30/2018	12/31/2018	1/31/2019	2/28/2019	3/31/2019	4/30/2019	5/31/2019	6/30/2019	7/31/2019	8/31/2019	AVERAGE
21	Forecast - TY End Aug 2019	1,156,727	1,144,340	1,296,541	1,772,089	1,646,671	878,081	787,457	746,450	706,766	665,759	626,075	585,068	943,409	996,572
22															
23		<u>Actual</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	13 Month
24		2/28/2019	3/31/2019	4/30/2019	5/31/2019	6/30/2019	7/31/2019	8/31/2019	9/30/2019	10/31/2019	11/30/2019	12/31/2019	1/31/2020	2/29/2020	AVERAGE
25	Forecast - PTY End Feb 2020	787,457	746,450	706,766	665,759	626,075	585,068	943,409	1,283,289	1,243,388	1,285,054	1,250,422	1,199,649	1,168,368	960,858
26															
27															
28	Propane Inventory*	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	13 Month
29		2/28/2018	3/31/2018	4/30/2018	5/31/2018	6/30/2018	7/31/2018	8/31/2018	9/30/2018	10/31/2018	11/30/2018	12/31/2018	1/31/2019	2/28/2019	AVERAGE
30	Actual - As of Feb 2019	55,466	55,466	55,466	55,466	55,466	55,466	55,466	55,466	55,466	55,466	55,466	55,466	55,466	55,466
31															
32	*No Forecast														
33															
34															
35	Materials and Supplies*														
36		<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	13 Month
37		2/28/2018	3/31/2018	4/30/2018	5/31/2018	6/30/2018	7/31/2018	8/31/2018	9/30/2018	10/31/2018	11/30/2018	12/31/2018	1/31/2019	2/28/2019	AVERAGE
38	Actual - As of Feb 2019	278,771	274,969	273,766	289,329	265,152	287,008	258,873	318,402	279,790	302,017	293,663	322,534	294,695	287,613
39															
40	*No Forecast														
41															
42															
43									Total Actual Inventories as of Feb 2019						14,279,109
44															
45									Total Projected Inventories as of Aug 2019 - Test Year Ending						15,905,772
46															
47									Total Projected Inventories as of Feb 2020 - Post-Test Year Ending						16,108,139

**IN THE MATTER OF THE PETITION OF
ELIZABETHTOWN GAS COMPANY FOR APPROVAL OF
INCREASED BASE TARIFF RATES AND CHARGES
FOR GAS SERVICE, CHANGES TO DEPRECIATION
RATES AND OTHER TARIFF REVISIONS**

BPU DOCKET NO. GR19_____

DIRECT TESTIMONY

OF

MICHAEL P. SCACIFERO

Director of Engineering Services

**On Behalf Of
Elizabethtown Gas Company**

Exhibit P-4

April 18, 2019

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**ELIZABETHTOWN GAS COMPANY
DIRECT TESTIMONY OF
MICHAEL P. SCACIFERO**

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, AFFILIATION AND BUSINESS ADDRESS.

A. My name is Michael P. Scacifero and I am the Director of Engineering Services for Elizabethtown Gas Company (“Elizabethtown” or the “Company”). My business address is 520 Green Lane, Union, New Jersey 07083.

Q. PLEASE DESCRIBE YOUR PROFESSIONAL RESPONSIBILITIES.

A. As Director of Engineering Services for Elizabethtown, I oversee engineering planning design and budgeting for all of Elizabethtown’s distribution system improvements, renewals, pressure improvements, Department of Transportation (“DOT”) projects, and large new business projects. I am responsible for conducting system modeling and analysis and providing engineering support to Field Operations and Construction Operations. I am also involved with the development of Elizabethtown’s capital budget and I am familiar with its components.

Q. WHAT ARE YOUR PROFESSIONAL AND EDUCATIONAL QUALIFICATIONS?

A. I received a B.S. in Civil Engineering from New Jersey Institute of Technology in 1988. I am a Licensed Professional Engineer in the State of New Jersey. I have been employed by Elizabethtown for 27 years in Engineering and Operations. Two of those years were spent as a Project Engineer, five years as a Division Engineer, and fourteen years as Manager of Engineering, Manager of Operations and, currently, Director of Engineering Services. Prior to joining Elizabethtown, I was a Project Engineer for four years with Johnson Engineering Inc., specializing in highway and infrastructure design. Prior to that, I was

1 employed for three years by the Township of Warren, New Jersey as a Staff Engineer
2 specializing in municipal engineering. I am a member of the National Society of
3 Professional Engineers, the American Gas Association, and the New Jersey Utilities
4 Association.

5 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NEW JERSEY BOARD**
6 **OF PUBLIC UTILITIES?**

7 **A.** Yes, I have submitted testimony on behalf of Elizabethtown in several proceedings,
8 including the Company's 2016 Base Rate Case in BPU Docket No. GR16090826, several
9 proceedings involving Elizabethtown's accelerated infrastructure proceedings, including
10 the Company's ENDURE and AIR Programs (BPU Docket Nos. GO13090826,
11 GR15060656 and GO12090693, respectively) and most recently in Elizabethtown's
12 pending Infrastructure Investment Program ("IIP") proceeding in BPU Docket No.
13 GR18101197.

14 **II. PURPOSE OF TESTIMONY**

15 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

16 **A.** My testimony in this case will address the recovery of capital expenditures incurred since
17 the Company's prior base rate case. Specifically, I will provide a summary of
18 Elizabethtown's capital expenditures for the twelve-month test year period ending August
19 31, 2019 and the six month post-test year period from September 1, 2019 through February
20 29, 2020, as well as a description of the categories of expenditures that comprise the capital
21 expenditures forecast. I will also discuss the Company's proposed IIP pending before the
22 Board in BPU Docket No. GR18101197.

1 **Q. DO YOU SPONSOR ANY SCHEDULES AS PART OF YOUR DIRECT**
2 **TESTIMONY?**

3 **A.** Yes. I am sponsoring the following schedules, supporting the Company's capital
4 expenditures utilized in rate base, which were prepared by me or under my supervision or
5 direction:

- 6 • Schedule MPS-1 – Utility Plant in Service (“UPIS”)
- 7 • Schedule MPS-2 – Test Year Plant Additions;
- 8 • Schedule MPS-3 – Post-Test Year Plant Additions; and
- 9 • Schedule MPS-4 – Major IT Capital Projects;

10 This information will be updated over the course of the proceeding to include actual data
11 for the full twelve-month test year period ending August 31, 2019.

12 **III. OVERVIEW OF THE COMPANY'S DISTRIBUTION SYSTEM**

13 **Q. PLEASE PROVIDE A BRIEF OVERVIEW OF ELIZABETHTOWN'S**
14 **DISTRIBUTION SYSTEM.**

15 **A.** Elizabethtown provides natural gas service to approximately 295,000 residential, business
16 and industrial customers in seven counties in two areas of New Jersey: the Union and
17 Northwest Divisions. The Union Division, which encompasses the eastern portion of
18 Elizabethtown's service territory, consists of 131 square miles and covers portions of
19 Union and Middlesex Counties. The Union Division is a relatively mature service area
20 where the majority of Elizabethtown's capital expenditures are made to replace and
21 upgrade aging infrastructure. The Northwest Division, which encompasses the northwest
22 portion of the Company's service territory, consists of 1,373 square miles and covers
23 portions of Sussex, Warren, Hunterdon, Mercer and Morris counties. The Northwest

1 Division contains relatively newer facilities and therefore, most of this area's capital
2 expenditures are associated with new business and work required by municipalities and/or
3 the New Jersey DOT.

4 **Q. WHAT ARE THE PHYSICAL CHARACTERISTICS OF ELIZABETHTOWN'S**
5 **DISTRIBUTION SYSTEM?**

6 **A.** Elizabethtown operates and maintains approximately 3,246 miles of various pressure gas
7 distribution and transmission main, and related services. As of December 31, 2018,
8 approximately 15 percent of the Company's system included cast iron, ductile iron or bare
9 and unprotected steel. As discussed below, Elizabethtown has made significant progress
10 in retiring and replacing its vintage infrastructure and with the BPU's approval of its
11 pending IIP filing, will continue these efforts on an accelerated basis.

12 **IV. UTILITY PLANT IN SERVICE/CAPITAL EXPENDITURES**

13 **Q. PLEASE DESCRIBE ELIZABETHTOWN'S CAPITAL SPENDING SINCE ITS**
14 **LAST BASE RATE CASE.**

15 **A.** The Company's distribution rates were last reset in a base rate case approved by the Board
16 in 2017. Since the conclusion of that case, Elizabethtown has continued to invest a
17 substantial amount of capital in new distribution plant and services and replacement plant
18 and services. Since that time, the Company has made approximately \$83 million of plant
19 additions that are not currently reflected in rates, and projects that an additional \$263
20 million will be added to its plant in service balance by February 29, 2020. As reflected on
21 MPS-1, the Company's actual utility plant in service ("UPIS") as of February 28, 2019
22 totaled approximately \$1.4 billion. The majority of plant additions since the previous base

rate case were related to the replacement of our aging infrastructure and the hardening of our distribution system.

Q. PLEASE SUMMARIZE THE CAPITAL EXPENDITURES DURING THE TEST YEAR.

A. Schedule MPS-2, attached hereto, provides a summary of the test year capital expenditures based on six months of actual data and six months of projected data. The projected six months of capital expenditures from March 1, 2019 through August 31, 2019, as well as projected plant retirements for the same period, were utilized to calculate the projected UPIS balance for the test year ending August 31, 2019. As shown on Schedule MPS-1, the total projected plant additions and plant retirements for the remaining months of the test year period are approximately \$114.2 million and \$7.3 million, respectively. This results in a total projected UPIS balance of approximately \$1.5 billion as of August 31, 2019, which is reflected in Schedule SMG-2 (Statement of Rate Base). As the test year is fully realized, Elizabethtown will replace the projected data with actual data through August 2019 in the Company's 12-month update to be submitted in this case.

Q. PLEASE SUMMARIZE THE POST-TEST YEAR CAPITAL EXPENDITURES FOR WHICH ELIZABETHTOWN IS SEEKING RATE RELIEF IN THIS PROCEEDING.

A. Elizabethtown is proposing to include in rate base capital expenditures in the post-test year period which are known and measurable, and consistent with Board precedent, including *In Re Elizabethtown Water Company Rate Case*, BPU Docket No. WR8504330 (May 23, 1985). Elizabethtown's proposed post-test year capital expenditures are "prudent and major in nature and consequence," and therefore, should be included in rate base.

1 In this initial filing, I am sponsoring post-test year adjustments based upon a
2 projection of capital expenditures to be made by the Company during the six-month period
3 September 1, 2019 through February 29, 2020. These expenditures total approximately
4 \$95.6 million, summarized in Schedule MPS-3. The Company also projects approximately
5 \$66.8 million post-test year capital expenditures related to information technology (“IT”)
6 system implementations and upgrades, summarized on Schedule MPS-4. The IT projects
7 identified on Schedules MPS-2, MPS-3 and MPS-4 are discussed in further detail by
8 Company witness Leonard Brinson, Jr. (Exhibit P-6). As reflected on Schedule MPS-1,
9 by the end of the post-test year, the Company projects a utility plant in service balance of
10 approximately \$1.6 billion.

11 **Q. WHAT ARE THE CAPITAL EXPENDITURE CATEGORIES REFLECTED ON**
12 **SCHEDULES MPS-2 AND MPS-3?**

13 **A.** The expenditure categories reflected on Schedules MPS-2 and MPS-3 include those
14 associated with New Business, Facilities, Fleet, Gas Operations, Mandatory, Distribution
15 Integrity Management Program (“DIMP”), Transmission Integrity Management Program
16 (“TIMP”), Department of Transportation (“DOT”), Periodic Testing (“PT”) of Meters,
17 Pressure Improvements, Renewals, Corrosion Work, Field Operations, Regulator Stations,
18 Tools and Equipment, IT, Infrastructure Investment Program (“IIP”), IIP Base Spending,
19 and Transfer from Construction Work in Progress (“CWIP”) to UPIS.

1 **Q. PLEASE EXPLAIN THE TYPES OF COSTS ASSOCIATED WITH THE**
2 **CAPITAL EXPENDITURE CATEGORIES REFLECTED ON SCHEDULES MPS-**
3 **2 AND MPS-3.**

4 **A.** I will address the IIP, DIMP and TIMP categories later in my testimony. The costs
5 associated with the other capital expenditure categories are as follows:

6 **New Business** includes costs associated with connecting new residential, commercial, and
7 industrial gas customers to Elizabethtown's distribution system. This category includes
8 the costs associated with the expansion of the Company's gas distribution system into new
9 areas in its service territory, including the costs to serve approximately 5,080 new
10 customers.

11 **Facilities** include costs associated with various building and ground improvements, such
12 as the addition of a dispatch center, training center improvements, parking lot expansion
13 and interior office space modifications.

14 **Fleet** includes costs associated with the Company's operations vehicles, such as pick-up
15 trucks, responder vans, dump trucks, crew trucks, automobiles and forklifts. In total, the
16 Fleet expenditures include the purchase and upfitting of 64 operations vehicles needed to
17 effectively operate the Company's system and maintain safe and reliable service to
18 customers. The vehicles being purchased are replacing those with leases ending or vehicles
19 that have exceeded their 8-year life cycle. Costs include the purchase of the vehicle,
20 modifying them for dual fuel operation, as well as body modifications consisting of tool
21 box installations, shelving, equipment holders, compressors and decaling.

1 **Gas Operations** include costs related to measurement operations, including meter and
2 regulation functions, as well as peaking costs related to Liquefied Natural Gas Plant
3 operations.

4 **Mandatory** includes costs associated with projects that are required to be undertaken by
5 the Company for compliance related improvements within State and Federal regulations.

6 **DOT** includes costs associated with distribution improvements related to state, municipal
7 and county roadway improvement projects. Post-test year expenditures for this category
8 reflect projects that have been identified for that period by state, municipal, and county
9 authorities.

10 **PT Meters** include costs arising from the periodic testing of the Company's meter
11 inventory, primarily for the purchase of new meters.

12 **Pressure Improvements** include costs related to projects that improve the system
13 pressures within the distribution mains and services to reliably serve customers.

14 **Renewals** include costs related to improvements to the distribution and transmission
15 systems for operations efficiency. Types of projects may include replacement of aging
16 equipment or infrastructure, water infiltration elimination, replacement of leaking
17 infrastructure, or emergency response capital spend.

18 **Corrosion Work** includes costs to improve the cathodic protection of the Company's steel
19 distribution or transmission systems.

20 **Field Operations** include costs related to capital projects like service replacements and
21 meter set protection projects, such as installing bollards to protect meters from vehicle
22 damage.

1 **Regulator Stations** include costs related to replacing aging district regulator stations or
2 installing new district regulator stations.

3 **Tools and Equipment** includes the costs associated with larger scale items needed to
4 perform capital replacement work, such as pressure control equipment, jackhammers, and
5 similar large mechanical tools.

6 **IT Projects** include costs associated with various system implementations or upgrades, as
7 discussed in further detail in the Direct Testimony of Mr. Brinson. Additionally, the
8 Company separately identified twelve major IT projects anticipated to be placed in service
9 during the post-test year. These twelve projects are shown on Schedule MPS-4 and are
10 also discussed in further detail in the Direct Testimony of Mr. Brinson.

11 **Transfer from CWIP to UPIS** reflects existing construction work in progress
12 expenditures as of February 28, 2019 that will be transferred to utility plant in service
13 during the test year. This transfer better estimates actual utility plant that will be in service
14 by the end of the test year. As indicated earlier, utility plant in service will be updated over
15 the course of the proceeding to include actual data for the full twelve-month test year period
16 ending August 31, 2019.

17 **Q. PLEASE DESCRIBE THE CAPITAL EXPENDITURES INCLUDED IN THE IIP**
18 **INVESTMENT CATEGORY**

19 **A.** Elizabethtown made a filing with the BPU in Docket No. GR18101197 seeking
20 authorization to implement an IIP to invest an incremental \$518 million over a five year
21 period beginning July 1, 2019. Through the IIP filing, the Company has proposed to (i)
22 replace and retire approximately 364 miles of vintage, at-risk main and associated customer
23 services, (ii) upgrade Elizabethtown's legacy low-pressure system to elevated pressure,

(iii) relocate approximately 44,000 inside meter sets to outside, (iv) install approximately 38,600 excess flow valves on the upgraded system, (v) retire approximately 100 district regulators that will no longer be needed once the low pressure system is upgraded, and (vi) convert five master metered apartment complexes to individually metered units. These investments will modernize and enhance the safety and reliability of Elizabethtown's gas distribution system. The IIP filing is currently pending before the Board.

Schedules MPS-2 and MPS-3 reflect the anticipated IIP amounts to be placed in service during the test year and post-test year period, totaling approximately \$32.2 million. To the extent IIP-related expenditures are recovered through the rate mechanism pending approval in the IIP proceeding, they will not be recovered through the base rates set in this proceeding.

Q. PLEASE EXPLAIN THE IIP BASE SPENDING CATEGORY.

A. The Company's IIP filing includes a proposal to maintain baseline spending equal to 10% of the IIP budget, or a total of approximately \$51.8 million over the five-year program. These capital expenditures will not be reflected in the recovery mechanism proposed in the IIP filing and instead will be recovered through Elizabethtown's base rates. Schedules MPS-2 and MPS-3 reflect the anticipated IIP base spending amounts to be placed in service during the test year and post-test year period, totaling approximately \$3.6 million.

Q. PLEASE DESCRIBE THE COSTS REFLECTED IN THE INTEGRITY MANAGEMENT CATEGORY (I.E., DIMP AND TIMP).

A. The Pipeline and Hazardous Materials Safety Administration's ("PHMSA") regulations require the Company to maintain a DIMP and TIMP to ensure the integrity of its distribution and transmission pipeline. PHMSA's regulations require Elizabethtown to

1 take a risk-based approach to identify, evaluate, and rank pipeline integrity threats and take
2 appropriate action to mitigate those threats. Capital expenditures for the DIMP category
3 total approximately \$94.1 million during the test year and post-test year period and are
4 associated with Elizabethtown's ongoing efforts to replace vintage, at-risk facilities in the
5 distribution system identified in the DIMP.

6 The capital expenditures included in TIMP are associated with projects designed to
7 improve the Company's transmission facilities in a manner consistent with state and federal
8 requirements. Costs for this category total approximately \$2.6 million during the test year
9 and post-test year period.

10 **Q. ARE THERE ANY PENDING PHMSA REGULATIONS THAT COULD**
11 **INCREASE TRANSMISSION INTEGRITY MANAGEMENT COSTS?**

12 **A.** Yes. In 2016, PHMSA issued a Notice of Proposed Rulemaking proposing new pipeline
13 safety regulations that include a requirement for increased inspections over the level that
14 is currently required, among other requirements. The enactment of these regulations are
15 expected to significantly impact gas distribution operating costs, particularly the
16 requirement related to material verification on existing transmission pipelines. As
17 discussed by Company witness Ms. Graham, the Company has not reflected these costs in
18 the test-year O&M expenditures and is instead proposing to track and defer for later
19 recovery the Company's incremental transmission integrity management costs.

20 **Q. WHAT STEPS DOES ELIZABETHTOWN TAKE TO ENSURE THE**
21 **REASONABLENESS OF CAPITAL PROJECTS EXPENDITURES?**

22 **A.** Elizabethtown follows a number of practices to ensure that its capital expenditures are
23 reasonable. These include competitive bidding, contractor quality assurance and cost

tracking. With respect to competitive bidding, once a project is approved, individual project design documents are prepared for competitive bid so that the project can be bid for construction immediately following design and permitting. Contractor bids are evaluated utilizing a combination of criteria including safety, cost, contractor quality, experience, availability, and timing. As to contractor quality, we continuously monitor the performance of our contractors and we use that information to evaluate the bids we receive from contractors who have worked for us previously. This helps us to ensure that the work they perform delivers pipeline assets constructed in a safe, quality, compliant, and most cost-effective way possible. Finally, we closely track our capital expenditures after a project commences to monitor the financial performance of each of our capital projects. Specifically, we examine each project through the project life cycle with monthly (or more frequently as needed) reviews on original cost estimates in relation to actual costs to determine the existence of any variances. If there are significant variances, we undertake a review to determine the causes, identify potential cost mitigation solutions and/or modify the scope of the project as appropriate.

Q. WHAT EFFORTS HAS THE COMPANY UNDERTAKEN TO CONTROL MUNICIPAL COSTS RELATED TO ITS PIPELINE REPLACEMENT PROJECTS?

A. The Company continues to experience increases in the costs associated with pipeline replacements due to increases in municipal costs. The biggest components of these municipal costs are attributable to the following: repaving requirements, traffic control plans, permit fees and night work restrictions. The Company continues to maintain an ongoing dialogue with the municipalities it serves during the pre-construction phase and

beyond to minimize these requirements. In addition, the Company has increased outreach efforts with local officials concerning these activities. Despite these efforts, the costs are ultimately subject to the determination of the individual municipalities.

With respect to repaving, where possible, Elizabethtown seeks to coordinate with other utility or municipal projects to share costs and ultimately save money on repaving, which also has the added benefit of reducing inconvenience to the community. Furthermore, the Company continues to seek to increase use of infrared restoration technology for repaving. This technology is much less expensive than mill and replace repairs. Infrared technology expedites repair by heating, fusing, and compacting recycled asphalt; saving labor, equipment and new material compared to conventional repairs that require the removal of old asphalt from a damaged site and replacement with new asphalt. The ability to use infrared technology depends on the size and extent of a project and the willingness of the individual municipality to agree to its use.

V. SUMMARY

Q. CAN YOU BRIEFLY SUMMARIZE YOUR TESTIMONY?

A. The issues discussed in my testimony address the significant levels of capital expenditures for both the test year and post-test year periods that are prudent and necessary to provide safe and reliable service to Elizabethtown's customers. Elizabethtown's construction program has increased the safety, operation and reliability of our distribution system. As such, I request the Board's approval of the proposals set forth herein.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

**ELIZABETHTOWN GAS COMPANY
STATEMENT OF RATE BASE
UTILITY PLANT IN SERVICE (UPIS)**

Line No.			<u>Reference</u>
1			
2	Actual UPIS as of 2/28/19	\$1,356,168,012	
3			
4	Projected Test Year Plant Additions (3/1/19 - 8/31/19)	\$114,171,061	MPS-2
5			
6	Projected Test Year Plant Retirements (3/1/19 - 8/31/19)	(\$7,335,534)	
7			
8	Projected Test Year Ending UPIS at 8/31/19	<u>\$1,463,003,539</u>	
9			
10	Projected Post Test Year Plant Additions (9/1/19 - 2/29/20)	\$95,646,246	MPS-3
11			
12	Projected Post Test Year Major IT Capital Projects	\$66,821,284	MPS-4
13			
14	Projected Post Test Year Plant Retirements (9/1/19 - 2/29/20)	(\$6,387,221)	
15			
16	Projected Post Test Year Ending UPIS at 2/29/20	<u>\$1,619,083,848</u>	

ELIZABETHTOWN GAS COMPANY
TEST YEAR PLANT ADDITIONS
12 MONTHS ENDING AUGUST 2019

	September Actual 2018	October Actual 2018	November Actual 2018	December Actual 2018	January Actual 2019	February Actual 2019	March Projected 2019	April Projected 2019	May Projected 2019	June Projected 2019	July Projected 2019	August Projected 2019	2018-2019 Test Year Total
New Business	2,703,927	2,104,806	2,210,717	3,666,853	2,296,262	1,799,270	1,610,798	1,347,125	1,089,651	1,811,990	1,814,397	1,815,098	24,270,892
Facilities	-	-	-	-	-	-	101,584	101,584	101,584	101,560	101,560	101,560	609,433
Fleet	-	-	-	-	99,935	102,138	606	206,618	607,608	651,789	689,206	1,295,892	3,653,791
Gas Operations	80,981	185,199	22,708	11,162	32,963	699	10,697	199,962	336,299	1,319,745	1,202,152	573,550	3,976,117
Mandatory	171,828	23,936	431,434	75,259	10,995	9,150	430,111	246,363	460,223	543,839	364,651	364,651	3,132,439
Distribution Integrity Management (DIMP)	4,752,374	8,170,482	7,448,540	7,750,434	3,982,616	3,785,774	7,508,880	5,877,439	7,640,941	6,038,413	6,712,621	5,558,139	75,226,653
Transmission Integrity Mgmt Program (TIMP)	104,273	66,012	492,270	77,358	91,414	145,988	14,114	5,645	5,645	1,180,643	369,235	4,687	2,557,285
DOT	3,476	17,582	3,599	213,914	4,443	21,705	674	270	270	214,034	107,129	214,034	801,131
Periodic Testing (PT) Meter	157,886	215,815	184,778	184,379	321,530	102,554	486,271	486,273	486,273	486,156	486,156	486,156	4,084,227
Pressure Improvement (PRIM)	13,889	217,603	676,571	162,076	32,273	34,333	404	162	165,862	14	88,210	13	1,391,410
Renewals	2,367,683	517,976	1,685,134	1,302,481	461,018	(216,558)	764,099	751,514	475,477	452,787	218,836	1,393,279	10,173,727
Corrosion Work	2,518	400,531	(397,662)	88,634	(74,751)	12,160	625	250	80,448	53,464	53,464	53,464	273,143
Field Operations	23,128	47,689	32,675	55,757	43,009	155,570	47,228	47,228	47,228	47,217	47,217	47,217	641,161
Regulator Station	2,487	-	-	-	-	-	-	-	-	-	106,905	106,905	216,298
Tools and Equipment	34,142	16,793	4,417	394	278	-	49,873	49,873	49,873	49,861	48,792	48,792	353,088
Information Technology (IT)	7,447	11,583,814	26,381	696,878	971,358	1,066,508	2,575,489	2,686,380	2,918,238	1,309,724	1,757,259	319,543	25,919,017
Infrastructure Investment Program (IIP)	-	-	-	-	-	-	-	-	-	-	-	381	381
IIP Base Spending	-	-	-	-	-	-	-	-	-	-	-	42	42
Transfer from CWIP To UPIS	-	-	-	-	-	-	1,793,293	24,155,654	909,272	3,965,605	2,403,201	57,850	33,284,876
TOTAL ETG PLANT ADDITIONS	10,426,039	23,568,238	12,821,563	14,285,579	8,273,343	7,019,290	15,394,745	36,162,340	15,374,893	18,226,840	16,570,991	12,441,252	190,565,113

ELIZABETHTOWN GAS COMPANY
POST-TEST YEAR PLANT ADDITIONS
6 MONTHS ENDING FEBRUARY 2020

	September Projected 2019	October Projected 2019	November Projected 2019	December Projected 2019	January Projected 2020	February Projected 2020	2019-2020 Post-Test Year Total
New Business	1,837,503	2,414,910	2,369,511	1,926,819	1,492,098	1,291,090	11,331,932
Facilities	101,575	101,596	101,605	101,582	47,667	47,667	501,692
Fleet	64,383	33,950	278	0	275,000	275,000	648,610
Gas Operations	758,605	988,694	384,501	266,786	192,500	302,500	2,893,586
Mandatory	364,717	256,088	252,310	244,403	-	-	1,117,517
Distribution Integrity Management (DIMP)	4,592,440	4,123,974	4,831,899	3,892,671	803,937	596,966	18,841,887
Transmission Integrity Mgmt Program (TIMP)	5,269	6,117	6,469	0	-	-	17,855
DOT	214,093	107,236	190,416	1	-	-	511,747
Periodic Testing (PT) Meter	486,227	486,330	429,568	429,468	-	-	1,831,593
Pressure Improvement (PRIM)	312,864	588,205	588,259	3	18,187	3,956	1,511,475
Renewals	1,105,375	642,562	953	8	47,623	67,177	1,863,698
Corrosion Work	13	15	80,230	0	-	-	80,258
Field Operations	47,223	47,233	47,238	47,227	49,766	49,766	288,453
Regulator Station	106,921	53,472	0	0	36,667	36,667	233,727
Tools and Equipment	48,796	35,049	32,913	31,836	37,400	37,400	223,394
Information Technology (IT)	320,943	322,879	324,296	323,475	625,000	625,000	2,541,593
Infrastructure Investment Program (IIP)	1,332	2,672,767	4,208,950	12,669,061	5,769,915	6,926,485	32,248,510
IIP Base Spending	148	296,974	467,661	1,407,673	641,102	769,609	3,583,168
Transfer from CWIP to UPIS	204,492	2,491,535	1,092,671	11,018,984	135,826	432,045	15,375,553
TOTAL ETG PLANT ADDITIONS	10,572,918	15,669,587	15,409,727	32,359,998	10,172,687	11,461,328	95,646,246

ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENTS
MAJOR IT CAPITAL PROJECTS

Line No.	Project Name	CWIP Life to Date ending <u>Feb-19</u>	Forecast <u>2019</u>	Forecast <u>2020</u>	Total	Projected In Service Date
1	Workday Finance	\$ 2,419,894	\$ 5,168,614	\$ -	\$ 7,588,508	Jan-20
2	CC&B Core	\$ 6,763,568	\$ 10,191,116	\$ 7,500,000	\$ 24,454,684	Jan-20
3	Customer Portal	\$ 40,212	\$ 1,199,744	\$ -	\$ 1,239,956	Jan-20
4	Middleware /IIB	\$ 836,202	\$ 2,379,530	\$ -	\$ 3,215,732	Jan-20
5	IVR & Workforce Management	\$ 131,717	\$ 2,887,886	\$ -	\$ 3,019,603	Jan-20
6	Transportation/Marketing/Sendout Portals	\$ 290,413	\$ 1,152,834	\$ -	\$ 1,443,247	Jan-20
7	Maximo	\$ 6,063,894	\$ 9,337,582	\$ -	\$ 15,401,476	Jan-20
8	MWM/ORS	\$ 137,981	\$ 3,125,443	\$ -	\$ 3,263,424	Jan-20
9	GIS	\$ 914,764	\$ 2,934,997	\$ -	\$ 3,849,761	Jan-20
10	Field SCADA	\$ 89,351	\$ 301,704	\$ -	\$ 391,056	Dec-19
11	Salesforce	\$ 186,495	\$ 925,333	\$ -	\$ 1,111,828	Jan-20
12	Toughbook/ Truck	\$ 42,309	\$ 1,799,702	\$ -	\$ 1,842,011	Dec-19
13						
14	Total Pro Forma Adjustment	\$ 17,916,800	\$ 41,404,484	\$ 7,500,000	\$ 66,821,284	

**IN THE MATTER OF THE PETITION OF
ELIZABETHTOWN GAS COMPANY FOR APPROVAL OF
INCREASED BASE TARIFF RATES AND CHARGES
FOR GAS SERVICE, CHANGES TO DEPRECIATION
RATES AND OTHER TARIFF REVISIONS**

BPU DOCKET NO. GR19_____

**DIRECT TESTIMONY
OF
NICKOLAOS NTELEKOS**

**On Behalf Of
Elizabethtown Gas Company**

Exhibit P-5

April 18, 2019

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**ELIZABETHTOWN GAS COMPANY
DIRECT TESTIMONY OF
NICKOLAOS NTELEKOS**

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Nickolaos Ntelekos. My business address is 1001 S. Grand Ave, Hammonton, New Jersey 08037.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by South Jersey Industries, Inc. ("SJI") as the Director of Accounting.

Q. PLEASE DESCRIBE YOUR PROFESSIONAL RESPONSIBILITIES.

A. I manage overall accounting functions of SJI and its subsidiaries, specifically including Elizabethtown Gas Company ("Elizabethtown" or the "Company"). My responsibilities include all general accounting and finance functions including, but not limited to the review of monthly and quarterly consolidations and reporting packages, the preparation and review of quarterly and annual SEC filings (SEC form 10-Q and 10-K, respectively), and the preparation and review of technical accounting support and related analysis. I am also responsible for the accounting for SJI's acquisition of Elizabethtown's assets from Pivotal Utility Holdings, Inc. d/b/a Elizabethtown Gas ("Pivotal"), including the initial purchase accounting, the onboarding of accounting and finance functions, performing accounting policy and controls alignments, and exit of the SJI's transition services agreement with the Southern Company ("Southern"), which was the previous owner of the acquired assets. I also serve as the Finance System Implementation Lead, in which I am responsible for the oversight for the implementation of finance related systems, including but not limited to Workday cloud-based enterprise resource system for Elizabethtown. I work directly with

1 the business leads and third-party consultants to implement key finance initiatives related
2 to this project.

3 **Q. WHAT ARE YOUR PROFESSIONAL AND EDUCATIONAL**
4 **QUALIFICATIONS?**

5 **A.** I graduated from Arcadia University in 2006 with a Bachelor of the Arts in Accounting. I
6 am a Certified Public Accountant, holding a license from the State of Pennsylvania. I am
7 a member of the American Institute of Certified Public Accountants and the Pennsylvania
8 Institute of Certified Public Accountants. After receiving my degree, I was employed as a
9 Senior Audit Associate at Bowman and Company LLP from 2006 to 2010. From 2010 to
10 2016, I was employed by the Big Four accounting firm KPMG, LLP, first as an Audit
11 Senior Associate and was later promoted to Audit Manager. I joined SJI in September
12 2016 as a Financial Reporting Manager and took on my additional role as Finance System
13 Implementations Lead in November 2017. In April 2019, I was promoted to Director of
14 Accounting.

15 **II. PURPOSE OF TESTIMONY**

16 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

17 **A.** The purpose of my direct testimony is to support Elizabethtown's April 2019 base rate
18 filing with the New Jersey Board of Public Utilities ("BPU" or "Board"). I will discuss
19 Elizabethtown's proposals to reflect and recover certain regulatory assets in the revenue
20 requirement in this proceeding. These regulatory assets are associated with pension and
21 other post-employment benefits ("OPEB") costs. I will also discuss certain elements of
22 the revenue requirement including the calculation of depreciation expense, the interest
23 synchronization adjustment, and the determination of the amounts of accumulated

1 depreciation and accumulated deferred federal and state income taxes included in rate base.
2 I will also sponsor various financial and accounting data required by the Board's
3 regulations as set forth in Section 14:1-5.12 of the New Jersey Administrative Code
4 ("NJAC"). The information required by the Board's regulations consists of balance sheets,
5 income statements and other financial data.

6 **Q. DO YOU SPONSOR ANY SCHEDULES IN YOUR DIRECT TESTIMONY?**

7 **A.** Yes. I am sponsoring the following schedules:

- 8 • Schedule NN-1 – Elizabethtown's Balance Sheet for six months ended December 31,
9 2018;
- 10 • Schedule NN-2 – Pivotal's Balance Sheets for the twelve months ended December 31,
11 2016 and 2017 and the six months ended June 30, 2018;
- 12 • Schedule NN-3 – Elizabethtown's Statement of Income for the six months ended
13 December 31, 2018;
- 14 • Schedule NN-4 – Pivotal's Statements of Income for the twelve months ended
15 December 31, 2016 and 2017 and the six months ended June 30, 2018;
- 16 • Schedule NN-5 – Elizabethtown's Statement of Gas Operating Revenues for the six
17 months ended December 31, 2018;
- 18 • Schedule NN-6 – Pivotal's Statement of Gas Operating Revenue for the six months
19 ended June 30, 2018;
- 20 • Schedule NN-7 – Elizabethtown's Payments and Accruals to Affiliates for the six
21 months ended December 31, 2018;
- 22 • Schedule NN-8 – Pro Forma Depreciation Expense & Accumulated Depreciation;
- 23 • Schedule NN-9 – Adjusted Deferred FIT Included in Rate Base;

- Schedule NN-10 – Adjusted Deferred CBT Included in Rate Base;
- Schedule NN-11 – Interest Synchronization Adjustment; and
- Schedule NN-12 – Pension & OPEB Regulatory Assets.

III. FILING REQUIREMENTS UNDER NJAC

Q. PLEASE DESCRIBE SCHEDULES NN-1 THROUGH NN-7.

A. Schedule NN-1 through NN-7 present statements and financial data required by the Board's regulations. Schedule NN-1 provides a balance sheet for Elizabethtown for the six months ended December 31, 2018, and Schedule NN-3 provides the statement of income for Elizabethtown for the six months ended December 31, 2018.

Schedules NN-2 and NN-4 provide historical comparative balance sheets and income statements, respectively, for Pivotal, the previous owner of Elizabethtown's assets, for the twelve months ended December 31, 2016 and 2017 and the six months ended June 30, 2018.

Schedule NN-5 provides Elizabethtown's statement of gas operating revenues for the six months ended December 31, 2018 and Schedule NN-6 provides the same information for Pivotal for the six months ended June 30, 2018. Finally, Schedule NN-7 provides Elizabethtown's payments and accruals to affiliates for the six months ended December 31, 2018.

Q. PLEASE EXPLAIN WHY ELIZABETHTOWN DOES NOT HAVE CERTAIN FINANCIAL DATA REQUIRED BY THE BOARD'S REGULATIONS FOR PERIODS PRIOR TO JULY 1, 2018.

A. On July 1, 2018, SJI acquired the assets of Elizabethtown from Pivotal, an indirect subsidiary of Southern. That transaction was approved by the Board by Order dated June

22, 2018 in BPU Docket No. GM17121309. Because that transaction was structured as an asset sale, the assets of Elizabethtown were transferred from one corporation, Pivotal, to another corporation, ETG Acquisition Corporation, which has since been renamed Elizabethtown Gas Company. Elizabethtown and Pivotal are separate corporations and taxable entities, and, as such, maintain separate books and records. Thus, Elizabethtown's financial data dates only from July 1, 2018. Financial data prior to that date was recorded on the books and records of Pivotal, which operated Elizabethtown as a standalone division.

To address the unavailability of financial data for Elizabethtown prior to July 1, 2018, the Company is providing comparative balance sheets and comparative income statements for Pivotal, the previous owner of Elizabethtown's assets, for the twelve-month periods ending December 31, 2016 and December 31, 2017 and the six-month period ending June 30, 2018. Thus, in total, Elizabethtown is providing financial information for past periods that are consistent with the timeframes applicable under the Board's regulations.

IV. DEPRECIATION ADJUSTMENTS

Q. PLEASE EXPLAIN THE COMPANY'S CALCULATION OF DEPRECIATION EXPENSE AND ACCUMULATED DEPRECIATION.

A. Schedule NN-8 is a summary of *pro forma* adjustments to depreciation expense and accumulated depreciation. These adjustments are reflected on line 9 on Schedule SMG-3 (Operating Income Statement) and on line 2 on Schedule SMG-2 (Statement of Rate Base), to Company witness Stefany Graham's testimony.

1 The first adjustment on Schedule NN-8 is the annualization of depreciation expense
2 utilizing the Company's proposed depreciation rates, as discussed in the Direct Testimony
3 of Dane Watson (Exhibit P-10). The resulting adjustment totaling \$4,974,900 (Schedule
4 NN-8, line 7) is based upon projected depreciable plant as of the test year ending August
5 31, 2019. This adjustment is necessary to reflect the proper annual level of depreciation
6 expense as of the end of the test year.

7 The second adjustment reflects additional annual depreciation expense associated with
8 projected post-test year net plant additions of \$156,080,309 from September 2019 through
9 February 2020, as discussed in the Direct Testimony of Company witnesses Scacifero,
10 Brinson and Graham. The resulting increase in depreciation expense related to post test
11 year plant is \$6,906,150 (line 11).

12 Also included in Schedule NN-8 is the impact of the additional post-test year
13 depreciation expense, retirements, and cost of removal on the Company's provision for
14 Accumulated Depreciation. The total adjustments result in a \$9,456,722 increase in the
15 provision for Accumulated Depreciation, which is included in line 2 of Schedule SMG-2
16 (Statement of Rate Base) to Ms. Graham's testimony.

17 **Q. DOES THE ACCUMULATED DEPRECIATION BALANCE SET FORTH ON**
18 **SCHEDULE NN-8 REFLECT ANY ADDITIONAL ADJUSTMENTS?**

19 **A.** Yes. The Accumulated Depreciation balance reflects a credit of \$160 million which
20 represents an acquisition adjustment required by the Board's June 22, 2018 Order in BPU
21 Docket No. GM17121309. The Company proposes to amortize the adjustment over a ten-
22 year period. While the accumulated depreciation credit reduces rate base, the amortization
23 of the credit will have no impact on Elizabethtown's income or revenues.

1 **V. FEDERAL AND STATE DEFERRED INCOME TAXES**

2 **Q. PLEASE EXPLAIN THE COMPANY’S CALCULATION OF FEDERAL AND**
3 **STATE DEFERRED INCOME TAXES AS SET FORTH ON SCHEDULES NN-9**
4 **AND NN-10.**

5 **A.** The calculation of deferred Federal and State Income Taxes used to reduce rate base
6 reflects the normalization of timing differences between book and tax accounting. The
7 deferred taxes are the accumulation of vintage years’ net timing differences calculated at
8 the statutory rates. Federal and State Deferred Taxes included in rate base for the adjusted
9 test year ending August 31, 2019 are (\$12,268,006) and (\$5,777,711), respectively.
10 Federal and State Deferred Taxes included in rate base for the adjusted post-test year ended
11 February 28, 2020 are (\$17,128,797) and (\$8,066,937), respectively. The derivation of
12 these amounts are shown in Schedules NN-9 and NN-10. The deferred income taxes
13 utilized in rate base also reflect a reduction for excess deferred income taxes as provided
14 by Company witness Alan Felsenthal. The total from each of these schedules is included
15 in Schedule SMG-2 to Ms. Graham’s testimony.

16 **VI. INTEREST SYNCHRONIZATION**

17 **Q. PLEASE EXPLAIN THE COMPANY’S INTEREST SYNCHRONIZATION**
18 **ADJUSTMENT AS SET FORTH ON SCHEDULE NN-11.**

19 **A.** Schedule NN-11 sets forth the calculation of the *pro forma* adjustment to income tax
20 expense related to interest expense synchronization. The interest expense synchronization
21 adjustment is based on the tax effect of the difference in projected annualized interest
22 expense and test year interest expense. The annualized interest expense is calculated on
23 the projected rate base shown on Schedule SMG-2 to Ms. Graham’s testimony, multiplied

1 by the total weighted cost of long-term debt of 2.14%, as set forth in the Direct Testimony
2 of Robert Hevert. This adjustment is necessary to synchronize the Federal income tax
3 associated with interest expense in the test period with the projected tax expense based on
4 an interest calculation using the weighted average cost of debt in the capital structure
5 utilized to support Rate Base. The resulting \$923,809 adjustment is an increase to Federal
6 Income Taxes included on Schedule SMG-3, Line 15 to Ms. Graham's testimony.

7 **VII. REGULATORY ASSETS**

8 **Q. PLEASE DESCRIBE THE PENSION AND OPEB REGULATORY ASSETS THAT**
9 **ARE REFLECTED ON ELIZABETHTOWN'S BOOKS.**

10 **A.** In Pivotal's previous base rate proceeding in BPU Docket No. GR16090826,
11 Elizabethtown was authorized to establish regulatory assets for its costs associated with the
12 accelerated recognition of pension and OPEB liabilities arising from the acquisition of
13 Southern Company Gas, Pivotal's former owner, by Southern. SJI purchased the
14 unamortized balance of these regulatory assets associated with Elizabethtown's New
15 Jersey employees as part of its acquisition of Pivotal's New Jersey assets. Elizabethtown's
16 current rates reflect the amortization of the pension regulatory asset over a 15-year period
17 and the amortization of the OPEB regulatory asset over a 9.2-year period.

18 **Q. HOW IS THE COMPANY PROPOSING TO REFLECT THESE ASSETS IN ITS**
19 **REVENUE REQUIREMENT?**

20 **A.** The Company proposes to continue the existing rate treatment of these regulatory assets as
21 approved by the Board in Pivotal's previous base rate proceeding. Thus, the Company
22 proposes to continue the 15-year amortization of the pension regulatory asset and the 9.2-
23 year amortization of the OPEB regulatory asset. The Company further proposes to include

1 in rate base the unamortized balance of these regulatory assets and the total accrued pension
2 and OPEB liabilities as of the end of the post-test year period. Information concerning the
3 balances of these regulatory assets has been provided to Company witness Stefany Graham
4 and is reflected on Schedule NN-12.

5 **VIII. CONCLUSION**

6 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

7 **A.** Yes, it does.

**Elizabethtown Gas Company
Comparative Balance Sheets
Ending December 31,**

		2018
Assets and Other Debits		
<u>Utility Plant</u>		
101-106, 114	Utility Plant	\$ 2,081,235,768
107	Construction Work in Progress	64,951,395
108, 111, 115	(Less) Accum. Prov. for Depr. Amort. Depl.	<u>(306,725,819)</u>
	Net Utility Plant	1,839,461,344
<u>Current and Accrued Assets</u>		
131	Cash	88,119
142	Customer Accounts Receivable	66,877,041
143	Other Accounts Receivable	2,874,167
144	(Less) Accum. Prov. for Uncollectible Acct.-Credit	(4,902,917)
154	Plant Materials & Operating Supplies	293,663
164.1	Gas Stored Underground - Current	17,486,320
164.2	Liquefied Natural Gas Stored and Held for Processing	1,646,671
165	Prepayments	7,630,345
176	Derivative Instrument Assets - Hedges	<u>1,444,289</u>
	Total Current and Accrued Assets	93,437,698
<u>Deferred Debits</u>		
181	Unamortized Debt Expense	6,003,958
182.3	Other Regulatory Assets	165,766,974
186	Miscellaneous Deferred Debits	1,666,099
189	Unamortized Loss on Reacquired Debt	<u>4,153,413</u>
	Total Deferred Debits	177,590,443
Total Assets and Other Debits		<u>\$ 2,110,489,485</u>

Elizabethtown Gas Company
Comparative Balance Sheets
Ending December 31,

		<u>2018</u>
Liabilities and Other Credits		
<u>Proprietary Capital</u>		
208-211	Other Paid-In Capital	\$ 1,199,397,342
215,215.1,216	Retained Earnings	(5,040,639)
	Total Proprietary Capital	<u>1,194,356,704</u>
<u>Long-Term Debt</u>		
224	Other Long-Term Debt	530,000,000
	Total Long-Term Debt	<u>530,000,000</u>
<u>Other Non-Current Liabilities</u>		
228.3	Accumulated Provision for Pensions and Benefits	5,019,238
228.4	Accumulated Miscellaneous Operating Provisions	654,874
	Total Other Non-Current Liabilities	<u>5,674,112</u>
<u>Current and Accrued Liabilities</u>		
231	Notes Payable	86,000,000
232	Accounts Payable	45,461,064
234	Accounts Payable to Associated Companies	25,953,966
235	Customer Deposits	3,895,777
236	Taxes Accrued	6,567,232
237	Interest Accrued	688,151
241	Tax Collections Payable	2,717,225
242	Miscellaneous Current and Accrued Liabilities	1,254,875
245	Derivative Instrument Liabilities - Hedges	242,068
	Total Current and Accrued Liabilities	<u>172,780,358</u>
<u>Deferred Credits</u>		
252	Customer Advances for Construction	1,291,283
253	Other Deferred Credits	104,591,590
254	Other Regulatory Liabilities	124,545,845
255	Accumulated Deferred Investment Tax Credits	38,078
282	Accumulated Deferred Income Taxes - Other Property	8,293,550
283	Accumulated Deferred Income Taxes - Other	(31,082,034)
	Total Deferred Credits	<u>207,678,311</u>
Total Liabilities and Other Credits		<u><u>\$ 2,110,489,485</u></u>

Pivotal Utility Holdings, Inc.
d/b/a Elizabethtown
Comparative Balance Sheets
Ending December 31,

		<u>2016</u>	<u>2017</u>
Assets and Other Debits			
<u>Utility Plant</u>			
101-106, 114	Utility Plant	\$ 1,249,911,371	\$ 1,399,999,950
107	Construction Work in Progress	60,258,186	38,358,267
108, 111, 115	(Less) Accum. Prov. for Depr. Amort. Depl.	(330,644,953)	(324,996,699)
	Net Utility Plant	<u>979,524,604</u>	<u>1,113,361,518</u>
<u>Current and Accrued Assets</u>			
142	Customer Accounts Receivable	47,828,787	63,241,892
143	Other Accounts Receivable	1,417,735	7,718,678
144	(Less) Accum. Prov. for Uncollectible Acct.-Credit	(4,053,761)	(4,905,352)
154	Plant Materials & Operating Supplies	248,430	251,328
164.1	Gas Stored Underground - Current	18,803,909	19,586,247
164.2	Liquefied Natural Gas Stored and Held for Processing	1,688,786	1,382,174
165	Prepayments	8,373,940	34,819,907
175	Derivative Instrument Assets	8,385,319	-
	Total Current and Accrued Assets	<u>82,693,145</u>	<u>122,094,874</u>
<u>Deferred Debits</u>			
181	Unamortized Debt Expense	748,663	680,666
182.3	Other Regulatory Assets	88,787,180	135,777,311
186	Miscellaneous Deferred Debits	6,516	40,000
189	Unamortized Loss on Reacquired Debt	4,304,520	3,870,043
190	Accumulated Deferred Income Taxes	22,067,346	12,762,695
	Total Deferred Debits	<u>115,914,225</u>	<u>153,130,715</u>
Total Assets and Other Debits		<u><u>\$ 1,178,131,974</u></u>	<u><u>\$ 1,388,587,107</u></u>

Pivotal Utility Holdings, Inc.
d/b/a Elizabethtown
Comparative Balance Sheets
Ending December 31,

		<u>2016</u>	<u>2017</u>
Liabilities and Other Credits			
<u>Proprietary Capital</u>			
208-211	Other Paid-In Capital	\$ 132,019,251	\$ 166,377,323
215,215.1,216	Retained Earnings	260,511,867	268,372,715
219	Accumulated Other Comprehensive Income	(20,870,015)	-
	Total Proprietary Capital	<u>371,661,103</u>	<u>434,750,038</u>
<u>Long-Term Debt</u>			
223	Advances From Associated Companies	167,527,985	268,405,834
224	Other Long-Term Debt	180,100,000	180,100,000
226	(Less) Unamortized Discount on Long-Term Debt-Dr.	(120,383)	(112,780)
	Total Long-Term Debt	<u>347,507,602</u>	<u>448,393,054</u>
<u>Other Non-Current Liabilities</u>			
228.3	Accumulated Provision for Pensions and Benefits	20,863,384	19,216,443
228.4	Accumulated Miscellaneous Operating Provisions	346,961	277,777
	Total Other Non-Current Liabilities	<u>21,210,345</u>	<u>19,494,220</u>
<u>Current and Accrued Liabilities</u>			
232	Accounts Payable	16,196,732	16,562,426
234	Accounts Payable to Associated Companies	55,185,806	81,902,559
235	Customer Deposits	9,686,043	7,299,263
236	Taxes Accrued	3,124,019	8,685,921
237	Interest Accrued	167,287	7
241	Tax Collections Payable	4,011,509	4,196,482
242	Miscellaneous Current and Accrued Liabilities	881,207	934,535
245	Derivative Instrument Liabilities - Hedges	-	2,005,920
	Total Current and Accrued Liabilities	<u>89,252,603</u>	<u>121,587,113</u>
<u>Deferred Credits</u>			
252	Customer Advances for Construction	879,272	1,061,378
253	Other Deferred Credits	106,053,907	85,136,624
254	Other Regulatory Liabilities	18,914,533	130,927,857
255	Accumulated Deferred Investment Tax Credits	148,538	62,463
282	Accumulated Deferred Income Taxes - Other Property	222,504,071	144,843,030
283	Accumulated Deferred Income Taxes - Other	-	2,331,330
	Total Deferred Credits	<u>348,500,321</u>	<u>364,362,682</u>
Total Liabilities and Other Credits		<u>\$ 1,178,131,974</u>	<u>\$ 1,388,587,107</u>

Pivotal Utility Holdings, Inc.
d/b/a Elizabethtown
Comparative Balance Sheets
Ending June 30,

		<u>2018</u>
Assets and Other Debits		
<u>Utility Plant</u>		
101-106, 114	Utility Plant	\$ 1,448,287,043
107	Construction Work in Progress	33,734,023
108, 111, 115	(Less) Accum. Prov. for Depr. Amort. Depl.	<u>(316,625,671)</u>
	Net Utility Plant	1,165,395,395
<u>Current and Accrued Assets</u>		
142	Customer Accounts Receivable	35,340,570
143	Other Accounts Receivable	9,972,352
144	(Less) Accum. Prov. for Uncollectible Acct.-Credit	(6,441,251)
154	Plant Materials & Operating Supplies	265,152
164.1	Gas Stored Underground - Current	20,225,893
164.2	Liquefied Natural Gas Stored and Held for Processing	1,257,626
165	Prepayments	<u>25,571,935</u>
	Total Current and Accrued Assets	86,192,277
<u>Deferred Debits</u>		
182.3	Other Regulatory Assets	124,896,686
186	Miscellaneous Deferred Debits	40,000
189	Unamortized Loss on Reacquired Debt	4,299,473
190	Accumulated Deferred Income Taxes	<u>11,506,635</u>
	Total Deferred Debits	140,742,794
Total Assets and Other Debits		<u><u>\$ 1,392,330,466</u></u>

Pivotal Utility Holdings, Inc.
d/b/a Elizabethtown
Comparative Balance Sheets
Ending June 30,

		<u>2018</u>
Liabilities and Other Credits		
<u>Proprietary Capital</u>		
208-211	Other Paid-In Capital	\$ 166,371,790
215,215.1,216	Retained Earnings	264,366,119
	Total Proprietary Capital	<u>430,737,909</u>
<u>Long-Term Debt</u>		
223	Advances From Associated Companies	268,405,834
226	(Less) Unamortized Discount on Long-Term Debt-Dr.	<u>(108,978)</u>
	Total Long-Term Debt	268,296,855
<u>Other Non-Current Liabilities</u>		
228.3	Accumulated Provision for Pensions and Benefits	18,484,438
228.4	Accumulated Miscellaneous Operating Provisions	<u>361,000</u>
	Total Other Non-Current Liabilities	18,845,438
<u>Current and Accrued Liabilities</u>		
232	Accounts Payable	16,007,377
234	Accounts Payable to Associated Companies	280,911,240
235	Customer Deposits	5,232,573
236	Taxes Accrued	4,152,889
237	Interest Accrued	20,406
241	Tax Collections Payable	1,018,079
242	Miscellaneous Current and Accrued Liabilities	<u>1,797,285</u>
	Total Current and Accrued Liabilities	309,139,851
<u>Deferred Credits</u>		
252	Customer Advances for Construction	1,107,227
253	Other Deferred Credits	77,290,863
254	Other Regulatory Liabilities	140,108,672
255	Accumulated Deferred Investment Tax Credits	38,078
282	Accumulated Deferred Income Taxes - Other Property	<u>146,765,572</u>
	Total Deferred Credits	365,310,412
Total Liabilities and Other Credits		<u>\$ 1,392,330,466</u>

Elizabethtown Gas Company
Comparative Statements of Income For
the Six Months Ending December 31,

		<u>2018</u>
<u>Utility Operating Income</u>		
400	Gas Operating Revenues	<u>\$ 125,605,299</u>
<u>Operating Expenses</u>		
401	Operation Expenses	105,625,276
402	Maintenance Expenses	3,309,571
403	Depreciation Expense	12,976,876
404-405	Amortization and Depletion of Utility Plant	-
408.1	Taxes Other Than Income Taxes	1,614,204
409.1	Income Taxes - Federal	-
409.1	Income Taxes - Other	-
410.1	Provision for Deferred Income Taxes	(3,085,553)
411.4	Investment Tax Credit Adjustment - Net	-
	Total Operating Expenses	<u>120,440,374</u>
	Net Operating Income (Loss)	<u>5,164,925</u>
<u>Other Income (Deductions)</u>		
415-421.1	Other Income	372,233
426.1-426.5	Miscellaneous Income Deductions	(65,875)
409.2-410.2	Income Taxes	-
	Net Other Income (Deductions)	<u>306,358</u>
<u>Interest Charges</u>		
427	Interest on Long-Term Debt	10,011,393
428	Amort. of Debt Disc. and Expense	603,357
428.1	Amortization of Loss on Reacquired Debt	255,038
430	Interest on Debt to Assoc. Companies	-
431	Other Interest Expense	83,235
432	(Less) Allow. for Borrowed Funds Used During Construction-Cr.	<u>(441,101)</u>
	Net Interest Charges	10,511,922
Net Income (Loss)		<u>\$ (5,040,639)</u>

Pivotal Utility Holdings, Inc.
d/b/a Elizabethtown
Comparative Statements of Income
For the Year Ending December 31,

	<u>2016</u>	<u>2017</u>
<u>Utility Operating Income</u>		
400 Gas Operating Revenues	\$ 297,871,471	\$ 307,632,025
<u>Operating Expenses</u>		
401 Operation Expenses	207,387,640	194,266,732
402 Maintenance Expenses	7,780,232	8,247,782
403 Depreciation Expense	26,595,939	28,666,777
404-405 Amortization and Depletion of Utility Plant	19,549	6,516
408.1 Taxes Other Than Income Taxes	3,130,614	5,473,999
409.1 Income Taxes - Federal	5,341,205	(10,826,424)
409.1 Income Taxes - Other	1,377,789	(1,021,580)
410.1 Provision for Deferred Income Taxes	8,157,236	32,939,066
411.4 Investment Tax Credit Adjustment - Net	(118,623)	(86,075)
Total Operating Expenses	<u>259,671,581</u>	<u>257,666,793</u>
Net Operating Income (Loss)	<u>38,199,890</u>	<u>49,965,232</u>
<u>Other Income (Deductions)</u>		
415-421.1 Other Income	(737,467)	(375,850)
426.1-426.5 Miscellaneous Income Deductions	(104,042)	(121,490)
409.2-410.2 Income Taxes	(213,329)	(418,787)
Net Other Income (Deductions)	<u>(1,054,838)</u>	<u>(916,127)</u>
<u>Interest Charges</u>		
427 Interest on Long-Term Debt	2,026,609	2,665,547
428 Amort. of Debt Disc. and Expense	67,997	67,997
428.1 Amortization of Loss on Reacquired Debt	442,465	442,080
430 Interest on Debt to Assoc. Companies	12,372,239	13,363,176
431 Other Interest Expense	231,078	(219,349)
432 (Less) Allow. for Borrowed Funds Used During Construction-Cr.	(207,992)	(359,820)
Net Interest Charges	<u>14,932,396</u>	<u>15,959,631</u>
Net Income (Loss)	<u>\$ 22,212,656</u>	<u>\$ 33,089,474</u>

Pivotal Utility Holdings, Inc.
d/b/a Elizabethtown
Comparative Statements of Income
For the Six Months Ending June 30,

		<u>2018</u>
<u>Utility Operating Income</u>		
400	Gas Operating Revenues	<u>\$ 183,896,802</u>
<u>Operating Expenses</u>		
401	Operation Expenses	117,800,613
402	Maintenance Expenses	4,507,441
403	Depreciation Expense	14,795,905
404-405	Amortization and Depletion of Utility Plant	-
408.1	Taxes Other Than Income Taxes	2,128,272
409.1	Income Taxes - Federal	5,412,192
409.1	Income Taxes - Other	4,096,805
410.1	Provision for Deferred Income Taxes	679,379
411.4	Investment Tax Credit Adjustment - Net	(24,385)
	Total Operating Expenses	<u>149,396,223</u>
	Net Operating Income (Loss)	<u>34,500,579</u>
<u>Other Income (Deductions)</u>		
415-421.1	Other Income	488,665
426.1-426.5	Miscellaneous Income Deductions	(108,056)
409.2-410.2	Income Taxes	-
	Net Other Income (Deductions)	<u>380,609</u>
<u>Interest Charges</u>		
427	Interest on Long-Term Debt	1,961,894
428	Amort. of Debt Disc. and Expense	22,666
428.1	Amortization of Loss on Reacquired Debt	232,373
430	Interest on Debt to Assoc. Companies	8,193,182
431	Other Interest Expense	(25,365)
432	(Less) Allow. for Borrowed Funds Used During Construction-Cr.	(219,336)
	Net Interest Charges	<u>10,165,414</u>
Net Income (Loss)		<u>\$ 24,715,773</u>

Elizabethtown Gas Company
Statement of Gas Operating Revenues
For the Six Months Ending December 31 2018,

		<u>Jurisdictional</u>	<u>Non-Jurisdictional</u>	<u>Total</u>
<u>Sales of Gas</u>				
480	Residential	\$ 77,530,842	\$ -	\$ 77,530,842
481	Commercial	34,636,905	-	34,636,905
	Total Sales of Gas	<u>112,167,748</u>	<u>-</u>	<u>112,167,748</u>
<u>Other Gas Revenues</u>				
480-495	Miscellaneous	5,489,345	-	5,489,345
489	Revenue From Transportation of Gas of Others	5,859,910	-	5,859,910
	Total Other Gas Revenues	<u>11,349,255</u>	<u>-</u>	<u>11,349,255</u>
Total Revenues		<u><u>\$ 123,517,003</u></u>	<u><u>\$ -</u></u>	<u><u>\$ 123,517,003</u></u>

Pivotal Utility Holdings, Inc.
d/b/a Elizabethtown
Statement of Gas Operating Revenues
For the Six Months Ending June 30 2018,

		<u>Jurisdictional</u>	<u>Non-Jurisdictional</u>	<u>Total</u>
<u>Sales of Gas</u>				
480	Residential	\$ 127,632,884	\$ -	\$ 127,632,884
481	Commercial	51,328,874	-	51,328,874
	Total Sales of Gas	<u>178,961,757</u>	<u>-</u>	<u>178,961,757</u>
<u>Other Gas Revenues</u>				
480-495	Miscellaneous	(4,897,421)	-	(4,897,421)
489	Revenue From Transportation of Gas of Others	5,814,450	-	5,814,450
	Total Other Gas Revenues	<u>917,029</u>	<u>-</u>	<u>917,029</u>
Total Revenues		<u>\$ 179,878,786</u>	<u>\$ -</u>	<u>\$ 179,878,786</u>

Elizabethtown Gas Company
Payments and Accruals to Affiliates
For the Six Months Ending December 31, 2018,

	<u>Amount</u>
<u>Payments and Accruals to Affiliates for Services Provided to Elizabethtown</u>	
<u>South Jersey Industries, Inc.</u>	
Management Fee and Intercompany Payroll Allocations	\$ 6,547,206
Allocation of Shared Asset Depreciation	30,270
Capitalization of O&M Costs	495,198
	<u>7,072,673</u>
<u>South Jersey Gas Company</u>	
Intercompany Payroll Allocation	133,827
	<u>133,827</u>
Total Costs for Services Provided to Elizabethtown	<u>\$ 7,206,501</u>
 <u>Payments and Accruals to Affiliates for Flowthrough Costs</u>	
<u>South Jersey Industries, Inc.</u>	
Medical and Benefit Costs Allocation	\$ 1,876,055
Accounts Payable Reimbursements (Primarily insurance policy and miscellaneous expenses)	3,459,463
Accounts Payable Reimbursements (Primarily trading activity deposits and debt issuance costs)	2,526,457
	<u>7,861,974</u>
<u>South Jersey Resources Group, Inc.</u>	
Gas Purchases, net of asset management fees	<u>51,220,433</u>
<u>South Jersey Gas Company</u>	
Medical and Benefit Costs Allocation	1,885,738
Accounts Payable Reimbursements (Primarily shared IT and utilities costs)	259,187
	<u>2,144,925</u>
Total Flowthrough Costs	<u>\$ 61,227,333</u>

ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENTS TO AUGUST 31, 2019 OPERATING INCOME AND RATE BASE
DEPRECIATION EXPENSE AND ACCUMULATED DEPRECIATION

Line No.		Utility Plant in Service	Depreciation Expense (Proposed Rates)
1	<u>Depreciation Expense:</u>		
2			
3	Utility Plant In Service as of August 31, 2019	\$ 1,463,003,539	\$ 36,221,026
4			
5	Test Year Depreciation Expense		<u>\$ 31,246,127</u>
6			
7	Pro Forma Depreciation Expense Annualization Adjustment		\$ 4,974,900
8			
11	Post Test Year Depreciation Expense Annualization Adjustment	\$ 156,080,309	\$ 6,906,150
12			
13	Total Pro Forma Adjustment to Depreciation Expense (Income Statement)	<u>\$ 1,619,083,848</u>	<u>\$ 11,881,049</u>
14			
15			
16	<u>Accumulated Depreciation:</u>		
17			
18	Accumulated Depreciation as of August 31, 2019*		\$ (469,239,870)
19			
20	Post Test Year Depreciation on UPIS as of Aug 31, 2019 (Sept 19 - Feb 20)		\$ (18,110,513)
21			
22	Post Test Year Depreciation on PTY Plant (Sept 19 - Feb 20)		\$ (3,453,075)
23			
24	Post Test Year Retirements (Sept 19 - Feb 20)		\$ 6,387,221
25			
26	Post Test Year Cost of Removal (Sept 19 - Feb 20)		\$ 5,719,645
27			
28	Accumulated Depreciation as of Feb 29, 2020 (Rate Base)		<u>\$ (478,696,592)</u>

**Reflects Acquisition Adjustment*

**ELIZABETHTOWN GAS COMPANY
CALCULATION OF ADJUSTED TEST YEAR
DEFERRED FEDERAL INCOME TAX (DFIT) INCLUDED IN RATE BASE**

Line No.		POST TEST YEAR ADDITIONS	ADDED TAX DEPRECIATION	DFIT IN RATE BASE
1	Projected DFIT Rate Base Balance 8/31/19			(12,268,006)
2				
3	<u>Normalization on 8/31/19 Plant (PTY 9/19-2/20):</u>			
4				
5	Book Depreciation	14,676,203		
6				
7	Tax Depreciation-Federal	<u>(40,638,620)</u>		
8				
9	Federal Tax Depreciation Over Book		<u>(25,962,417)</u>	
10				
11	<u>Normalization on PTY Additions (PTY 9/19-2/20):</u>			
12				
13	Book Depreciation	3,453,075		
14				
15	Tax Depreciation-Federal	<u>(2,926,506)</u>		
16				
17	Federal Tax Depreciation Over Book		<u>526,569</u>	
18				
19	Total Added Tax Depreciation		(25,435,848)	
20				
21	Deferred FIT (@ effective FIT rate of 21%)			<u>(5,341,528)</u>
22				
23	Federal benefit of state taxes - 21%			<u>480,737</u>
24				
25	Adjusted DFIT Rate Base Balance 2/29/20			<u>(17,128,797)</u>

**ELIZABETHTOWN GAS COMPANY
CALCULATION OF ADJUSTED TEST YEAR
DEFERRED NJ CORPORATE BUSINESS TAX (CBT) INCLUDED IN RATE BASE**

<u>Line No.</u>		<u>POST TEST YEAR ADDITIONS</u>	<u>ADDED TAX DEPRECIATION</u>	<u>DFIT IN RATE BASE</u>
1	Projected DCBT Rate Base Balance 8/31/19			(5,777,711)
2				
3	<u>Normalization on 8/31/19 Plant (PTY 9/19-2/20):</u>			
4				
5	Book Depreciation	14,676,203		
6				
7	Tax Depreciation-Federal	<u>(40,638,620)</u>		
8				
9	Federal Tax Depreciation Over Book		<u>(25,962,417)</u>	
10				
11	<u>Normalization on PTY Additions (PTY 9/19-2/20):</u>			
12				
13	Book Depreciation	3,453,075		
14				
15	Tax Depreciation-Federal	<u>(2,926,506)</u>		
16				
17	Federal Tax Depreciation Over Book		<u>526,569</u>	
18				
19	Total Added Tax Depreciation		(25,435,848)	
20				
21	Pro Forma Adjustment - Deferred NJ CBT @ 9.00%			<u>(2,289,226)</u>
22				
23	Adjusted DCBT Rate Base Balance 2/29/20			<u>(8,066,937)</u>

ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENT TO AUGUST 31, 2019 OPERATING INCOME
INCOME TAXES - INTEREST SYNCHRONIZATION

Line No.

1	Adjusted Rate Base	\$ 1,103,568,748	
2			
3	Total Weighted Cost of Long Term Debt	<u>2.14%</u>	
4			
5	Annualized Interest Expense	\$ 23,641,202	
6			
7	Less: Test Year Interest Expense	<u>\$ (26,927,610)</u>	
8			
9	Net Interest Expense		<u>\$ (3,286,408)</u>
10			
11	Income Tax Rate		<u>28.11%</u>
12			
13	Total (Increase)/Decrease to test year income taxes		<u>\$ (923,809)</u>

**ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENTS TO RATE BASE
PENSION AND OPEB REGULATORY ASSETS**

Total Accrued Pension and Other Post Retirement Benefits	\$	(1,964,169)	
Pension & OPEB Regulatory Asset - Southern Acquisition		<u>40,078,516</u>	
Regulatory Asset included in Rate Base Balance as of 2/28/19	\$		38,114,346
Adjusted for:			
Projected regulatory asset amortization expense and net periodic benefit costs from 3/1/19 - 8/31/19		<u>(1,164,311)</u>	
Regulatory Asset included in Rate Base Test Year Balance as of 8/31/19			36,950,035
Adjusted for:			
Projected regulatory asset amortization expense and net periodic benefit costs from 9/1/19 - 2/28/20		<u>(1,164,311)</u>	
Regulatory Asset included in Rate Base Post Test Year Balance as of 2/29/20	\$		<u><u>35,785,724</u></u>

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF :
ELIZABETHTOWN GAS COMPANY FOR :
APPROVAL OF INCREASED BASE TARIFF :
RATES AND CHARGES FOR GAS SERVICE, : BPU DOCKET NO. _____
CHANGES TO DEPRECIATION RATES AND :
OTHER TARIFF REVISIONS :

CASE SUMMARY, PETITION, NOTICE AND EXHIBITS

Volume 2 of 4

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Elizabethtown Gas Company

April 18, 2019

**IN THE MATTER OF THE PETITION OF
ELIZABETHTOWN GAS COMPANY FOR APPROVAL OF
INCREASED BASE TARIFF RATES AND CHARGES
FOR GAS SERVICE, CHANGES TO DEPRECIATION
RATES AND OTHER TARIFF REVISIONS**

BPU DOCKET NO. GR19_____

**DIRECT TESTIMONY
OF
LEONARD BRINSON JR.**

**On Behalf of
Elizabethtown Gas Company**

Exhibit P-6

April 18, 2019

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**ELIZABETHTOWN GAS COMPANY
DIRECT TESTIMONY OF
LEONARD BRINSON JR.**

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Leonard Brinson Jr. My business address is 1001 South Grand Street, Hammonton, New Jersey 08037.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by South Jersey Industries, Inc. ("SJI") as Vice President and Chief Information Officer.

Q. PLEASE DESCRIBE YOUR PROFESSIONAL RESPONSIBILITIES.

A. In this capacity, I provide strategic vision and advise executive management on the use of technology to meet strategic business goals. I am accountable for the management of the Information Technology ("IT") department, projects, initiatives, systems and assets. I oversee the critical area of Cyber Security and actively engage in the coordination and development of relationships with third party service providers.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND INDUSTRY RELATED EXPERIENCE.

A. I graduated from Millikin University in 1979 with a Bachelor of the Arts in Political Science and later earned an Executive M.B.A. from Jacksonville University. After graduating from Millikin University, I worked at Prudential Financial Florida and New Jersey from 1980 until 2004, where I held a number of positions including Director, Information Systems, Enterprise Tax Systems and Manager, Technology Services, Output Services and LAN Administration. After Prudential, I worked at Enterprise Technology Partners, LLC from 2004 to 2005, serving as Client Relationship Director. In 2005, I joined

Williams Companies, where I held a number of management positions, including Transformation Manager; Manager, Planning & Governance; Manager, IT Operations; and Manager, Information Management. From 2013 to 2017, I worked at Axalta Coating Systems where I held several Director roles, including Global IT Director, Corporate Applications & Reporting; Global IT Director, Global Applications; and Global IT Director, Office of the CIO. I joined SJI in my current position in April 2017.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my testimony is to support the IT investments that Elizabethtown Gas Company (“Elizabethtown” or “Company”) has included for recovery in the base rates proposed in this proceeding. Toward this end, I will explain the IT investments projected to be in service prior to February 29, 2020, the end of the post-test year period, and why these investments are needed to support the operations of Elizabethtown and the continued provision of safe and reliable service to the Company’s customers. In doing so, I will describe the IT function at SJI and how these investments will help to both modernize our technology in a manner that is beneficial to the Elizabethtown, its customers and other stakeholders, while also aligning with the integration of Elizabethtown into the SJI infrastructure.

Q. PLEASE DESCRIBE THE ORGANIZATIONAL STRUCTURE OF THE SJI IT DEPARTMENT AND ITS AREAS OF RESPONSIBILITY.

A. The IT Department is housed within SJI and provides technology services to all companies within the SJI organization, including Elizabethtown, with an emphasis on the customer experience, utility operations and enterprise service systems. The IT Department oversees

1 system applications and has responsibility for all devices, including personal computers,
2 laptops and mobile devices, as well as all infrastructure, including all networks, layered
3 security devices, communications devices, and physical and virtual servers. The IT
4 Department is responsible for the following five functional areas:

- 5 (i) **Plan Function**, which consists of four major components: (1) development
6 and management of the SJI IT budget; (2) management of the SJI IT
7 portfolio, including responsibility for prioritizing IT projects and helping to
8 ensure that they remain within the agreed upon scope, budget and timeline;
9 (3) management of SJI's vendor relationships, including the negotiation of
10 contracts and monitoring vendor performance; and (4) IT-related SOX and
11 other internal and external IT-related compliance;
- 12 (ii) **Build Function**, which involves the development of new applications as
13 well as enhancements to existing applications, providing new functionality
14 to the organization;
- 15 (iii) **Run Function**, which involves the delivery of IT services in three major
16 areas, including (1) infrastructure, including the network and software that
17 provides the foundation on which all IT services are built; (2) applications,
18 which deploy and support IT applications that provide automation and
19 consistency to IT-enabled SJI business processes; and (3) service, which
20 provides first and second tier IT support to business users;
- 21 (iv) **Protect Function**, which involves maintaining information security and
22 cybersecurity across the entire SJI enterprise; and

- (v) **Report Function**, which involves ensuring the integrity and security of all data assets, data systems, business intelligence, and data-related processes.

III. DISCUSSION

Q. PLEASE DESCRIBE EACH OF THE SIGNIFICANT INFORMATION SYSTEMS THAT ELIZABETHTOWN IS PLANNING TO PLACE IN SERVICE DURING THE POST-TEST YEAR PERIOD OF THIS CASE AND EXPLAIN WHAT THOSE SYSTEMS ARE USED FOR.

A. The following major systems are projected to be put into service during the post-test year period:

(i) **Workday Finance 3** is the third phase of the implementation of Workday, an enterprise resource planning (“ERP”) system that will be the system of record for all Elizabethtown financial records and information. The third phase of the Workday implementation project includes integrations to Customer Care and Billing (“CC&B”), Maximo and PowerPlan, as well Accounts Receivable functionality;

(ii) **Oracle CC&B Core** is the main customer support system that provides customer support in the Elizabethtown call center, which is used to access customer information. CC&B is a complete billing and customer care application. CC&B handles every aspect of the customer life cycle, from establishing new customers, meter reading, billing, rates, payment processing, collections, and creating field work. It also includes customer relationship features;

- 1 (iii) **Customer Portal** allows Elizabethtown customers to access and manage
2 their account information, pay their bills, select their preferences and
3 receive answers to frequently asked questions online twenty-four hours per
4 day, seven days per week;
- 5 (iv) **Interactive Voice Response (“IVR”) and Workforce Management** is a
6 state-of-the-art system for call center management that facilitates various
7 functions, including the management of call center activities, staff
8 management and outbound dialing;
- 9 (v) **Transportation/Marketing/Sendout Portals** are a set of three portals used
10 by the Company and/or third-parties to enhance Elizabethtown’s gas supply
11 functions. The **Transportation Portal** allows the Company’s gas supply
12 analysts and confirmation analysts to administer classes of customers and
13 marketers, approve or reject marketer and supply nominations, send
14 broadcast messages to users, and process system reports. The **Marketer**
15 **Portal** allows marketers to nominate gas for customers and perform trades
16 with other marketers. The **Sendout Portal** provides an interface for all non-
17 third party suppliers to nominate gas and allows the Company’s Gas Supply
18 operations to account for such gas;
- 19 (vi) **IBM Maximo** is an asset management system that provides a single point
20 of control over all the Company’s physical assets and allows the Company
21 to share and enforce best practices, inventory, resources and personnel, as
22 well as assist with the management of field work;

- 1 (vii) **Oracle Mobile WorkForce Management (“MWM”) and Oracle**
2 **RealTime Scheduler (“ORS”)** optimizes the deployment of the
3 Company’s field operations resources by logically identifying the best
4 resource to respond to issues and by prioritizing emergencies;
- 5 (viii) **Geographical Information Systems (“GIS”)** supports key functional
6 areas/processes at Elizabethtown, including mapping/visualizing assets,
7 work management and inspections, mobile workforce, project planning, and
8 design and construction;
- 9 (ix) **SalesForce** will enable Elizabethtown sales and support staff to input and
10 monitor all new customer acquisition activities, generate reports, track leads
11 and utilize advanced workflows and processes. In addition, the **Configure,**
12 **Price, Quote (“CPQ”) module** will provide the salesperson with the ability
13 to accurately project the cost to serve potential customers and determine if
14 there is any customer contribution required, allowing the salesperson to
15 provide more exact price quotes;
- 16 (x) **Field Supervisory Control and Data Acquisition (“SCADA”)** is a set of
17 hardware, software and systems that monitor and control SJI’s pipeline
18 locations. Elizabethtown’s pipeline locations will be added to SJI’s
19 SCADA system, allowing the SJI control room to monitor and control the
20 flow of gas for the Elizabethtown pipeline;
- 21 (xi) **Middleware/IIB** is the middle layer between applications and databases.
22 The Middleware is a software component that enables flow of
23 data/information across applications seamlessly. The data/information

1 could be of any format, size and frequency but middleware manages all such
2 differences in data/information between multiple applications and manages
3 communication across those applications. For example, CC&B captures a
4 customer complaint of a gas leak, that data is sent to Maximo to create a
5 work order and ORS to schedule an appointment with a technician.
6 Middleware takes the CC&B complaint data and flows it through that
7 scenario outlined above; and

8 (xii) **Toughbook/Truck Technology** will upgrade the existing technology used
9 by Elizabethtown's trucks and field personnel. The existing technology is
10 past its useful life and is unable to upgrade to the Windows 10 operating
11 system, leaving Elizabethtown vulnerable to threats after support for the
12 current operating system ends in January 2020. In addition, new global
13 positioning system ("GPS") devices are being implemented to more reliably
14 and intelligently manage the routes the crews take to optimize efficiency in
15 service to the Elizabethtown customer base.

16 The actual and forecast expenditures for each of these projects, as well as the
17 projected in-service dates, are shown on Schedule MPS-4 to Company witness Michael P.
18 Scacifero's testimony. These investments will replace the systems currently provided by
19 The Southern Company ("Southern") under the Transition Services Agreement ("TSA").

20 **Q. PLEASE DESCRIBE HOW THE SPECIFIC SYSTEMS TO BE INSTALLED FOR**
21 **ELIZABETHTOWN WERE SELECTED.**

22 **A.** In assessing its options for each of these projects, Elizabethtown used a competitive
23 bidding process with multiple vendors to allow the Company to find the most cost-efficient

1 solution to its IT needs. The Company determined that each of the systems being
2 implemented best addressed the Company's particular needs in a cost-efficient manner.
3 Details regarding the selection of each system are discussed below.

4 (i) **Workday Finance 3** – Workday is SJI's platform for Human Capital
5 Management ("HCM") and Payroll. HCM and Payroll were implemented
6 for Elizabethtown at the time of the acquisition. The decision was made to
7 further invest in the Workday platform by adding Elizabethtown financial
8 data to the system in order to gain efficiencies from having all SJI Financial
9 information in a central ERP system;

10 (ii) **CC&B Core** – Following the recommendation of the vendor and leveraging
11 our experience with CC&B, the SJI IT team determined it would be best to
12 create a separate instance of CC&B that would be for the unique
13 functionality Elizabethtown required;

14 (iii) **Customer Portal** – The Company determined that implementing a system
15 similar to that in place at SJI's other utilities would allow the Company to
16 leverage its experience with the system to reduce implementation and
17 maintenance costs;

18 (iv) **IVR** – After Elizabethtown's current IVR provider, Avaya, filed Chapter
19 11 last year and exited the business, the Company determined that it would
20 be best to switch its IVR system to the Cisco platform, which is widely
21 considered by industry experts as the leading technology platform for
22 Contact Centers;

- 1 (v) **Transportation/Marketing/Sendout Portals** – Based on the functionality
2 that the existing Southern portals provided, the decision was made to
3 internally develop new applications (portals) to replace those applications.
4 There was not an off-the-shelf solution to replace the Southern systems
5 currently used by Elizabethtown, so the Company and SJI determined the
6 best solution was to develop new portals for the Company and third parties
7 that are configured to provide enhanced functionality and eliminate many
8 of the manual processes surrounding existing systems;
- 9 (vi) **IBM Maximo** – Maximo is needed to manage physical assets on a common
10 platform allowing Elizabethtown to share data between applications.
11 Maximo efficiently tracks and manages asset and location data throughout
12 the asset lifecycle. In addition, Maximo efficiently tracks both planned and
13 unplanned work activities, from initial request through completion and
14 recording of actuals;
- 15 (vii) **MWM/ORS** – The TSA only allowed for SJI to receive the data from the
16 Southern systems, not the systems themselves. The SJI IT team initially
17 considered implementing the Click system for Elizabethtown because that
18 is their current dispatching system. However, because of cost and the fact
19 that Southern was not providing the custom logic, SJI IT decided to
20 implement the ORS system which we have experience with, and includes
21 the mobile application MWM for the Elizabethtown’s field technicians;
- 22 (viii) **GIS – Utilities & Pipeline Data Model (UPDM)** – The Company
23 determined that an upgrade to the existing GIS system was needed. The

1 upgrade includes major functionality enhancements that will reduce the
2 need for wholesale customizations;

3 (ix) **SalesForce** – A new customer acquisition system was needed for
4 Elizabethtown as its current system, a proprietary system developed by
5 Southern, was not offered or acquired in the sale. The SJI IT team selected
6 Salesforce based on the positive experience it had with the Salesforce
7 application with SJI's other subsidiaries;

8 (x) **Field SCADA** – The SJI IT team determined that integrating
9 Elizabethtown's pipeline locations into SJI's SCADA system would allow
10 the Company to manage all pipeline locations from a single control room,
11 allowing for efficient operation and reduced maintenance costs;

12 (xi) **Middleware** – With new and enhanced applications and processes being
13 introduced to Elizabethtown, the SJI IT team determined that a middleware
14 platform was needed to enable the systems to communicate and interact
15 with each other seamlessly irrespective of the data type, format, frequency,
16 load etc. This will allow Elizabethtown to fully realize the efficiencies of
17 the new systems; and

18 (xii) **Toughbook/Truck Technology** – The SJI IT team determined that the
19 existing technology at Elizabethtown was past its useful life, and required
20 an upgrade to more current operating systems to both protect the Company
21 from cybersecurity threats and ensure the existing systems were supported.

1 **Q. WHEN WILL EACH OF THESE SYSTEMS BE PLACED IN SERVICE?**

2 **A.** Other than the Field SCADA and Toughbook/Truck Technology, which we anticipate will
3 be placed in service in December 2019, the majority of the systems are expected to be in
4 service in January 2020.

5 **Q. WILL ANY ADDITIONAL IT PROJECTS BE PUT INTO SERVICE DURING**
6 **THE TEST YEAR OR POST-TEST YEAR?**

7 **A.** Yes. Several smaller projects will be placed into service during the test year and post-test
8 year. These projects include the following:

9 (i) **Data Center** involves a core data center upgrade that is needed to handle
10 increased call volumes, load balancing and to implement best security
11 practices to at Elizabethtown;

12 (ii) **Data Warehouse** is a long-term Data Warehouse solution to store key
13 data used for executive reports;

14 (iii) **DataStage/Message Broker** is needed to guide the installation,
15 configuration and testing of the infrastructure required to integrate
16 different applications used by the Company;

17 (iv) **End-User Device & Asset Migration** will inventory and replace current
18 hardware (desktops, laptops, monitors, etc.), image and stage new
19 hardware, and transition current mobile phone hardware and contracts
20 used by Elizabethtown personnel;

21 (v) **Fleet (Wave 2)** is the purchase and installation of M5 AssetWorks
22 software used to manage Elizabethtown's fleet of trucks;

- 1 (vi) **Fleetboss/Geotab Vehicle Tracking** consists of the installation of GPS
- 2 tracking equipment in Elizabethtown’s trucks that integrates with the
- 3 GeoTab Vehicle Location application;
- 4 (vii) **HR & Payroll Migration** establishes Elizabethtown as a new company in
- 5 Workday, including the addition of human resources compensation and
- 6 benefits selection, timesheets, and pay for weekly union employees and
- 7 biweekly exempt employees;
- 8 (viii) **Liquefied Natural Gas (“LNG”) SCADA**, similar to the Field SCADA
- 9 project for pipelines, migrates Elizabethtown’s LNG SCADA network to
- 10 SJI’s system and allows the network to be monitored and controlled from
- 11 a central location;
- 12 (ix) **IT Security** allows expansion of SJI’s existing security information and
- 13 event management (“SIEM”) environment to include Elizabethtown
- 14 employees, performs security risk assessment, creates and deploys
- 15 cybersecurity training, and upgrades RSA hard tokens and hardware;
- 16 (x) **Oracle Database** includes the purchase of additional Oracle database
- 17 licenses necessary to support the Elizabethtown;
- 18 (xi) **PowerPlan and Finance Edge Applications** implements PowerPlan at
- 19 Elizabethtown for fixed asset accounting, depreciation, allowance for
- 20 funds used during construction and related regulatory reporting;
- 21 (xii) **Risk Management (Wave 2)** is an IT solution that entails two separate
- 22 business processes implemented in Salesforce: (a) it allows employees to
- 23 submit on the job injury, company vehicle, company property or customer

property damage claims by a webform that is processed through Salesforce and (b) it collects contractor or home owner damage claims of company mains, services and meters by an internal webform that is invoiced and tracked through Salesforce;

(xiii) **TSA Application Lifecycle Management (“ALM”) Upgrade** is an upgrade to existing HP ALM system needed to allow SJI and Elizabethtown to properly test and track new projects;

(xiv) **Unstructured Data Migration** involves the transfer of Elizabethtown SharePoint sites and other unstructured data to SJI’s system;

(xv) **Utility Operations TSA** deploys or transfers licenses for multiple applications supporting various operations such as engineering design (AutoCAD), environmental safety and health (3E, Drive cam, PHA works, Commander) and gas modeling (Sketch Tool, Synergee, Gas Calc, Tech Toolbox);

(xvi) **Website** migrates Elizabethtown’s public-facing website to SJI’s platform, including rebranding with SJI-style logo and replacing existing content with SJI content;

(xvii) **Workday Finance** is the first phase of the Workday implementation project, which includes all Workday functions to support SJI Utilities, Inc., such as procurement, payables, expenses, banking, payroll, p-card/travel card integrations, projects, and business assets for non-regulatory assets;

(xviii) **Workday Finance 2** is the second phase of the Workday implementation project, which adds the Workday accounting and payables function for Elizabethtown, except for accounts receivables and CC&B, Maximo and PowerPlan integrations;

(xix) **PowerTax** implements PowerTax for Elizabethtown assets;

(xx) **Hyperion Redesign Phase 3** redesigns the existing Hyperion system based on the new Workday Chart of Accounts, managerial reports, and integration; and

(xxi) **Elizabethtown IT Capital Blanket** provides computer equipment required to access IT investments to all Elizabethtown employees.

The actual and forecast capital expenditures for these projects are included in the amounts shown on Schedules MPS-2 and MPS-3 to Company witness Scacifero's testimony.

Q. WHY DOES ELIZABETHTOWN NEED TO HAVE NEW SYSTEMS AT THIS TIME?

A. As I noted previously, Elizabethtown is currently receiving IT services from Southern under the TSA. The TSA is a temporary arrangement intended to enable Elizabethtown to continue to provide service until its was able to make a transition to IT systems managed by SJI. It would not make business sense for either Southern or SJI to continue IT services under the TSA indefinitely. Moreover, it is my understanding that Southern is planning to transition to a new system to replace the existing Click system, to replace its outdated PeopleSoft system with Oracle Financials and to upgrade its version of CC&B. It would not make any sense for Southern to include Elizabethtown in the planning and development of these replacement systems.

1 **Q. IS ELIZABETHTOWN CURRENTLY INCLUDING COSTS UNDER THE TSA**
2 **THAT WILL BE DISPLACED WHEN ELIZABETHTOWN'S NEW SYSTEMS**
3 **ARE PUT IN PLACE?**

4 **A.** Yes. To the extent that TSA IT costs are displaced as Elizabethtown's own systems are
5 put in place, the Company will adjust its revenue requirement as appropriate in its 9+3
6 update in this proceeding. Given the current circumstances, we are seeking to make
7 strategic investments in a manner that will modernize the technology that supports
8 Elizabethtown's operations while aligning with the integration of Elizabethtown into the
9 SJI infrastructure. Elizabethtown will need to be integrated into the SJI IT infrastructure.
10 At the same time, we expect to modernize and enhance the system.

11 **Q. WILL THE NEW SYSTEMS BEING DEVELOPED FOR ELIZABETHTOWN**
12 **HAVE GREATER FUNCTIONALITY OR CAPABILITIES THAN THE**
13 **CURRENT SYSTEMS USED BY THE COMPANY?**

14 **A.** Yes, Elizabethtown will benefit from increased functionality or capabilities from many of
15 its new or enhanced systems. For example, the new CC&B system will allow the Company
16 to use a single system for all customer billing and EDI transactions, whereas the current
17 system cannot bill industrial and marketer customers or manage marketer EDI transactions.
18 Additionally, the new MWM and ORS systems will optimize the efficiency of the
19 Company's field operations, as they continuously calculate the best route and most logical
20 resource to respond to field calls.

21 In addition, a number of the current systems being used by Elizabethtown are
22 nearing the end of their useful lives and will no longer be supported by the vendor including
23 CC&B version 2.4 and Click. The version of CC&B that SJI is installing for Elizabethtown

1 and the Maximo system will have much longer useful lives than the systems they are
2 replacing.

3 **Q. HOW WILL THIS GREATER FUNCTIONALITY BENEFIT CUSTOMERS?**

4 **A.** Customers will benefit from the greater functionality of these new and enhanced systems
5 in many ways. For example, the new CC&B system will allow for changes to be made
6 more easily to address business and customer needs, and will make more information
7 available to customer service representatives to address customer inquiries. The new
8 MWM/ORS system will also benefit customers by improving the Company's ability to
9 meet appointment times and efficiently respond to field calls. In addition to the CC&B
10 and Maximo applications, SJI is also developing a robust Business Intelligence and Data
11 Warehouse platform that will be used by the Elizabethtown leadership teams to make
12 business decisions using real-time data.

13 **Q. WILL THE NEW SYSTEMS CREATE ANY OPPORTUNITIES FOR SAVINGS**
14 **OR EFFICIENCIES FOR ELIZABETHTOWN?**

15 **A.** Yes, the new systems create many opportunities for savings and efficiencies at
16 Elizabethtown. For example, the CC&B system increases efficiency in administering
17 customer accounts by housing all billing and EDI transactions in a single system, rather
18 than requiring the Company to track data across multiple platforms. The Customer Portal
19 will allow customers to address common questions and concerns at any place, at any time,
20 which will reduce call volume and call times at the Company's call center, reducing cost.
21 The new MWM/ORS system will allow the Company to efficiently deploy field resources
22 and minimize driving time, as well as allow the Company to quickly prioritize emergency
23 situations.

1 **Q. WHY DIDN'T SJI CONNECT ELIZABETHTOWN TO THE SAME SYSTEMS**
2 **CURRENTLY USED BY SOUTH JERSEY GAS COMPANY ("SJG")?**

3 **A.** The systems currently in place at SJG have been constructed and customized to fit the
4 business processes, rates and tariffs, workforce, culture and customer expectations at SJG.
5 While Elizabethtown and SJG are delivering the same product to their customers and have
6 very similar business capabilities, the underlying service and support processes, rates and
7 tariffs, and customer expectations for each company are very different. As such,
8 connecting Elizabethtown to SJG's system would require us to modify and customize the
9 systems to meet the particular business and customer demands at Elizabethtown, all while
10 ensuring that we did not impact SJG customers, service and support processes, workforce
11 and culture. This effort would have been far more time-consuming and would have
12 ultimately created a system that had duplicate functionality that was much more
13 complicated and costly to support. Additionally, the complexity of the system would have
14 reduced our ability to respond to the needs of the business.

15 The decision to create a separate IT environment for Elizabethtown allows us to
16 move more quickly to put the new environment into place and to move our customers and
17 business processes out of the Southern IT environment. It further allows Elizabethtown to
18 continue delivering the service and support to their customers in the same fashion as they
19 did before the acquisition. Additionally, we are able to leverage the latest technology
20 advances, which will help us create a much more efficient IT environment for
21 Elizabethtown.

1 **Q. WOULD IT HAVE BEEN MORE COSTLY TO TRANSITION**
2 **ELIZABETHTOWN TO THE SJG SYSTEMS BECAUSE THEY ARE**
3 **CUSTOMIZED?**

4 **A.** Yes. It would cost more to design and construct the integration because the SJG systems
5 were designed and developed for a single company. Additionally, such an integration
6 process could pose a threat to business continuity and customer service at Elizabethtown
7 and SJG.

8 An illustrative example of the problems with integrating Elizabethtown into SJG's
9 system is the CC&B system. The CC&B system randomly selects the account number for
10 a customer. Because Elizabethtown and SJG have been on different CC&B systems, it is
11 likely that customers in each system have the same account numbers. Account numbers
12 are the primary means of differentiating customers, so we would have needed to change
13 account numbers, thereby impacting the future service for a customer and the historical
14 view of that customer. The CC&B application would have needed to be re-designed and
15 re-structured as a multi-company solution requiring extensive renovation of the application
16 as well as the service and support processes.

17 **Q. WHAT EFFORTS DID SJI UNDERTAKE TO ENSURE THE COST**
18 **EFFECTIVENESS OF ELIZABETHTOWN'S SYSTEMS?**

19 **A.** SJI undertook significant effort to ensure that the new and enhanced systems were
20 implemented at Elizabethtown in the most cost-effective manner possible. For example,
21 SJI IT determined that utilizing its current CC&B configuration as a template to develop a
22 separate CC&B system for Elizabethtown with specific configuration and process changes
23 to address Elizabethtown's particular needs was the most cost-effective way to develop the

1 new CC&B system. Similarly, SJI IT leveraged its research and experience with the
2 customer portal in place at its other subsidiaries to reduce implementation and maintenance
3 costs for the portal at Elizabethtown. SJI IT also leveraged its experience with the
4 Maximo/MWM/ORS systems to establish a base system and build in exceptions to address
5 Elizabethtown-specific needs and issues.

6 **Q. WHAT ALTERNATIVES TO THE PROPOSED SYSTEM WERE CONSIDERED**
7 **AND WHY WERE THEY REJECTED?**

8 **A.** SJI IT considered several alternatives to the systems being implemented. For example,
9 other customer care systems, asset and work management systems, and scheduling systems
10 were rejected in order to enable Elizabethtown to benefit from the efficiencies gained by
11 selecting systems that were already familiar to Elizabethtown or SJI IT. Similarly, other
12 customer portals were rejected because Elizabethtown would benefit from the efficiencies
13 gained by using a portal that was aligned with Elizabethtown's billing statements and
14 website.

15 **Q. WILL ELIZABETHTOWN'S SYSTEMS BE USED BY ITS UTILITY**
16 **AFFILIATES INCLUDING SOUTH JERSEY GAS COMPANY?**

17 **A.** No, the investments discussed throughout our testimony, and the associated costs, are for
18 Elizabethtown only.

19 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

20 **A.** Yes.

**IN THE MATTER OF THE PETITION OF
ELIZABETHTOWN GAS COMPANY FOR APPROVAL OF
INCREASED BASE TARIFF RATES AND CHARGES
FOR GAS SERVICE, CHANGES TO DEPRECIATION
RATES AND OTHER TARIFF REVISIONS**

BPU DOCKET NO. GR19_____

DIRECT TESTIMONY

OF

ROBERT B. HEVERT

ScottMadden, Inc.

**On Behalf of
Elizabethtown Gas Company**

Exhibit P-7

April 18, 2019

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GLOSSARY OF FREQUENTLY USED TERMS

TERM	DESCRIPTION
Beta Coefficient	A component of the Capital Asset Pricing Model that measures the risk of a given stock relative to the risk of the overall market.
Bond Yield Plus Risk Premium Approach	A risk premium model used to estimate the Cost of Equity. The Bond Yield Plus Risk Premium approach assumes that investors required a risk premium over the cost of debt as compensation for assuming the greater risk of common equity investment. The model is expressed as a bond yield plus equity risk premium.
Capital Asset Pricing Model (“CAPM”)	A risk premium-based model used to estimate the Cost of Equity, assuming the stock is added to a well-diversified portfolio. The CAPM assumes that investors are compensated for the time value of money (represented by the Risk-Free Rate), and risk (represented by the combination of the Beta Coefficient and the Market Risk Premium).
Constant Growth DCF Model	A form of the Discounted Cash Flow model that assumes cash flows will grow at a constant rate, in perpetuity. The model simplifies to a form that expresses the Cost of Equity as the sum of the expected dividend yield and the expected growth rate.
Cost of Equity	The return required by investors to invest in equity securities. The terms “Return on Equity” and “Cost of Equity” are used interchangeably.
Discounted Cash Flow (“DCF”) Model	A model used to estimate the Cost of Equity based on expected cash flows. The Cost of Equity equals the discount rate that sets the current market price equal to the present value of expected cash flows.
Dividend Yield	For a given stock, the current annualized dividend divided by its current market price.
Gross Domestic Product (“GDP”)	The value of all finished goods and services produced within a country during a given period of time (usually measured annually). GDP includes public and private consumption, government expenditures, investments, and net exports (that is, exports minus imports).
Market Return	The expected return on the equity market, taken as a portfolio.
Market Risk Premium	The additional compensation required by investors in the equity market as a portfolio over the Risk-Free rate. The Market Risk Premium is a component of the CAPM.

TERM	DESCRIPTION
Proxy Group	A group of publicly traded companies used as the “proxy” for the subject company (in this case, Elizabethtown). Proxy companies are sometimes referred to as “Comparable Companies.”
Return on Equity (“ROE”)	The return required by investors to invest in equity securities. The terms “Return on Equity” and “Cost of Equity” are used interchangeably. Please note that the ROE in this context is distinct from the accounting measure sometimes referred to as the “Return on Average Common Equity”.
Risk-Free Rate	The rate of return on an asset with no risk of default.
Risk Premium	The additional compensation required by investors for taking on additional increments of risk. Risk Premium-based approaches are used in addition to the DCF and CAPM to estimate the Cost of Equity.
Treasury Yield	The return on Treasury securities; the yield on the 30-year Treasury bonds is considered to be a measure of the Risk-Free Rate.

**ELIZABETHTOWN GAS COMPANY
DIRECT TESTIMONY OF
ROBERT B. HEVERT**

I. INTRODUCTION AND SUMMARY OF RECOMMENDATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Robert B. Hevert. I am a Partner with ScottMadden, Inc., a general management consultancy firm, and my business address is 1900 West Park Drive, Suite 250, Westborough, MA 01581.

Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS TESTIMONY?

A. I am submitting this direct testimony (“Direct Testimony”) before the New Jersey Board of Public Utilities (the “BPU” or the “Board”) on behalf of Elizabethtown Gas Company (“Elizabethtown” or the “Company”).

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. I hold a Bachelor’s degree in Business and Economics from the University of Delaware, and an M.B.A. with a concentration in Finance from the University of Massachusetts. I also hold the Chartered Financial Analyst designation.

Q. PLEASE DESCRIBE YOUR EXPERIENCE IN THE ENERGY AND UTILITY INDUSTRIES.

A. I have worked in regulated industries for over 30 years, having served as an executive and manager with consulting firms, a financial officer of a publicly traded natural gas utility, and an analyst at a telecommunications utility. In my role as a consultant, I have advised numerous energy and utility clients on a wide range of financial and economic issues, including corporate and asset-based transactions, asset and enterprise valuation, transaction due diligence, and strategic matters. As an expert witness, I have provided testimony in more than 250 proceedings regarding financial and regulatory matters before numerous

state utility regulatory agencies (including the BPU), the Federal Energy Regulatory Commission (“FERC”), U.S. District Court, and the Alberta Utilities Commission. A summary of my professional and educational background, including a list of my testimony in prior proceedings, is included in Schedule RBH-1 to my Direct Testimony.

II. PURPOSE AND OVERVIEW OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. My Direct Testimony presents evidence and provides a recommendation regarding the Company’s proposed capital structure and Return on Equity (“ROE”) to be used for ratemaking purposes in this proceeding.¹ My analyses and conclusions are supported by the data presented in Schedules RBH-2 through RBH-10.

Q. WHAT ARE YOUR CONCLUSIONS REGARDING THE APPROPRIATE COST OF EQUITY FOR THE COMPANY?

A. My analyses indicate that a ROE in the range of 10.00 percent to 10.75 percent represents the range of equity investors’ required return for investment in a natural gas utility such as Elizabethtown in today’s capital markets. Based on the quantitative and qualitative analyses discussed throughout my Direct Testimony, and taking into consideration the Board’s decisions in prior proceedings, I propose a ROE of 10.40 percent.

I note that the Cost of Equity, which is the return required by equity investors to assume the risks of ownership, is a market-based concept. As opposed to the earned Return on Common Equity, which is a directly observable measure, the Cost of Equity is unobservable and must be estimated based on carefully discerned market data. As a

¹ Throughout my Direct Testimony, I interchangeably use the terms “ROE” and “Cost of Equity.”

1 consequence, there may be differences of opinion among analysts as to the data,
2 assumptions and models used in estimating the Cost of Equity.

3 **Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE ANALYSES THAT LED TO**
4 **YOUR ROE RECOMMENDATION.**

5 **A.** Because all financial models are subject to various assumptions and constraints, equity
6 analysts and investors tend to use multiple methods to develop their return requirements. I
7 relied on three widely accepted approaches to develop my ROE recommendation: (1) the
8 Constant Growth Discounted Cash Flow (“DCF”) model; (2) the Capital Asset Pricing
9 Model (“CAPM”); and (3) the Bond Yield Plus Risk Premium approach. As discussed in
10 Sections V and VI, I considered the results of those methods in the context of general
11 capital market factors.

12 In developing my recommendation, I recognized that the low and high analytical
13 results (set by the low end of the Constant Growth DCF model results, and the high end of
14 the CAPM results, respectively) are not reasonable estimates of the Company’s Cost of
15 Equity. In large measure, that is because those results are far removed from the returns
16 recently authorized in other jurisdictions. As discussed in more detail later in my Direct
17 Testimony, because the Constant Growth DCF model’s fundamental assumptions do not
18 align with current and expected market conditions, it is not likely to produce reliable
19 results; other regulatory commissions have found as much. Because Risk Premium-based
20 methods more directly reflect measures of capital market risk, they may be more likely
21 than other approaches (such as the Constant Growth DCF method) to provide reliable ROE
22 estimates in evolving or unstable capital markets.

1 **Q. PLEASE SUMMARIZE THE RESULTS OF YOUR ROE RECOMMENDATION.**

2 **A.** Based on the analyses described above, I concluded that 10.40 percent represents a
3 reasonable estimate of the Company's Cost of Equity. My conclusions and
4 recommendations reflect the following considerations:

- 5 • The Company's need for base rate relief, including a reasonable opportunity to earn a fair
6 return. The Company has significantly under-earned relative to its authorized return, and
7 expects to earn an ROE of 6.22 percent for the test year ending August 31, 2019, as
8 calculated by Company Witness Graham;
- 9 • Widespread expectations for increases in interest rates, as revealed in both market data and
10 economists' consensus projections, which weigh in the evaluation of the DCF, CAPM, and
11 Bond Yield Plus Risk Premium results;
- 12 • An increasing degree of equity market volatility as the Federal Reserve continues its
13 process of monetary policy normalization;
- 14 • The capital-intensive nature of utility operations, indicating the need to finance large, long-
15 lived investments with internally generated and externally acquired funds, both of which
16 depend on the Company's ability to earn a reasonable return on its rate base;
- 17 • The need to maintain the financial profile required to access capital at reasonable rates,
18 even during periods of capital market distress;
- 19 • The downward pressure on cash flows and credit metrics across the utility industry as a
20 result of the Tax Cuts and Jobs Act of 2017 ("TCJA");
- 21 • The small size of Elizabethtown relative to the proxy group; and
- 22 • The effect of flotation costs, which represent a permanent reduction to the capital needed
23 to support the assets required to provide safe and reliable utility service. Although I have

1 not made an explicit adjustment to account for flotation costs, I have considered them when
2 quantifying the Company's ROE.

3 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS REGARDING THE**
4 **COMPANY'S PROPOSED CAPITAL STRUCTURE.**

5 **A.** I conclude that the Company's proposal in this case, which includes 52.50 percent common
6 equity and 47.50 percent long-term debt is consistent with the capital structures that have
7 been in place over several fiscal quarters at comparable utility companies and with the
8 equity ratios recently authorized for other gas local distribution companies in New Jersey.
9 In light of its ongoing need to access external capital, and given the consistency of its
10 proposal with similarly situated utility companies, I conclude that the Company's proposed
11 capital structure is more than reasonable and supports its S&P issuer rating of BBB (stable).

12 **Q. HOW IS THE REMAINDER OF YOUR DIRECT TESTIMONY ORGANIZED?**

13 **A.** The balance of my Direct Testimony is organized as follows:

14 Section III – Provides a summary of the issues regarding Cost of Equity estimation in
15 regulatory proceedings and discusses the regulatory guidelines pertinent to the
16 development of the cost of capital;

17 Section IV – Explains my selection of the proxy group used to develop my analytical
18 results;

19 Section V – Explains my analyses and the analytical bases for my ROE
20 recommendation;

21 Section VI – Highlights the current capital market conditions and their effect on the
22 Company's Cost of Equity, including the effect of the TCJA, small size and common
23 equity flotation costs;

Section VII – Addresses the reasonableness of the Company’s proposed capital structure;

Section VIII – Derives the Company’s weighted average cost of capital; and

Section IX – Summarizes my conclusions and recommendations.

I also included Appendices A and B, which explain in detail the selection criteria used for my utility proxy group and the analysis and inputs for each of my Cost of Equity models, respectively.

III. SUMMARY OF ISSUES SURROUNDING COST OF EQUITY ESTIMATION IN REGULATORY PROCEEDINGS

Q. BEFORE ADDRESSING THE SPECIFIC ASPECTS OF THIS PROCEEDING, PLEASE PROVIDE A GENERAL OVERVIEW OF THE ISSUES SURROUNDING THE COST OF EQUITY IN REGULATORY PROCEEDINGS.

A. In very general terms, the Cost of Equity is the return that investors require to make an equity investment in a firm. That is, investors will only provide funds to a firm if the return that they *expect* is equal to, or greater than, the return that they *require* to accept the risk of providing funds to the firm. From the firm’s perspective, that required return, whether it is provided to debt or equity investors, has a cost. Individually, we speak of the “Cost of Debt” and the “Cost of Equity”; together, they are referred to as the “Cost of Capital.”

The Cost of Capital is based on the economic principle of “opportunity costs.” Investing in any asset, whether debt or equity securities, implies a forgone opportunity to invest in alternative assets. For any investment to be sensible, its expected return must be at least equal to the return expected on alternative, comparable investment opportunities.

1 If it is not, investors will sell the “over-valued” security, and buy the “under-valued”
2 security until the expected returns on the two are aligned.

3 Although both debt and equity have required costs, they differ in certain
4 fundamental ways. Most noticeably, the Cost of Debt is contractually defined and can be
5 directly observed as the interest rate or yield on debt securities.² The Cost of Equity, on
6 the other hand, is neither directly observable nor a contractual obligation. Rather, equity
7 investors have a claim on cash flows only after debt holders are paid; the uncertainty (or
8 risk) associated with those residual cash flows determines the Cost of Equity. Because
9 equity investors bear that additional “residual risk,” they require higher returns than debt
10 holders. In that basic sense, equity and debt investors differ – they invest in different
11 securities, face different risks, and require different returns.

12 Whereas the Cost of Debt can be directly observed, the Cost of Equity must be
13 estimated or inferred based on market data and various financial models. As discussed
14 throughout my Direct Testimony, each model is subject to its own set of assumptions,
15 which may be more or less applicable under differing market conditions. In addition,
16 because the Cost of Equity is premised on opportunity costs, the models typically are
17 applied to a group of “comparable” or “proxy” companies. The choice of models
18 (including their inputs), the selection of proxy companies, and the interpretation of the
19 model results all require the application of reasoned judgment. That judgment should
20 consider data and information, both quantitative and qualitative, not necessarily included
21 in the models themselves.

2 The observed interest rate may be adjusted to reflect issuance or other directly observable costs.

1 In the end, the estimated Cost of Equity should reflect the return investors require
 2 given the subject company's risks, and the returns available on comparable investments.
 3 A given utility stock may require a higher return based on the risks to which it is exposed
 4 relative to other utilities. That is, although utilities may be viewed as a "sector," not all
 5 require the same return. The assessment of relative risk and its effect on the Cost of Equity
 6 requires the application of reasoned, experienced judgment applied to a variety of data,
 7 much of which is qualitative.

8 **Q. PLEASE PROVIDE A BRIEF SUMMARY OF THE REGULATORY**
 9 **GUIDELINES ESTABLISHED FOR THE PURPOSE OF DETERMINING THE**
 10 **ROE.**

11 **A.** The United States Supreme Court (the "Supreme Court") established the guiding principles
 12 for establishing a fair return for capital in two cases: (1) *Bluefield Water Works and*
 13 *Improvement Co. v. Public Service Comm'n of West Virginia*, 262 U.S. 679 (1923)
 14 ("Bluefield"); and (2) *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591
 15 (1944) ("Hope"). In these cases, the Supreme Court recognized that the fair ROE should
 16 be: (1) comparable to returns investors expect to earn on other investments of similar risk;
 17 (2) sufficient to assure confidence in the company's financial integrity; and (3) adequate to
 18 maintain and support the company's credit and to attract capital.

19 **Q. DOES NEW JERSEY PRECEDENT PROVIDE SIMILAR GUIDANCE?**

20 **A.** Yes. For example, in its Final Order in BPU Docket No. ER12111052 (issued March 26,
 21 2015) concerning Jersey Central Power & Light Company, the Board found:

22 [i]t is well-established that a public utility is entitled to such rates as will
 23 permit it to earn a return on the value of the property that it employs for
 24 the convenience of the public, equal to that generally being made at the
 25 same time and in the same general part of the country on investments in

other business undertakings, which are attended by corresponding risks and uncertainties. *Bluefield Water Works & Improvement Company v. Public Service Commission of West Virginia*, 262 U.S. 679, 692 (1923). The Board is empowered to determine what, in a particular situation, is a just and reasonable return for a public utility and it has broad discretion in the exercise of that authority. *Atlantic City Sewerage Co. v. Board of Public Utility Com'rs*, 128 N.J.L. 359 (1942), aff'd 129 N.J.L. 401. Board-approved public utility rates will be considered valid so long as they enable the utility to operate successfully, maintain its financial integrity, attract capital and compensate its investors for the risk assumed. *FPC v. Hope Natural Gas Co.*, 320 U.S. 591, 605 (1944).

Based on those standards, the authorized ROE should provide the Company with the opportunity to earn a fair and reasonable return, and should enable efficient access to external capital under a variety of market conditions.

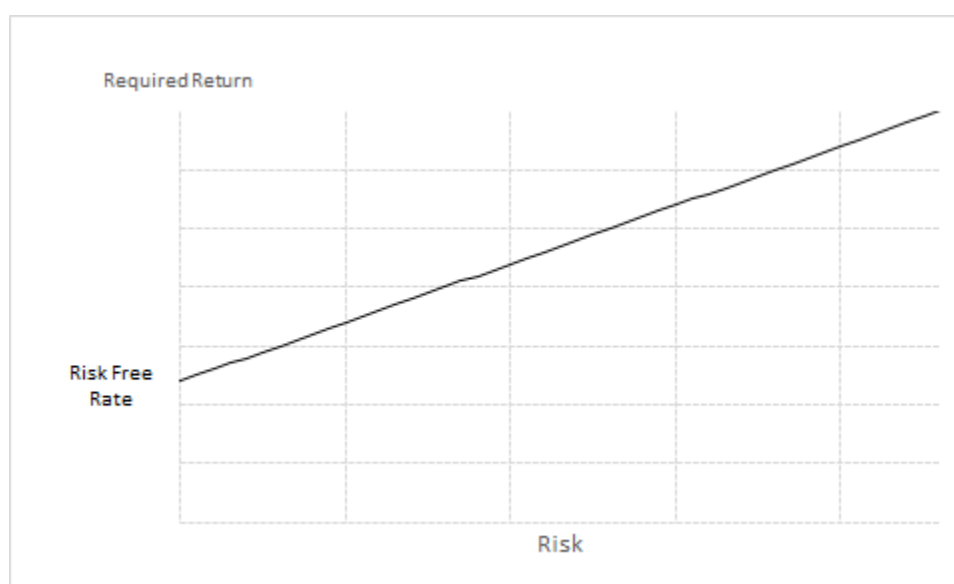
Q. WHY IS IT IMPORTANT FOR A UTILITY TO BE ALLOWED THE OPPORTUNITY TO EARN A RETURN ADEQUATE TO ATTRACT CAPITAL AT REASONABLE TERMS?

A. A return adequate to attract capital at reasonable terms enables the utility to provide service while maintaining its financial integrity. As discussed above, and in keeping with the *Hope* and *Bluefield* standards, that return should be commensurate with the returns expected elsewhere in the market for investments of equivalent risk. Based on those standards, the Board's decision in this case should provide the Company with the opportunity to earn an ROE that is: (1) adequate to attract capital at reasonable terms; (2) sufficient to ensure its financial integrity; and (3) commensurate with returns on investments in enterprises having corresponding risks. To the extent the Company is provided a reasonable opportunity to earn its market-based Cost of Equity, neither customers nor shareholders should be disadvantaged. A return adequate to attract capital at reasonable terms enables the Company to continue to provide safe, reliable natural gas service while maintaining its financial integrity.

Q. HOW IS THE *HOPE* AND *BLUEFIELD* “COMPARABLE RISK” STANDARD REFLECTED IN THE COST OF EQUITY ESTIMATION PROCESS?

A. The “comparable risk” standard is a natural outcome of the risk/return relationship, which is a fundamental principle of finance. Under the risk/return relationship, investors require a higher return for taking on greater risk. Risk, in turn, relates to the uncertainty of a given outcome. As illustrated in Chart 1 (below), as risk increases, so does the required return.

Chart 1: Risk/Return Principle Illustration



The “comparable risk” standard indicates that the required return for companies with “corresponding risks” should be the same. As a practical matter, however, no two companies are identical, and no single model provides the most reliable estimate of investors’ required returns under all market conditions. Practitioners and academics recognize that financial models are descriptions of investor behavior, not precise quantifications of it. They understand that models are tools to be used in the ROE estimation process, and strict adherence to any single approach, or to the specific results of any single approach, can lead to flawed or misleading conclusions. That position is

consistent with another of the *Hope* and *Bluefield* principles — that the analytical result, rather than the method employed, controls in arriving at ROE determinations.

IV. PROXY GROUP SELECTION

Q. AS A PRELIMINARY MATTER, WHY IS IT NECESSARY TO SELECT A GROUP OF PROXY COMPANIES TO DETERMINE THE COST OF EQUITY FOR THE COMPANY?

A. Because the ROE is market-based and given that Elizabethtown is not a publicly traded entity, it is necessary to establish a group of comparable, publicly traded companies to serve as its “proxy.” Even if the Company were publicly traded, it is possible that transitory events, such as asset impairment charges that are subsequently reversed, or temporary trading activity associated with unfounded rumors, could bias its market value in one way or another over a given period of time. A significant benefit of using a proxy group is that it moderates the effects of anomalous, *i.e.*, temporary events associated with any one company. Please see Appendix A to this Direct Testimony for a description of how I selected the proxy group. Applying the screening criteria discussed in Appendix A results in a proxy group that, taken as a whole, is fundamentally comparable to Elizabethtown’s investment profile.

Q. PLEASE PROVIDE A SUMMARY PROFILE OF ELIZABETHTOWN.

A. Elizabethtown is a wholly owned subsidiary of SJI Utilities, Inc., providing natural gas distribution service to over 295,000 residential, business and industrial customers in New Jersey.³ SJI Utilities, Inc. is a wholly owned subsidiary of South Jersey Industries, Inc., which is publicly traded on the New York Stock Exchange under ticker symbol “SJI.”

³ Company provided customer data.

South Jersey Industries, Inc.'s and Elizabethtown's current long-term S&P issuer credit ratings both are BBB (stable).⁴ South Jersey Industries, Inc. acquired Elizabethtown's assets from the Southern Company in 2018.

Q. WHAT COMPANIES ARE INCLUDED IN YOUR PROXY GROUP?

A. Table 1 (below) identifies the seven companies included in the proxy group.

Table 1: Proxy Group Screening Results

Company	Ticker
Atmos Energy Corporation	ATO
Chesapeake Utilities Corporation ⁵	CPK
New Jersey Resources Corporation	NJR
Northwest Natural Gas Company	NWN
ONE Gas, Inc.	OGS
Southwest Gas Corporation	SWX
Spire Inc.	SR

Q. DOES THE USE OF A PROXY GROUP SUGGEST THAT THE ROE ESTIMATES WILL BE TIGHTLY CLUSTERED AROUND THE AVERAGE RESULTS?

A. No. Even with carefully selected proxy groups, it is common for analytical results to reflect a seemingly wide range.⁶ Despite the care taken to select comparable proxy companies, market expectations regarding future risks and growth opportunities will vary from company to company. Although selecting proxy companies and developing the range of

⁴ Source: Bloomberg Professional.

⁵ Even though Chesapeake Utilities Corp. is not publicly rated by S&P, its Value Line Financial Strength Rating of B++ is comparable to the rest of the proxy group. CPK also has a National Association of Insurance Commissioners ("NAIC") rating of "NAIC I," which is equivalent to ratings in the "A" category for both Moody's and Standard & Poor's. *See*, Chesapeake Utilities Corporation, Northeast Road Show, January 2018, at 16; National Association of Insurance Commissioners, CRP Credit Rating Equivalent to SVO Designations, November 2017.

⁶ In Appendix B, I provide more substantive descriptions of the models used to estimate the ROE.

results are critical issues, an equally important concern is how to select the Cost of Equity within that range. That selection necessarily considers a wide range of both quantitative and qualitative information. As noted earlier, it is not an entirely mathematical analysis.

V. COST OF EQUITY ESTIMATION

Q. PLEASE BRIEFLY DISCUSS THE ROE IN THE CONTEXT OF THE REGULATED RATE OF RETURN.

A. Regulated utilities primarily use common stock and long-term debt to finance their capital investments. The Weighted Average Cost of Capital (or overall rate of return) weights the costs of the individual sources of capital by their respective book values.

Q. HOW HAVE YOU DETERMINED THE INVESTOR-REQUIRED ROE?

A. Because the Cost of Equity is not directly observable, it must be estimated based on both quantitative and qualitative information. Although a number of empirical models have been developed for that purpose, all are subject to limiting assumptions or other constraints. Consequently, many finance texts recommend using multiple approaches to estimate the Cost of Equity as detailed in Appendix B.⁷ When faced with the task of estimating the Cost of Equity, analysts and investors are inclined to gather and evaluate as much relevant data as reasonably can be analyzed and, therefore, rely on multiple analytical approaches.

As a practical matter, no individual model is more reliable than all others under all market conditions. Therefore, it is important to use multiple methods to mitigate the effects of assumptions and inputs associated with any single approach. The use of multiple methods, and the consideration given to them, recently was addressed by FERC. In its

⁷ See, e.g., Eugene Brigham, Louis Gapenski, Financial Management: Theory and Practice, 7th Ed., 1994, at 341, and Tom Copeland, Tim Koller and Jack Murrin, Valuation: Measuring and Managing the Value of Companies, 3rd ed., 2000, at 214.

October 16, 2018 *Order Directing Briefs*, FERC found that although it “previously relied solely on the DCF model to produce the evidentiary zone of reasonableness...[it is] concerned that relying on that methodology alone will not produce just and reasonable results.”⁸ As FERC explained, because the Cost of Equity depends on what the market expects, it is important to understand “how investors analyze and compare their investment opportunities.”⁹ FERC also explained that, although certain investors may give some weight to the DCF approach, other investors “place greater weight on one or more of the other methods...”¹⁰ Consistent with that perspective, I have considered the results of the Constant Growth DCF model, the Capital Asset Pricing Model, and the Bond Yield Plus Risk Premium approach.

Q. WHY DID YOU SELECT THOSE THREE MODELS?

A. I did so for two reasons. First, because the purpose of any ROE analyses is to estimate the return investors require, it is important to apply the methods investors often use. As discussed in Appendix B, the models I applied are commonly used in practice. Second, the models focus on different aspects of return requirements, and provide different insights to investors’ views of risk and return. Using multiple models provides a broader, and therefore a more reliable perspective on investors’ return requirements.

Q. PLEASE BRIEFLY DESCRIBE THE CONSTANT GROWTH DCF MODEL.

A. The Constant Growth DCF approach defines the Cost of Equity as the sum of the (1) expected dividend yield, and (2) expected long-term growth. The expected dividend yield

⁸ Docket No. EL11-66-001, *et al.*, *Order Directing Briefs*, at 30, 165 FERC ¶ 61,118 (Oct. 16, 2018).

⁹ *Id.* at 33.

¹⁰ *Id.* at 35. See, generally, Docket No. PL19-4-000, *Inquiry Regarding the Commission’s Policy for Determining Return on Equity*, March 21, 2019.

generally equals the expected annual dividend divided by the current stock price, and the growth rate is based on analysts' expectations of earnings growth. Under the model's strict assumptions, the growth rate equals the rate of capital appreciation (that is, the growth in the stock price).¹¹ Given that structure, it does not matter whether the investor holds the stock in perpetuity, or whether he holds the stock for some period, collects the dividends, then sells at the prevailing market price. Under the model's assumptions, the result is the same regardless of the holding period.

The Constant Growth DCF model assumes: (1) earnings, book value, and dividends all grow at the same, constant rate in perpetuity; (2) the dividend payout ratio remains constant; (3) the Price to Earnings ("P/E") multiple remains constant in perpetuity; (4) the discount rate (that is, the estimated Cost of Equity) is greater than the expected growth rate; and (5) the calculated Cost of Equity remains constant, also in perpetuity. Because the Constant Growth DCF model's fundamental assumptions do not align with current and expected market conditions, it is not likely to produce reliable results; other regulatory commissions have found as much.¹² Because Risk Premium-based methods

11 As discussed in Appendix B, the model assumes that earnings, dividends, book value, and the stock price all grow at the same constant rate in perpetuity.

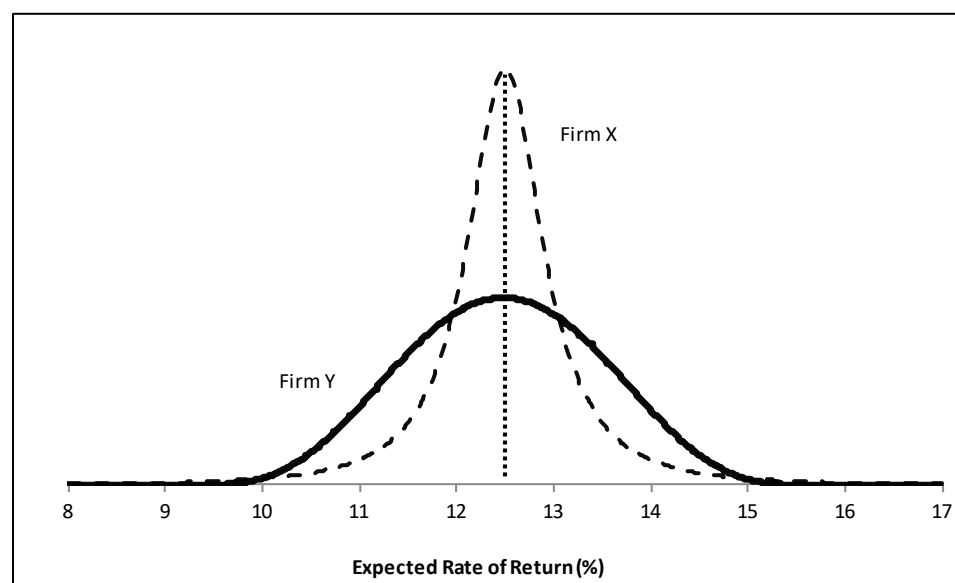
12 Other jurisdictions have noted similar conclusions. *See, for example, Martha Coakley v. Bangor Hydro-Electric Company*, Opinion No. 531, 147 FERC ¶ 61,234 (2014), *Order On Paper Hearing* Opinion No. 531-A, 149 FERC ¶ 61,032 (2014), and *Order On Rehearing* Opinion No. 531-B, 150 FERC ¶ 61,165 (2015); Massachusetts Department of Public Utilities, D.P.U. 13-90, *Petition of Fitchburg Gas and Electric Light Company (Electric Division) d/b/a Unitil*, May 30, 2014, at 219; *Formal Case No. 1093, In the Matter of the Investigation into the Reasonableness of Washington Gas Light Company's Existing Rates and Charges for Gas Service*, Before the Public Service Commission of the District of Columbia, Order No. 17132, May 15, 2013, at 17-18, 20. Also, an article recently published by Bloomberg notes the ultralow interest rate environment has "wrought havoc" on the DCF model. *See, Kawa, Luke, "A Critical Idea in Valuing Stocks Is Being Made Obsolete by Low Rates," Bloomberg Business*, October 13, 2016. <http://www.bloomberg.com/news/articles/2016-10-13/a-critical-idea-in-valuing-stocks-is-being-madeobsolete-by-low-rates>.

more directly reflect measures of capital market risk, they may be more likely than other approaches (such as the Constant Growth DCF method) to provide reliable ROE estimates in evolving or unstable capital markets.

Q. PLEASE BRIEFLY DESCRIBE THE CAPITAL ASSET PRICING MODEL.

A. Whereas DCF models focus on expected cash flows, Risk Premium-based models such as the CAPM focus on the additional return that investors require for taking on additional risk. In finance, “risk” generally refers to the variation in expected returns, rather than the expected return itself. Consider two firms, X and Y, with expected returns, and the expected variation in returns noted in Chart 2, below. Although the two have the same expected return (12.50 percent), Firm Y’s are far more variable. From that perspective, Firm Y is considered the riskier investment.

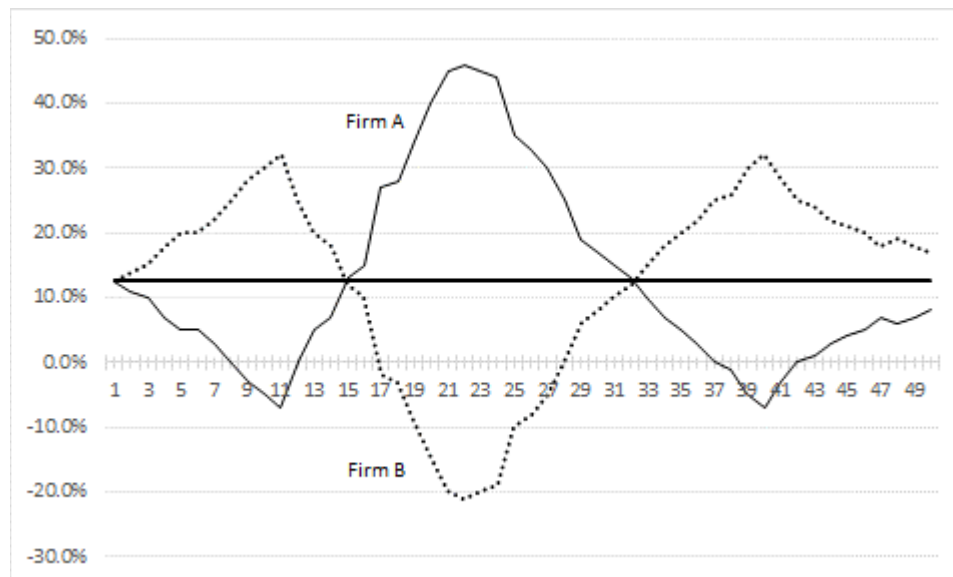
Chart 2: Expected Return and Risk



Now consider two other firms, Firm A and Firm B, in Chart 3, below. Both have expected returns of 12.50 percent, and both are equally risky as measured by their volatility.

But as Firm A's returns go up, Firm B's returns go down. That is, the returns are negatively correlated.

Chart 3: Relative Risk



If we were to combine Firms A and B into a portfolio, we would expect a 12.50 percent return with no uncertainty because of the opposing symmetry of their risk profiles. That is, we can diversify the risk away. As long as two stocks are not perfectly correlated, we can achieve diversification benefits by combining them into a portfolio. That is the essence of the Capital Asset Pricing Model; because we can combine firms into a portfolio, the only risk that matters is the risk that remains after diversification, *i.e.*, the “non-diversifiable” risk.

The CAPM defines the Cost of Equity as the sum of the “risk-free” rate, and a premium to reflect the additional risk associated with equity investments. The “risk-free” rate is the yield on a security viewed as having no default risk, such as long-term Treasury bonds. The risk-free rate essentially sets the baseline of the CAPM. That is, an investor would expect a higher return than the risk-free rate to purchase an asset that carries risk.

The difference between that higher return (*i.e.*, the required return) and the risk-free rate is the risk premium.

$$\text{Risk} - \text{Free Rate} + \text{Risk Premium} = \text{Required Return} \quad [1]$$

The risk premium is defined as a security's Beta coefficient multiplied by the risk premium of the overall market (the "Market Risk Premium" or "MRP"). The Beta coefficient is a measure of the subject company's risk relative to the overall market, *i.e.*, the "non-diversifiable" risk. A Beta coefficient of 1.00 indicates the security is equally as risky as the overall market; a value below 1.00 represents a security with less risk than the overall market, and a value over 1.00 represents a security with more risk than the overall market.

$$\text{Risk} - \text{Free Rate} + \text{Beta coefficient} \times \text{MRP} = \text{Required Return} \quad [2]$$

Q. PLEASE BRIEFLY DESCRIBE THE BOND YIELD PLUS RISK PREMIUM METHOD.

A. This approach is based on the basic financial principle that equity investors bear the risk associated with ownership and therefore require a premium over the return they would have earned as a bondholder. That is, because returns to equity holders are more risky than returns to bondholders, equity investors must be compensated for bearing that additional risk (that difference often is referred to as the "Equity Risk Premium"). Bond Yield Plus Risk Premium approaches estimate the Cost of Equity as the sum of the Equity Risk Premium and the yield on a particular class of bonds.

$$\text{Bond Yield} + \text{Equity Risk Premium} = \text{Required Return} \quad [3]$$

1 **Q. WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF-BASED**
 2 **ANALYSIS?**

3 **A.** The results of the model described above are provided in Table 2, below.¹³

4 **Table 2: Summary of Constant Growth DCF Results¹⁴**

	Low Median	Median	High Median
30-Day Average	7.81%	9.83%	12.16%
90-Day Average	7.81%	9.79%	12.12%
180-Day Average	7.83%	9.85%	12.17%

5 **Q. PLEASE NOW SUMMARIZE YOUR REMAINING ANALYTICAL RESULTS.**

6 **A.** The Risk Premium-based results, including the CAPM and Bond Yield Plus Risk Premium
 7 methods, are provided below.

8 **Table 3: Summary of Risk Premium Results**

	Bloomberg Derived Market Risk Premium	Value Line Derived Market Risk Premium
CAPM Results		
<i>Average Bloomberg Beta Coefficient</i>		
Current 30-Year Treasury (3.03%)	9.56%	10.96%
Near Term Projected 30-Year Treasury (3.33%)	9.86%	11.26%
Long Term Projected 30-Year Treasury (4.05%)	10.58%	11.98%
<i>Average Value Line Beta Coefficient</i>		
Current 30-Year Treasury (3.03%)	10.61%	12.24%
Near Term Projected 30-Year Treasury (3.33%)	10.91%	12.54%
Long Term Projected 30-Year Treasury (4.05%)	11.63%	13.25%

13 See Appendix B for a more detailed description of the models, assumptions, and inputs described in Section V.

14 For the purposes of my Direct Testimony, I have shown the median results for my Constant Growth DCF analysis, because the mean results are affected by an anomalously high growth rate for Northwest Natural Gas Company of 30.50% from Value Line due to the company's significant losses in 2017.

<i>Bond Yield Plus Risk Premium Results</i>	
Current 30-Year Treasury (3.03%)	9.89%
Near Term Projected 30-Year Treasury (3.33%)	9.93%
Long Term Projected 30-Year Treasury (4.05%)	10.11%

VI. OTHER CONSIDERATIONS

Q. WHAT OTHER FACTORS HAVE YOU CONSIDERED IN DETERMINING YOUR RECOMMENDED ROE?

A. I considered the capital market environment, the small size of Elizabethtown relative to the proxy group, and the effect of flotation costs. Those factors are discussed in turn, below.

A. CAPITAL MARKET ENVIRONMENT

Q. DO ECONOMIC CONDITIONS INFLUENCE THE REQUIRED COST OF CAPITAL AND REQUIRED RETURN ON COMMON EQUITY?

A. Yes. As discussed in Section V, the models used to estimate the Cost of Equity are meant to reflect, and therefore are influenced by, current and expected capital market conditions. Therefore, it is important to assess the reasonableness of any financial model's results in the context of observable market data. To the extent a given model's assumptions are misaligned with such data, or its results inconsistent with basic financial principles, it is appropriate to consider whether other methods likely provide more meaningful and reliable results.

1 **Q. DO YOU HAVE ANY GENERAL OBSERVATIONS REGARDING THE**
2 **RELATIONSHIP BETWEEN FEDERAL RESERVE MONETARY POLICY,**
3 **CAPITAL MARKET CONDITIONS, AND THE COMPANY'S COST OF**
4 **EQUITY?**

5 **A.** Yes, I do. Although the Federal Reserve completed its Quantitative Easing initiative in
6 October 2014, it was not until December 2015 that it raised the Federal Funds rate and
7 began the process of monetary policy normalization.¹⁵ A significant analytical issue is
8 how investors likely will react as that process continues, and eventually is completed. For
9 example, increasing interest rates may be seen as an indication of expanding
10 macroeconomic growth, in which case we reasonably could expect the growth rate
11 component of the DCF model to increase. At the same time, sectors that historically have
12 included dividend-paying companies have lost value, as increasing interest rates provide
13 investors with alternative sources of current income. A more reasoned approach is to
14 understand the relationships among capital market and macroeconomic variables, and to
15 consider how those factors may affect different models and their results.

16 **Q. DOES YOUR RECOMMENDATION CONSIDER THE INTEREST RATE**
17 **ENVIRONMENT?**

18 **A.** Yes, it does. From an analytical perspective, it is important that the inputs and assumptions
19 used to arrive at an ROE recommendation, including assessments of capital market

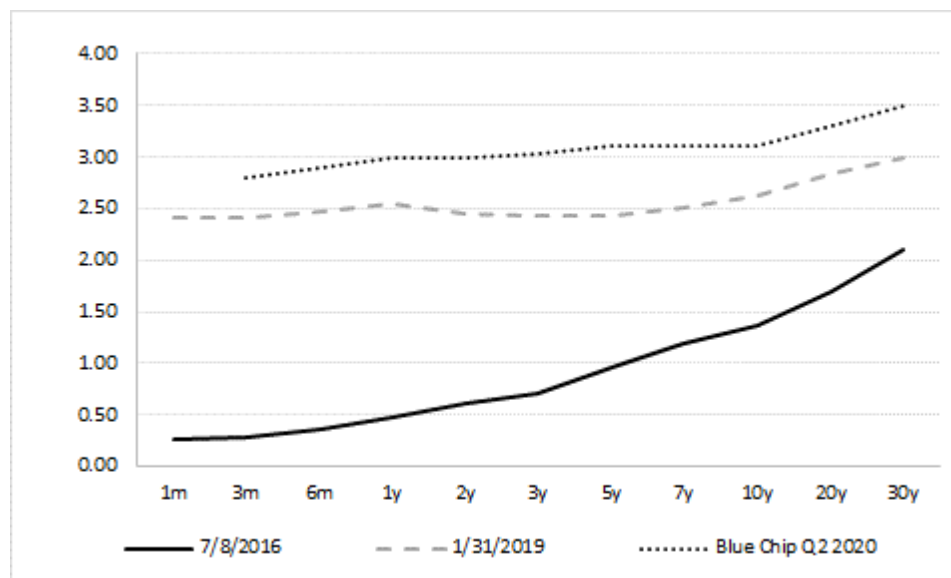
15 "Normalization" refers to the removal of the extraordinary monetary policy initiatives adopted in response to the 2008-2009 financial crisis. The Federal Reserve has stated that the two main components of its policy normalization will be "gradually raising its target range for the federal funds rate to more normal levels and gradually reducing the Federal Reserve's securities holdings." See <https://www.federalreserve.gov/monetarypolicy/policy-normalization.htm>. See, also, *Federal Reserve Press Release* dated December 16, 2015.

1 conditions, are consistent with the recommendation itself. Although all analyses require
2 an element of judgment, the application of that judgment must be made in the context of
3 the quantitative and qualitative information available to the analyst, and the capital market
4 environment in which the analyses were undertaken. Because the Cost of Equity is
5 forward-looking, the salient issue is whether investors see the likelihood of increasing costs
6 of capital during the period in which the rates set in this proceeding will be in effect.

7 Although the Federal Reserve's market intervention policies kept interest rates
8 historically low, since July 8, 2016 (when the 30-year Treasury yield fell to its secular low
9 of 2.11 percent) rates have risen. As the Federal Reserve increased the Federal Funds target
10 rate eight times between December 2016 and December 2018 to 2.25 percent – 2.50
11 percent, short-term and long-term interest rates also increased (see Chart 4 below).¹⁶

16 Federal Reserve Board Schedule H.15. One-year, ten-year, and 30-year Treasury yields increased by 207 basis points, 126 basis points, and 88 basis points, respectively, July 8, 2016 to January 31, 2019.

**Chart 4: Treasury Yield Curve: 7/8/2016, 1/31/19 and
Projected Q2 2020¹⁷**



In a press conference following the December 2018 Federal Open Market Committee meeting, Chairman Powell discussed the recent increases in the Federal Funds rate and the expectation for some further gradual rate increases, noting a strengthening economy, a strong labor market and rising wages.¹⁸

Aside from increases in the Federal Funds rate, in October 2017, the Federal Reserve initiated its balance sheet normalization program that includes gradual reductions

¹⁷ Sources: Federal Reserve Board Schedule H.15.; *Blue Chip Financial Forecasts*, Vol. 38, No. 1, January 1, 2019, at 2. Three-year, seven-year, and 20-year projected Treasury yields interpolated.

¹⁸ See Transcript of Chairman Powell's Press Conference, December 19, 2018.

to its security holdings by decreasing its reinvestment activities.¹⁹ In the January 2019 meeting, the Federal Reserve decided to continue with the balance sheet wind-down.²⁰ At the same time, the supply of marketable U.S. Treasury securities has increased by approximately \$1.14 trillion.²¹ The growing supply of Treasury securities from both the Federal Reserve and the U.S. Treasury puts upward pressure on Treasury rates.

Q. DOES MARKET-BASED DATA INDICATE THAT INVESTORS SEE A PROBABILITY OF INCREASING INTEREST RATES?

A. Yes. Consensus near-term forecasts of the 30-year Treasury yield reported by the *Blue Chip Financial Forecast* indicate the market expects long-term rates to reach 3.50 percent by the second quarter of 2020.²² Importantly, the potential for rising rates represents risk for utility investors.

Q. HAS MARKET VOLATILITY CHANGED WITH THE FEDERAL RESERVE'S MOVE TOWARD MONETARY POLICY NORMALIZATION?

A. Yes, it has. A visible and widely reported measure of expected volatility is the Cboe Options Exchange ("Cboe") Volatility Index, often referred to as the VIX. As Cboe

¹⁹ See <https://www.federalreserve.gov/monetarypolicy/policy-normalization.htm> and Federal Open Market Committee Press Release, June 14, 2017. In its January 30, 2019 press release the FOMC noted that although it continues to view changes in the federal funds target rate as the "primary means of adjusting monetary policy", it also would adjust the details of its balance sheet normalization based on economic and financial developments. See *Federal Reserve Press Release* dated January 30, 2019. At its March 2019 meeting, the FOMC determined it would hold the Federal Funds target rate constant, looking to current and expected economic conditions to determine future rate adjustments. See, *Federal Reserve Press Release* dated March 20, 2019.

²⁰ See *Federal Reserve Press Release* dated January 30, 2019.

²¹ Source: U.S. Treasury, Monthly Statement of the Public Debt. See, <https://www.treasurydirect.gov/govt/reports/pd/mspd/mspd.htm>. U.S. marketable securities increased from \$14.48 trillion to \$15.62 trillion between December 31, 2017 and December 31, 2018.

²² See *Blue Chip Financial Forecast*, Vol. 38, No. 2, February 1, 2019, at 2.

1 explains, the VIX “is a calculation designed to produce a measure of constant, 30-day
2 expected volatility of the U.S. stock market, derived from real-time, mid-quote prices of
3 S&P 500[®] Index call and put options.”²³ Simply, the VIX is a market-based measure of
4 expected volatility. Because volatility is a measure of risk, increases in the VIX, or in its
5 volatility, are broad indicators of expected increases in market risk.

6 Although the VIX is not expressed as a percentage, it should be understood as such.
7 That is, if the VIX stood at 15.00, it would be interpreted as an expected standard deviation
8 in annual market returns of 15.00 percent over the coming 30 days. Since 2000, the VIX
9 has averaged about 19.70, which is highly consistent with the long-term standard deviation
10 on annual market returns (19.80 percent, as reported by Duff & Phelps).

11 As Chart 5 (below) demonstrates, in 2017 market volatility was well below its long-
12 term average, and moved within a somewhat narrow range; the VIX averaged about 11.09,
13 with a standard deviation of 1.36. Throughout 2018 and into 2019, the VIX average
14 increased to 16.87 with a standard deviation of 4.98. That is, since 2017, both the level
15 and the volatility of market volatility increased.

23 Source: <http://www.cboe.com/vix>.

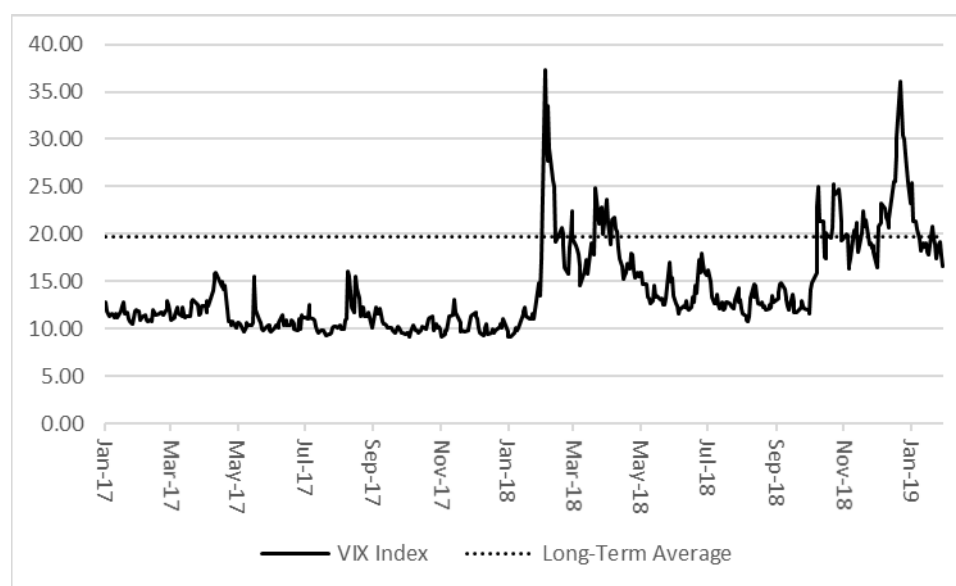
Chart 5: VIX Since January 2017²⁴

Table 4 (below) further demonstrates the increase in market uncertainty from 2017 to 2019. As that table notes, the standard deviation (that is, the volatility of volatility) in 2018-2019 is about 3.66 times higher than its 2017 level (1.36).

Table 4: VIX Levels and Volatility²⁵

Long-Term Average	19.70
2018-2019 Average	16.87
2018-2019 Maximum	37.32
2018-2019 Minimum	9.15
2018-2019 Standard Deviation	4.98
2017 Average	11.09
2017 Maximum	16.04
2017 Minimum	9.14
2017 Standard Deviation	1.36

²⁴ Source: Bloomberg Professional. Data through January 31, 2019.

²⁵ Source: Bloomberg Professional. Data through January 31, 2019.

Q. IS MARKET VOLATILITY EXPECTED TO INCREASE FROM ITS CURRENT LEVELS?

A. Yes, it is. One means of assessing market expectations regarding the future level of volatility is to review Cboe’s “Term Structure of Volatility.” As Cboe points out:

The implied volatility term structure observed in SPX options markets is analogous to the term structure of interest rates observed in fixed income markets. Similar to the calculation of forward rates of interest, it is possible to observe the option market's expectation of future market volatility through use of the SPX implied volatility term structure.²⁶

Cboe’s term structure data is upward sloping, indicating market expectations of increasing volatility. The expected VIX value in June 2020 is 17.87, suggesting investors see a reversion toward the long-term average volatility over the coming months.²⁷ That increase in expected volatility makes intuitive sense, given the Federal Reserve’s movement toward normalizing monetary policy. That policy change includes reducing the liquidity provided to the financial markets during the Federal Reserve’s Quantitative Easing initiatives. Because that additional liquidity had the effect of dampening volatility, it stands to reason volatility will increase as liquidity is reduced.

Q. DOES THE FEDERAL RESERVE’S TIGHTENING OF MONETARY POLICY HAVE OTHER IMPLICATIONS FOR THE ASSESSMENT OF CAPITAL MARKETS?

A. Yes. Just as the Federal Reserve’s monetary policy in the post-financial crisis era was aimed at lowering interest rates and market volatility, its “normalization” will tend to

²⁶ Source: <http://www.cboe.com/trading-tools/strategy-planning-tools/term-structure-data>.

²⁷ Source: <http://www.cboe.com/trading-tools/strategy-planning-tools/term-structure-data>, accessed April 2, 2019.

1 increase both. Because it is at least a directional indicator of investors' return requirements,
2 the elevated uncertainty supports my recommended range.

3 It also is important to recognize that the Federal Reserve's reduction in monetary
4 stimulus is related to expectations of improved economic and financial conditions, and
5 sustained growth in the overall economy. When increasing the Federal Funds rate on
6 December 19, 2018, the Federal Open Market Committee ("FOMC") noted the labor
7 market continued to strengthen, and that household spending was rising at a strong rate
8 while business fixed investment had moderated from its rapid pace earlier in the year.²⁸

9 Although the Federal Reserve did not increase the Federal Funds rate in its January 2019
10 meeting, the FOMC observed the labor market continued to strengthen, and economic
11 activity continued to rise at a solid rate.²⁹ From that perspective, we would expect to see
12 higher growth estimates for companies in the overall economy, including the utility sector.

13 **Q. HAVE YOU ALSO CONSIDERED THE TCJA'S EFFECT ON THE UTILITY**
14 **INDUSTRY?**

15 **A.** Yes, I have. The TCJA was enacted on December 22, 2017. Since then, the major rating
16 agencies have observed a reduction in utilities' revenue resulting from lower income taxes
17 under the TCJA and the potential return of excess accumulated deferred income taxes.
18 Further, the loss of bonus depreciation under the TCJA also may reduce utilities' cash flow,
19 putting downward pressure on key credit metrics. Because rating agencies have assessed
20 the consequences of the TCJA to utilities' cash flow and credit statistics, we reasonably
21 can assume equity investors also recognize those concerns.

28 See *Federal Reserve Press Release* dated December 19, 2018.

29 See *Federal Reserve Press Release* dated January 30, 2019.

Q. WHAT CONCERNS HAVE THE MAJOR RATING AGENCIES RAISED AS THEY CONSIDER THE IMPLICATIONS OF THE TCJA FOR UTILITIES' CASH FLOW AND CREDIT STATISTICS?

A. The major rating agencies have observed that a reduction in utilities' revenue associated with lower income taxes and the potential return of excess accumulated deferred income taxes may reduce utilities' cash flow.³⁰ As FitchRatings ("Fitch") pointed out "[a]bsent mitigating strategies on the regulatory front, this is expected to lead to weaker credit metrics and negative rating actions for issuers with limited headroom to absorb the leverage creep."³¹ In a similar vein, Standard & Poor's ("S&P") observed that the TCJA is "...negative for credit quality because the combination of a lower tax rate and the loss of stimulus provisions related to bonus depreciation or full expensing of capital spending will create headwinds in operating cash-flow generation capabilities as customer rates are lowered in response to the new tax code."³² Moody's Investors Service ("Moody's") stated the following:

Tax reform is credit negative for US regulated utilities because the lower 21% statutory tax rate reduces cash collected from customers, while the loss of bonus depreciation reduces tax deferrals, all else being equal. Moody's calculates that the recent changes in tax laws will dilute a utility's ratio of cash flow before changes in working capital to debt by approximately 150 - 250 basis points on average, depending to some degree on the size of the company's capital expenditure programs. From a leverage perspective, Moody's estimates that debt to total capitalization ratios will increase, based on the lower value of deferred

³⁰ See, S&P Global Market Intelligence, *Rating agencies warn tax reform could drag US utility sector credit quality*, January 25, 2018.

³¹ See, FitchRatings Special Report, *Tax Reform Impact on the U.S. Utilities, Power & Gas Sector*, January 24, 2018.

³² S&P Global Ratings, *U.S. Tax Reform: For Utilities' Credit Quality, Challenges Abound*, January 24, 2018.

1 tax liabilities.³³

2 All three rating agencies, therefore, have observed the TCJA's negative effects on utilities'
3 cash flow, and the potential consequences for their credit profiles.

4 **Q. DID MOODY'S UPDATE ITS REVIEW OF THE UTILITY SECTOR?**

5 **A.** Yes. On June 18, 2018 Moody's changed its outlook on the U.S. regulated utility sector to
6 "negative" from "stable". Moody's explained that its change in outlook "...primarily
7 reflects a degradation in key financial credit ratios, specifically the ratio of cash flow from
8 operations to debt, funds from operations ("FFO") to debt and retained cash flow to debt,
9 as well as certain book leverage ratios."³⁴ The sector's outlook could remain "negative"
10 if cash flow-based metrics continue to decline, or if there emerge signs of a more
11 "contentious" regulatory environment (which, Moody's notes, is not fully reflected in
12 lower authorized returns). Moody's also noted that "[m]anagement teams' defensive
13 efforts and a few initial signs of supportive regulatory responses to tax reform are important
14 first steps in addressing the sector's increased financial risk," and explained that in its view,
15 "it will take longer than 12-18 months for the sector to exhibit a material financial
16 improvement from these actions."³⁵

33 Moody's Investors' Service, *Rating Action: Moody's changes outlooks on 25 US regulated utilities primarily impacted by tax reform*, January 19, 2018.

34 See Moody's Investors Service, *Announcement: Moody's changes the US regulated utility sector outlook to negative from stable*, June 18, 2018.

35 *Id.*

Q. HAVE THE CREDIT RATING AGENCIES INDICATED WHAT THEY WOULD VIEW AS CREDIT POSITIVE RESPONSES TO THE ADVERSE CASH FLOW EFFECTS CREATED BY THE TCJA?

A. Yes. In the June 18, 2018 report, Moody's pointed to Georgia and Alabama as two regulatory jurisdictions that provided relief from the consequences of tax reform by authorizing increased equity ratios. The Georgia Public Service Commission approved a settlement agreement that permitted Georgia Power Company to increase its authorized retail equity ratio from approximately 51.00 percent to as high as 55.00 percent, and the Alabama Public Service Commission approved Alabama Power Company's request to gradually increase its equity ratio to 55.00 percent by 2025.³⁶

Q. WHAT CONCLUSIONS DO YOU DRAW FROM THE DATA AND INFORMATION DISCUSSED ABOVE?

A. There is little question that the TCJA has increased cash flow-related risks, and created potentially dilutive effects of additional equity issuances for utilities. Those risks are reflected in the comments of financial participants such as Moody's, S&P, and Fitch. Further, because non-regulated companies may benefit from the TCJA in ways utilities cannot, it is reasonable to conclude investors have begun to see utilities as less attractive relative to other industry sectors. In addition, to the extent the TCJA accelerates economic growth and inflation, and increases the potential for widening federal budget deficits, investors may see further reason to expect increasing interest rates.³⁷ Lastly, the dilution in cash flow may increase short-term borrowing requirements to fund day-to-day utility

³⁶ Moody's Investors Service, *2019 outlook shifts to negative due to weaker cash flows, continued high leverage*, June 18, 2018, at 3.

³⁷ See, Blue Chip Financial Forecasts, Vol. 37, No. 3, March 1, 2018, at 1.

1 operations. Because those effects weigh against utilities, we should focus on the upper end
2 of the range of analytical results.

3 **Q. IS THE TCJA EXPECTED TO AFFECT ELIZABETHTOWN'S FINANCIAL**
4 **PROFILE ON A FORWARD BASIS?**

5 **A.** Yes, the TCJA's effect on Elizabethtown is expected to be similar to that of its peers. As
6 discussed by Company Witness Graham and Felsenthal,³⁸ the Company has incorporated
7 the lower tax provision and the flowback of excess accumulated deferred income taxes in
8 its cost of service which reduce its cash flows. In addition, the Company is no longer able
9 to use bonus depreciation as a financing source for its capital expenditures. As a result, the
10 TCJA's effect on the Company represents a meaningful reduction to its cash flows. As a
11 consequence, Elizabethtown will require access to the capital markets on a more frequent
12 basis to finance its capital investments, including significant investments in infrastructure
13 replacement. The need to more frequently access external capital, together with the
14 dilution of its cash flow-related credit metrics, creates additional risks and challenges for
15 the Company.

16 **Q. ARE YOU RECOMMENDING A HIGHER ROE IN THIS PROCEEDING IN**
17 **CONNECTION WITH THE TCJA?**

18 **A.** No, I am not. Rather, I recommend that the Commission consider the capital market
19 implications of the TCJA as part of its review. Based on the data and information discussed
20 above, it is my view that the TCJA, and its implications for utilities' cash flows and credit
21 profiles, provide further support for my ROE recommendation.

38 See, Direct Testimony of Stefany Graham and Alan Felsenthal.

1 **Q. WHAT CONCLUSIONS DO YOU DRAW FROM YOUR ANALYSES OF THE**
2 **CURRENT CAPITAL MARKET ENVIRONMENT, AND HOW DO THOSE**
3 **CONCLUSIONS AFFECT YOUR ROE RECOMMENDATION?**

4 **A.** From an analytical perspective, it is important that the inputs and assumptions used to
5 arrive at an ROE determination, including assessments of capital market conditions, are
6 consistent with the conclusion itself. Although all analyses require an element of judgment,
7 the application of that judgment must be made in the context of the quantitative and
8 qualitative information available to the analyst and the capital market environment in
9 which the analyses were undertaken. Because the application of financial models and
10 interpretation of their results often is the subject of differences among analysts in regulatory
11 proceedings, it is important to review and consider a variety of data points. That approach
12 enables us to put in context both quantitative analyses and the associated recommendations.
13 Further, because all models produce ranges of results, it is important to consider the type
14 of information discussed above to determine where the Company's ROE falls within those
15 ranges. As discussed throughout my testimony, doing so supports my recommended range
16 of 10.00 percent to 10.75 percent.

17 ***B. SMALL SIZE PREMIUM***

18 **Q. PLEASE EXPLAIN THE RISK ASSOCIATED WITH SMALL SIZE.**

19 **A.** Both the financial and academic communities have long accepted the proposition that the
20 Cost of Equity for small firms is subject to a "size effect". Although empirical evidence
21 of the size effect often is based on studies of industries beyond regulated utilities, utility
22 analysts also have noted the risks with associated small market capitalizations.
23 Specifically, Ibbotson Associates noted:

For small utilities, investors face additional obstacles, such as smaller customer base, limited financial resources, and a lack of diversification across customers, energy sources, and geography. These obstacles imply a higher investor return.³⁹

Small size, therefore, leads to two categories of increased risk for investors: (1) liquidity risk (*i.e.*, the risk of not being able to sell one's shares in a timely manner due to the relatively thin market for the securities); and (2) fundamental business risks.

Q. HOW DOES ELIZABETHTOWN COMPARE IN SIZE TO THE PROXY COMPANIES?

A. Elizabethtown is significantly smaller than the proxy group, both in terms of number of customers and market capitalization. Because the Company is not a separately traded entity, an estimated stand-alone market capitalization for Elizabethtown must be calculated. To do so, I applied the median market to book ratio for the seven-member proxy group to Elizabethtown's implied equity of \$579.37 million.⁴⁰ The implied market capitalization based on that calculation is \$1,260.64 million, which is approximately 30.89 percent of the median level of the proxy group.

Q. HOW DID YOU EVALUATE THE RISKS ASSOCIATED WITH THE COMPANY'S RELATIVELY SMALL SIZE?

A. In its 2018 *Stocks, Bonds, Bills and Inflation*[®] Yearbook, Duff & Phelps calculates the size premium for deciles of market capitalizations relative to the S&P 500 Index. As shown on Schedule RBH-8, based on recent market data, the average market capitalization of the proxy group is \$4.32 billion, and the median market capitalization of the proxy group is

³⁹ Michael Annin, Equity and the Small-Stock Effect, Public Utilities Fortnightly, October 15, 1995.

⁴⁰ Stockholder equity was calculated by applying the proposed equity ratio of 52.50 percent to the proposed rate base for Elizabethtown of \$1,103.57 million.

1 \$4.08 billion, which corresponds to the fifth decile of Duff & Phelps' market capitalization
2 data. Using the median market capitalization in the Duff & Phelps' analysis, the proxy
3 group has a size premium of 1.38 percent. The implied market capitalization for
4 Elizabethtown is approximately \$1,260.64 million, which falls within the 7th decile and
5 corresponds to a size premium of 1.58 percent. The difference between those size
6 premiums is 20 basis points (1.58 percent – 1.38 percent). However, rather than propose a
7 specific adjustment, I considered the effect of small size in determining where the
8 Company's ROE falls within the range of results.

9 **C. FLOTATION COSTS**

10 **Q. WHAT ARE FLOTATION COSTS?**

11 **A.** Flotation costs are associated with the sale of new issues of common stock. Such costs
12 include out-of-pocket expenditures for preparation, filing, underwriting and other issuance
13 costs of common stock.

14 **Q. WHY IS IT IMPORTANT TO RECOGNIZE FLOTATION COSTS IN THE**
15 **ALLOWED ROE?**

16 **A.** To attract and retain new investors, a regulated utility must have the opportunity to earn a
17 return that is both competitive and compensatory. To the extent the opportunity to recover
18 prudently incurred flotation costs is denied, actual returns will fall short of expected (or
19 required) returns, thereby diminishing its ability to attract adequate capital on reasonable
20 terms.

1 **Q. ARE FLOTATION COSTS PART OF THE UTILITY'S INVESTED COSTS OR**
2 **PART OF THE UTILITY'S EXPENSES?**

3 **A.** Flotation costs are part of the invested costs of the utility, which are properly reflected on
4 the balance sheet under "paid in capital." They are not current expenses, and therefore are
5 not reflected on the income statement. Rather, like investments in rate base or the issuance
6 costs of long-term debt, flotation costs are recognized over time and are outstanding in
7 perpetuity. As a result, the great majority of a utility's flotation costs is incurred prior to
8 the test year, but remains part of the cost structure that exists during the test year and
9 beyond, and as such, should be recognized for ratemaking purposes. Therefore, recovery
10 of flotation costs is appropriate even if no new issuances are planned in the near future
11 because failure to allow such cost recovery may deny Elizabethtown the opportunity to
12 earn its required rate of return in the future.

13 **Q. DO THE DCF, CAPM, AND BOND YIELD PLUS RISK PREMIUM MODELS**
14 **ALREADY INCORPORATE INVESTOR EXPECTATIONS OF A RETURN IN**
15 **ORDER TO COMPENSATE FOR FLOTATION COSTS?**

16 **A.** No. The models used to estimate the appropriate ROE assume no "friction" or transaction
17 costs, as these costs are not reflected in the market price (in the case of the DCF model) or
18 risk premium (in the case of the CAPM and the Bond Yield Plus Risk Premium model).
19 Therefore, it is appropriate to consider flotation costs when determining where the
20 Company's return should fall.

Q. IS THE NEED TO CONSIDER FLOTATION COSTS RECOGNIZED BY THE ACADEMIC AND FINANCIAL COMMUNITIES?

A. Yes. The need to reimburse investors for equity issuance costs is justified by the academic and financial communities in the same spirit that investors are reimbursed for the costs of issuing debt. This treatment is consistent with the philosophy of a fair rate of return. As explained by Dr. Shannon Pratt:

Flotation costs occur when a company issues new stock. The business usually incurs several kinds of flotation or transaction costs, which reduce the actual proceeds received by the business. Some of these are direct out-of-pocket outlays, such as fees paid to underwriters, legal expenses, and prospectus preparation costs. Because of this reduction in proceeds, the business's required returns must be greater to compensate for the additional costs. Flotation costs can be accounted for either by amortizing the cost, thus reducing the net cash flow to discount, or by incorporating the cost into the cost of equity capital. Since flotation costs typically are not applied to operating cash flow, they must be incorporated into the cost of equity capital.⁴¹

Q. HAVE YOU CALCULATED THE EFFECT OF FLOTATION COSTS ON THE RETURN ON EQUITY?

A. Yes, I modified the DCF calculation to derive the dividend yield that would reimburse investors for direct issuance costs. Based on the weighted average issuance costs shown in Schedule RBH-9, a reasonable estimate of flotation costs is approximately 0.06 percent (6 basis points). However, rather than propose a specific adjustment, I considered the effect of flotation costs in determining the Company's ROE.

⁴¹ Shannon P. Pratt, Roger J. Grabowski, Cost of Capital: Applications and Examples, 4th ed. (John Wiley & Sons, Inc., 2010), at 586.

VII. CAPITAL STRUCTURE

Q. WHAT IS THE COMPANY'S PROPOSED CAPITAL STRUCTURE?

A. In this proceeding, the Company proposes a ratemaking capital structure that consists of 52.50 percent common equity and 47.50 percent long-term debt which is consistent with the proxy group as I describe below. The Company's proposed common equity ratio of 52.50 percent is significantly lower than the *pro forma* common equity ratio of 55.04 percent (derived below).

Q. IS THERE A GENERALLY ACCEPTED APPROACH TO ASSESSING THE CAPITAL STRUCTURE FOR A REGULATED NATURAL GAS UTILITY?

A. Yes, there is. In general, it is important to consider the capital structure in light of industry norms and investor requirements. That is, the capital structure should be reasonably consistent with industry practice, and enable the subject company to maintain its financial integrity, thereby enabling access to capital at competitive rates under a variety of economic and financial market conditions.

Q. HOW DOES THE CAPITAL STRUCTURE AFFECT THE COST OF CAPITAL?

A. It is well understood that from a financial perspective, there are two general categories of risk: business risk and financial risk. Business risk includes operating, market, regulatory, and competitive uncertainties, while financial risk is the incremental risk to investors associated with additional levels of debt. As such, the capital structure relates to a Company's financial risk, which represents the risk that a company may not have adequate cash flows to meet its financial obligations, and is a function of the percentage of debt (or financial leverage) in its capital structure. In that regard, as the percentage of debt in the capital structure increases, so do the fixed obligations for the repayment of that debt.

Consequently, as the degree of financial leverage increases, the risk of financial distress (*i.e.*, financial risk) also increases. In essence, even if two firms face the same business risks, a company with meaningfully higher levels of debt in its capital structure is likely to have a higher cost of both debt and equity.⁴² Because the capital structure can affect the subject company's overall level of risk, it is an important consideration in establishing a just and reasonable rate of return.

Q. IS THERE SUPPORT FOR THE PROPOSITION THAT THE CAPITAL STRUCTURE IS A KEY CONSIDERATION IN ESTABLISHING AN APPROPRIATE RETURN ON EQUITY?

A. Yes. The United States Supreme Court and various utility commissions have long recognized the role of capital structure in the development of a just and reasonable rate of return for a regulated utility. In particular, a utility's leverage, or debt ratio, has been explicitly recognized as an important element in determining a just and reasonable rate of return:

Although the determination of whether bonds or stocks should be issued is for management, the matter of debt ratio is not exclusively within its province. Debt ratio substantially affects the manner and cost of obtaining new capital. It is therefore an important factor in the rate of return and must necessarily be considered by and come within the authority of the body charged by law with the duty of fixing a just and reasonable rate of return.⁴³

⁴² See Modigliani & Miller Proposition II. The cost of equity capital increases with the percentage of debt in the capital structure. In fact, $ROE = Ro + \frac{D}{E} \times (Ro - Rd)$ where Ro is the cost of capital if the firm were financed entirely with equity and Rd is the cost of debt.

⁴³ *New England Telephone & Telegraph Co. v. State*, 98 N.H. 211, 220, 97 A.2d 213, 220 (1953), citing *New England Tel. & Tel. Co. v. Department of Pub. Util.*, (Mass.) 327 Mass. 81, 97 N.E. 2d 509, 514; *Petitions of New England Tel. & Tel. Co.* 116 Vt. 480, 80 A2d 671.

Perhaps ultimate authority for balancing the issues of cost and financial integrity is found in the Supreme Court's statement in *Hope Natural Gas*:

The rate-making process under the Act, i.e., the fixing of "just and reasonable" rates, involves a balancing of the investor and the consumer interests." 320 U.S. at 603, 64 S. Ct. at 288. The equity investor's stake is made less secure as the company's debt rises, but the consumer rate-payer's burden is alleviated.⁴⁴

Consequently, the principles of fairness and reasonableness with respect to the allowed rate of return and capital structure are considered at both the federal and state levels.

Q. IS ELIZABETHTOWN'S PROPOSED EQUITY RATIO OF 52.50 PERCENT CONSISTENT WITH THE EQUITY RATIOS THAT RECENTLY HAVE BEEN APPROVED BY THE BOARD FOR NEW JERSEY'S OTHER GAS DISTRIBUTION UTILITIES?

A. Yes. The Board most recently approved rates for Public Service Electric and Gas Company that reflect a 54.00 percent equity ratio.⁴⁵ The Board also has approved rates that reflect a 52.50 percent equity component for New Jersey Natural Gas Company⁴⁶ and South Jersey Gas Company.⁴⁷

Q. WHAT IS ELIZABETHTOWN'S ACTUAL CAPITAL STRUCTURE?

A. Elizabethtown's actual capital structure as of February 2019 reflects a 69.67 percent equity ratio. Please see Table 5 below.

⁴⁴ *Communications Satellite Corp. et. al. v. FCC*, 198 U.S. App. D.C. 60, 63-64611 F.2d 883.

⁴⁵ See Agenda Item: 2K dated 10/29/18 in BPU DOCKET NOS. ER18010029, GR18010030, AX18010001, and ER18030231; OAL DOCKET NOS. PUC 01151-18 and PUC 07232-2018N.

⁴⁶ See Agenda Item: 2A dated 9/23/16 in BPU DOCKET NO. GR15111304.

⁴⁷ See Agenda Item: 2E dated 10/20/17 in BPU DOCKET NO. GR17010071 OAL DOCKET NO. PUC 3261-17.

Table 5: Actual Capital Structure as of February 2019⁴⁸

	Amount	Percent of Capital
Long-Term Debt	\$530,000,000	30.33%
Common Equity	\$1,217,208,959	69.67%
Total Capitalization	\$1,747,208,959	100.00%

Q. WHY HAVE YOU EXCLUDED SHORT-TERM DEBT FROM THE COMPANY'S RATEMAKING CAPITAL STRUCTURE?

A. There are several reasons why short-term debt should be excluded. First, prudent financing practice calls for long-term assets (such as rate base items) to be financed with long-term securities (the “matching principle”). Doing otherwise would expose the Company’s customers to both refinancing risk (that is, the risk of not being able to roll-over short-term debt as it comes due), and interest rate risk (incurring higher interest costs as maturing short-term debt is refinanced). Although short-term debt may be used as an interim source of financing (that is, until a sufficiently large balance has been accumulated to be efficiently financed by long-term securities), it should not be seen as a permanent source of capital. Rather short-term debt is more appropriate to fund non-rate base items recovered over shorter durations of time under the Company’s Tariff for Gas Service including site investigation and remediation costs that are recovered through the Remediation Adjustment Clause (“RAC”), energy efficiency costs that are recovered through the Energy Efficiency Clause (“EEC”), and gas costs that are recovered through the Basic Gas Supply Service Charge (“BGSS”).

⁴⁸ Company-provided.

Second, although short-term debt may be used, at least in part, to fund Construction Work In Progress (“CWIP”), the Company has not requested that CWIP be part of the rate base. Because CWIP is not reflected in its rate base, the short-term debt balance associated with CWIP should not be part of the ratemaking capital structure.

Lastly, even when short-term debt is not included in the ratemaking capital structure, customers still realize the benefit of short-term debt in the determination of the Allowance for Funds Used During Construction (“AFUDC”) rate that is applied to CWIP. That approach, which matches short-term funding requirements with short-term sources of funds, reduces costs to customers, and mitigates the refinancing and interest risks noted above.

Q. PLEASE EXPLAIN THE “MATURITY MATCHING” PRINCIPLE.

A. Like other utilities, Elizabethtown follows the long-used financing practice, sometimes referred to as “maturity matching”, in which the lives of assets being financed are matched with the maturity of the securities issued to finance those assets. Under that practice, the overall term structure of the utility’s long-term liabilities – including both debt and equity – correspond to the life of its long-term assets. As noted by Brigham and Houston, “[t]his strategy minimizes the risk that the firm will be unable to pay off its maturing obligations.”

Brigham and Houston went on to note that:

In practice, firms don’t finance each specific asset with a type of capital that has a maturity equal to the asset’s life. However, academic studies do show that most firms tend to finance short-term assets from short-term sources and long-term assets from long-term sources.⁴⁹

⁴⁹ Brigham, Eugene F. and Joel F. Houston, Fundamentals of Financial Management, Concise 4th Ed., Thomson South-Western, 2004, p. 574.

As a matter of industry practice, it would be unusual for a company such as Elizabethtown to permanently fund its long-lived assets with short-term debt.

Q. DOES ELIZABETHTOWN FINANCE NON-RATE BASE ITEMS WITH SHORT-TERM DEBT?

A. Yes. As of February 2019, the Company had a total balance of \$23.91 million associated with the RAC, EEC and BGSS mechanisms, and \$70.23 million associated with CWIP. Collectively, the RAC, EEC, BGSS and CWIP represent \$94.14 million funded by short-term debt.⁵⁰

Q. IS SHORT-TERM DEBT SOMETIMES USED AS AN INTERIM SOURCE OF FINANCING?

A. Yes, but that does not mean it should be included in the ratemaking capital structure. In my practical experience, cash requirements associated with capital investments may be temporarily funded with short-term debt, until the balances are sufficiently large that it becomes cost-effective to roll those balances into long-term securities. Long-term securities, such as debt and equity, typically are issued in relatively large, discrete amounts; fixed costs and other constraints (such as legal costs) effectively discourage relatively small issuances because the effective cost rate would be prohibitively high. Short-term debt, within the constraints of lending covenants and financial liquidity requirements (that is, maintaining borrowing capacity to fund near-term, unforeseen needs) provides a vehicle to fund investment requirements until a sufficiently large balance has been accumulated to be efficiently refinanced on a long-term basis. It is not, however, a vehicle used to

⁵⁰ As of February 2019, the Company's actual short-term debt balance was \$106.00 million. The total non-rate base balance of \$94.14 million is reasonably matched with the Company's short-term debt balance as of February 2019. The variance is attributed to normal short-term fluctuations in working capital levels including accounts receivable and accounts payable.

1 permanently fund those investments. Rather, short-term debt matches more appropriately
2 as a funding source for CWIP, which is relatively short-lived for gas distribution
3 companies, due to most plant projects closing within a year or less.

4 In summary, although short-term debt may temporarily fund capital investments,
5 such as CWIP, it is not an appropriate source of permanent financing. If a utility were to
6 use short-term debt for that purpose, it would reduce the borrowing capacity needed to fund
7 working capital requirements, and expose customers to both refinancing risk and interest
8 rate risk. For those reasons, and consistent with my experience, it is not the practice of
9 natural gas utilities to fund permanent assets with short-term debt.

10 **Q. WHAT DO YOU CONCLUDE FROM YOUR ANALYSES REGARDING SHORT-**
11 **TERM DEBT?**

12 **A.** First, although short-term debt may be used as a source of interim financing, it is not used
13 to finance long-lived assets on a permanent basis. Rather, the long-term assets included in
14 rate base are financed with securities of correspondingly long lives – common equity, and
15 long-term debt. Doing otherwise (that is, financing long-term assets with short-term debt)
16 would expose the Company and its customers to both refinancing risk, and interest rate
17 risk.

18 Second, although short-term debt may be used to finance CWIP and other non-rate
19 base items such as the RAC, EEC and BGSS, the Company has not included any of these
20 balances in its rate base. Because these components are not included in the Company's
21 rate base, nor should short-term debt associated with these components be part of its
22 ratemaking capital structure.

Q. ARE YOU AWARE OF THE TERMS OF THE BOARD OF PUBLIC UTILITIES' ORDER APPROVING THE ACQUISITION OF ELIZABETHTOWN BY SOUTH JERSEY INDUSTRIES, INC.?

A. Yes, under the terms approving the acquisition of Elizabethtown, the Company may not include goodwill in its ratemaking capital structure. The Company also must maintain a capital structure of no less than a 46.00 percent common equity ratio (excluding goodwill), and cannot seek more than a 52.50 percent common equity ratio (excluding goodwill) in setting rates in its next base rate case.⁵¹

Q. HAS THE COMPANY EXCLUDED GOODWILL FROM ITS PROPOSED RATEMAKING CAPITAL STRUCTURE?

A. Yes, as shown in Table 6 below, the Company has removed goodwill from both its long-term debt and equity balances. The Company's actual capital structure excluding goodwill reflects 69.67 percent common equity and 30.33 percent long-term debt. The actual common equity ratio significantly exceeds the proposed ratemaking equity ratio of 52.50 percent.

Table 6: Actual Capital Structure Excluding Goodwill⁵²

	Amount	Goodwill Adjustment	Capital Excluding Goodwill	Percent of Capital
Long-Term Debt	\$530,000,000	(\$221,733,845)	\$308,266,155	30.33%
Common Equity	\$1,217,208,959	(\$509,238,532)	\$707,970,427	69.67%
Total Capitalization	\$1,747,208,959	(\$730,972,377)	\$1,016,236,582	100.00%

⁵¹ Docket No. GM17121309, *In the Matter of the Acquisition of Elizabethtown Gas, a Division of Pivotal Utility Holdings, Inc. by ETG Acquisition Corp., a Subsidiary of South Jersey Industries, Inc. and Related Transactions*, Decision and Order Approving Stipulation (June 22, 2018).

⁵² Company-provided. Goodwill has been removed in proportion to the actual equity and long-term debt financing components.

Q. DOES THE COMPANY HAVE ANY ANTICIPATED FINANCING PLANS?

A. Yes, the Company plans to issue up to \$270 million of additional long-term debt before the end of 2019 to finance its capital expenditure program. The Company's *pro forma* capital structure reflecting this issuance is shown in Table 7 below and reflects an equity ratio of 55.04 percent which is higher than the Company's proposed ratemaking equity ratio of 52.50 percent.

Table 7: Pro Forma Capital Structure

	Capital Excluding Goodwill	New Debt Issuance	<i>Pro Forma</i> Capital	Percent of Capital
Long-Term Debt	\$308,266,155	\$270,000,000	\$578,266,155	44.96%
Common Equity	\$707,970,427	\$---	\$707,970,427	55.04%
Total Capitalization	\$1,016,236,582	\$270,000,000	\$1,286,236,582	100.00%

Q. HOW DOES THE COMPANY'S PROPOSED EQUITY RATIO OF 52.50 PERCENT COMPARE TO THE PROXY COMPANIES' CAPITAL STRUCTURES?

A. It is important to keep in mind that the proxy group has been selected to reflect comparable companies in terms of financial and business risk. As such, it is appropriate to review the proxy companies' capital structures as a means of assessing whether the proposed capital structure is consistent with industry practice. To the extent the Company's proposed capital structure differs from industry practice, the difference in financial risk should be considered when estimating its required Cost of Equity.

To make that assessment, I calculated the average capital structure for each of the proxy companies over the last eight quarters (see Schedule RBH-10). The mean of the proxy group actual capital structures is 56.50 percent common equity and 43.50 percent long-term debt; the common equity ratios range from 46.45 percent to 75.61 percent.

1 **Q. WHAT IS THE BASIS FOR USING AVERAGE CAPITAL COMPONENTS**
2 **RATHER THAN A POINT-IN-TIME MEASUREMENT?**

3 **A.** Measuring the capital components at a particular point in time can skew the capital
4 structure by the specific circumstances of a particular period. Therefore, it is more
5 appropriate to normalize the relative relationship between the capital components over a
6 period of time.

7 **Q. WHAT IS YOUR CONCLUSION REGARDING THE COMPANY'S PROPOSED**
8 **RATEMAKING CAPITAL STRUCTURE IN RELATION TO YOUR PROXY**
9 **GROUP?**

10 **A.** I believe that the proposed common equity ratio of 52.50 percent, while below the average
11 equity ratio in place by the proxy group companies, is reasonable and appropriate.

12 **VIII. WEIGHTED AVERAGE COST OF CAPITAL**

13 **Q. HAVE YOU CALCULATED THE COMPANY'S WEIGHTED AVERAGE COST**
14 **OF CAPITAL UTILIZING THE PROPOSED RATEMAKING CAPITAL**
15 **STRUCTURE?**

16 **A.** Yes, I used 52.50 percent and 47.50 percent common equity and long-term debt ratios,
17 respectively. For cost rates, I applied my recommended Return on Equity of 10.40 percent,
18 and an embedded cost of long-term debt of 4.51 percent.

19 **Q. HOW DID YOU DERIVE THE EMBEDDED COST OF LONG-TERM DEBT?**

20 **A.** On December 20, 2018, the Company issued \$530 million of first mortgage bonds with
21 varying tenors from ten to 40 years, with a weighted average coupon rate of 4.32 percent.
22 The Company plans to issue up to an additional \$270 million of first mortgage bonds before
23 the end of 2019. To calculate the Company's embedded cost of long-term debt, I assumed

the same weighted average coupon rate of 4.32 percent for the new long-term debt issuance, which I will update with the actual rate during this proceeding. Table 8, below, provides the overall embedded cost of long-term debt of 4.51 percent, which includes issuance costs, and the unamortized cost of debt that was reacquired by Pivotal Utility Holdings, Inc. immediately prior to the transfer of its New Jersey assets to SJL.

Table 8: Embedded Cost of Long-Term Debt⁵³

Maturity	Principal	Unamortized Debt Issuance Costs and Reacquired Debt Costs	Net Principal	Coupon Rate	Annual Interest	Annual Debt Issuance Costs	Total Annual Costs	All-In Cost of Debt
12/20/28	\$50,000,000	\$510,084	\$49,489,916	4.02%	\$2,010,000	\$51,873	\$2,061,873	4.17%
12/20/33	55,000,000	564,263	54,435,737	4.22%	2,321,000	38,040	2,359,040	4.33%
12/20/38	150,000,000	1,543,222	148,456,778	4.29%	6,435,000	77,809	6,512,809	4.39%
12/20/48	200,000,000	2,063,393	197,936,607	4.37%	8,740,000	69,164	8,809,164	4.45%
12/20/58	75,000,000	774,853	74,225,147	4.52%	3,390,000	19,452	3,409,452	4.59%
New Issuance	270,000,000	1,820,000	268,180,000	4.32%	11,664,000	260,000	11,924,000	4.45%
Retired Debt ⁵⁴	---	4,068,400	(4,068,400)	---	---	510,077	510,077	---
Total	\$800,000,000	\$11,344,214	\$788,655,786	4.32%	\$34,560,000	\$1,026,415	\$35,586,415	4.51%

Q. WHAT IS THE RESULTING WEIGHTED AVERAGE COST OF CAPITAL?

A. Based on the 52.50 percent and 47.50 percent common equity and long-term debt ratios, respectively, and 10.40 percent and 4.51 percent for Return on Equity and cost of long-

⁵³ Company-provided. Annual debt costs for new issuance assumes \$1.82 million of costs amortized over a 7-year average life.

⁵⁴ Company-provided. Reflects regulatory asset of \$4.07 million as of February 2019 associated with retirement of legacy revenue bonds amortizing at \$0.51 million annually. Board precedent permits the amortization of such gains and losses over the life of the retired debt. See BPU Docket No. ER12111052, OAL Docket No. PUC16310-12, *In the Matter of the Verified Petition of Jersey Central Power & Light Company for Review and Approval Increases in and Other Adjustments to its Rates and Charges for Electric Service, and for Approval of Other Proposed Tariff Revisions in Connection Therewith; and for Approval of an Accelerated Reliability Enhancement Program ("2012 Base Rate Filing")*, Order Adopting Initial Decision with Modifications and Clarifications (Mar. 26, 2015).

term debt, respectively, the Company's weighted average cost of capital is 7.60 percent (see, Table 9 below).

Table 9: Weighted Average Cost of Capital

	Weight	Cost Rate	Weighted Average Cost of Capital
Equity	52.50%	10.40%	5.46%
Long-Term Debt	47.50%	4.51%	2.14%
Total			7.60%

IX. CONCLUSIONS AND RECOMMENDATION

Q. WHAT IS YOUR CONCLUSION REGARDING THE COMPANY'S COST OF EQUITY?

A. As discussed in Section V (and as shown in Schedules RBH-2 through RBH-7), I have performed several analyses to estimate Elizabethtown's Cost of Equity. In light of those results, and taking into consideration other relevant and observable market data, I believe that an ROE of 10.40 percent is within the range of returns required by equity investors under current and expected market conditions. Moreover, I find an ROE of 10.40 percent represents a reasonable estimate of the Cost of Equity for Elizabethtown. My recommendation reflects analytical results based on a proxy group of natural gas utilities, and takes into consideration capital market conditions.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

APPENDIX A

A. PROXY GROUP SELECTION

Q. HOW DID YOU SELECT THE COMPANIES INCLUDED IN YOUR PROXY GROUP?

A. I began with the universe of companies that Value Line classifies as Natural Gas Utilities and applied the following screening criteria:

- Because certain models used in my analyses assume earnings and dividends grow over time, I excluded companies that do not consistently pay quarterly cash dividends;
- To ensure the growth rates used in my analyses are not biased by a single analyst, all companies in my proxy group have been covered by at least two utility industry equity analysts;
- All companies in my proxy group have investment grade senior unsecured bond and/or corporate credit ratings from S&P or equivalent ratings for the National Association of Insurance Commissioners;
- To incorporate companies that are primarily regulated gas distribution utilities, I included companies with at least 60.00 percent of operating income derived from regulated natural gas utility operations; and
- I eliminated companies currently known to be party to a merger, or other significant transaction.

Q. DID YOU INCLUDE SJI IN YOUR PROXY GROUP?

A. No. To avoid the circular logic that would otherwise occur, it has been my consistent practice to exclude the subject company (or its parent) from the proxy group. That is, it would be inappropriate to include SJI in the proxy group because Elizabethtown is an

indirectly wholly owned subsidiary of SJI. Because SJI's earnings are affected by Elizabethtown's operations, SJI is not an appropriate "proxy".

Q. WHAT COMPANIES MET THOSE SCREENING CRITERIA?

A. The criteria discussed above resulted in a proxy group of the following seven companies:

Table 10: Proxy Group Screening Results

Company	Ticker
Atmos Energy Corporation	ATO
Chesapeake Utilities Corporation ⁵⁵	CPK
New Jersey Resources Corporation	NJR
Northwest Natural Gas Company	NWN
ONE Gas, Inc.	OGS
Southwest Gas Corporation	SWX
Spire Inc.	SR

⁵⁵ Even though Chesapeake Utilities Corp. is not publicly rated by S&P, its Value Line Financial Strength Rating of B++ is comparable to the rest of the proxy group. CPK also has an National Association of Insurance Commissioners (NAIC) rating of "NAIC 1," which is equivalent to ratings in the "A" category for both Moody's and Standard & Poor's. See, Chesapeake Utilities Corporation, Northeast Road Show, January 2018, at 16; National Association of Insurance Commissioners, CRP Credit Rating Equivalent to SVO Designations, November 2017.

APPENDIX B

A. CONSTANT GROWTH DISCOUNTED CASH FLOW MODEL

Q. PLEASE DESCRIBE MORE FULLY THE CONSTANT GROWTH DCF APPROACH.

A. The Constant Growth DCF approach is based on the theory that a stock's current price represents the present value of all expected future cash flows. DCF theory assumes that an investor buys a stock for an expected total return rate which is derived from cash flows received in the form of dividends plus appreciation in market price (the expected growth rate). In its simplest form, the Constant Growth DCF model expresses the Cost of Equity as the discount rate that sets the current price equal to expected cash flows:

$$P = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \dots + \frac{D_\infty}{(1+k)^\infty} \quad [4]$$

where P represents the current stock price, $D_1 \dots D_\infty$ represent expected future dividends, and k is the discount rate, or required ROE. Equation [4] is a standard present value calculation that can be simplified and rearranged into the familiar form:

$$k = \frac{D_0(1+g)}{P} + g \quad [5]$$

Equation [5] often is referred to as the "Constant Growth DCF" model, in which the first term is the expected dividend yield and the second term is the expected long-term annual growth rate in perpetuity.

Q. WHAT ASSUMPTIONS UNDERLIE THE CONSTANT GROWTH DCF MODEL?

A. The Constant Growth DCF model assumes: (1) a constant average annual growth rate for earnings and dividends; (2) a stable dividend payout ratio; (3) a constant Price to Earnings multiple; and (4) a discount rate greater than the expected growth rate. The model also assumes the current Cost of Equity will remain constant, also in perpetuity.

Q. WHAT MARKET DATA DID YOU USE TO CALCULATE THE DIVIDEND YIELD IN YOUR CONSTANT GROWTH DCF MODEL?

A. The dividend yield is based on the proxy companies' current annualized dividend, and average closing stock prices over the 30-, 90-, and 180-trading day periods as of January 31, 2019.

Q. WHY DID YOU USE THREE AVERAGING PERIODS TO CALCULATE AN AVERAGE STOCK PRICE?

A. I did so to ensure the model's results are not skewed by anomalous events that may affect stock prices on any given trading day. At the same time, the averaging period should be reasonably representative of expected capital market conditions over the long term. In my view, using 30-, 90-, and 180-day averaging periods reasonably balances those concerns.

Q. DID YOU MAKE ANY ADJUSTMENTS TO THE DIVIDEND YIELD TO ACCOUNT FOR PERIODIC GROWTH IN DIVIDENDS?

A. Yes, I did. Because utility companies tend to increase their quarterly dividends at different times throughout the year, it is reasonable to assume that dividend increases will be evenly distributed over calendar quarters. Given that assumption, it is appropriate to calculate the expected dividend yield by applying one-half of the long-term growth rate to the current dividend yield. That adjustment ensures that the expected dividend yield is, on average, representative of the coming twelve-month period, and does not overstate the dividends to be paid during that time.

Q. IS IT IMPORTANT TO SELECT APPROPRIATE MEASURES OF LONG-TERM GROWTH IN APPLYING THE DCF MODEL?

A. Yes. In its Constant Growth form, the DCF model (*i.e.*, as presented in Equation [5] above) assumes a single growth estimate in perpetuity. Accordingly, in order to reduce the long-term growth rate to a single measure, one must assume a fixed payout ratio, and the same constant growth rate for earnings per share (“EPS”), dividends per share, and book value per share. Because dividend growth can only be sustained by earnings growth, the model should incorporate a variety of measures of long-term earnings growth. That can be accomplished by averaging those measures of long-term growth that tend to be least influenced by capital allocation decisions that companies may make in response to near-term changes in the business environment. Because such decisions may directly affect near-term dividend payout ratios, estimates of earnings growth are more indicative of long-term investor expectations than are dividend growth estimates. For the purposes of the Constant Growth DCF model, therefore, growth in EPS represents the appropriate measure of long-term growth.

Q. PLEASE SUMMARIZE THE FINDINGS OF ACADEMIC RESEARCH ON THE APPROPRIATE MEASURE FOR ESTIMATING EQUITY RETURNS USING THE DCF MODEL.

A. The relationship between various growth rates and stock valuation metrics has been the subject of much academic research.⁵⁶ As noted over 40 years ago by Charles Phillips in The Economics of Regulation:

For many years, it was thought that investors bought utility stocks

⁵⁶ See, Robert S. Harris, *Using Analysts’ Growth Forecasts to Estimate Shareholder Required Rate of Return*, Financial Management (Spring 1986).

largely on the basis of dividends. More recently, however, studies indicate that the market is valuing utility stocks with reference to total per share earnings, so that the earnings-price ratio has assumed increased emphasis in rate cases.⁵⁷

Philips' conclusion continues to hold true. Subsequent academic research has clearly and consistently indicated that measures of earnings and cash flow are strongly related to returns, and that analysts' forecasts of growth are superior to other measures of growth in predicting stock prices.⁵⁸ For example, Vander Weide and Carleton state that, "[our] results ... are consistent with the hypothesis that investors use analysts' forecasts, rather than historically oriented growth calculations, in making stock buy-and-sell decisions."⁵⁹ Other research specifically notes the importance of analysts' growth estimates in determining the Cost of Equity, and in the valuation of equity securities. Dr. Robert Harris noted that "a growing body of knowledge shows that analysts' earnings forecast are indeed reflected in stock prices." Citing Cragg and Malkiel, Dr. Harris notes that those authors "found that the evaluations of companies that analysts make are the sorts of ones on which market valuation is based."⁶⁰ Similarly, Brigham, Shome and Vinson noted that "evidence in the current literature indicates that (i) analysts' forecasts are

57 Charles F. Phillips, Jr., The Economics of Regulation, at 285 (Rev. ed. 1969).

58 See, e.g., Andreas C. Christofi, Petros C. Christofi, Marcus Lori and Donald M. Moliver, *Evaluating Common Stocks Using Value Line's Projected Cash Flows and Implied Growth Rate*, Journal of Investing (Spring 1999); Harris and Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management, 21 (Summer 1992); and Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

59 James H. Vander Weide and Willard T. Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

60 Robert S. Harris, *Using Analysts' Growth Forecasts to Estimate Shareholder Required Rate of Return*, Financial Management (Spring 1986).

superior to forecasts based solely on time series data; and (ii) investors do rely on analysts' forecasts."⁶¹

To that point, the research of Vander Weide and Carleton demonstrates that earnings growth projections have a statistically significant relationship to stock valuation levels, while dividend growth rates do not.⁶² Those findings suggest that investors form their investment decisions based on expectations of growth in earnings, not dividends. Consequently, earnings growth, not dividend growth, is the appropriate estimate for the purpose of the Constant Growth DCF model.

Q. PLEASE SUMMARIZE YOUR INPUTS TO THE CONSTANT GROWTH DCF MODEL.

A. I applied the DCF model to the proxy group of natural gas utility companies using the following inputs for the price and dividend terms:

- The average daily closing prices for the 30-, 90-, and 180-trading days ended January 31, 2019, for the term P_0 ; and
- The annualized dividend per share as of January 31, 2019, for the term D_0 ;

I then calculated my DCF results using each of the following growth terms:

- The Zacks consensus long-term earnings growth estimates;
- The First Call consensus long-term earnings growth estimates; and
- The Value Line long-term earnings growth estimates; and

⁶¹ Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management (Spring 1985).

⁶² See Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

- The Retention Growth estimates.⁶³

Q. PLEASE DESCRIBE THE RETENTION GROWTH ESTIMATE AS APPLIED IN YOUR DCF MODEL.

A. The Retention Growth model, which is a generally recognized and widely taught method of estimating long-term growth, is an alternative approach to the use of analysts' earnings growth estimates. The model is premised on the assumption that a firm's growth is a function of its expected earnings, and the extent to which it retains earnings to invest in the enterprise. In its simplest form, the model represents long-term growth as the product of the retention ratio (*i.e.*, the percentage of earnings not paid out as dividends (referred to below as "b") and the expected return on book equity (referred to below as "r")). Thus, the simple "b x r" form of the model projects growth as a function of internally generated funds. That form of the model is limiting, however, in that it does not provide for growth funded from external equity.

The "br + sv" form of the Retention Growth estimate used in my DCF analysis is meant to reflect growth from both internally generated funds (*i.e.*, the "br" term) and from issuances of equity (*i.e.*, the "sv" term). The first term, which is the product of the retention ratio (*i.e.*, "b", or the portion of net income not paid in dividends) and the expected Return on Equity (*i.e.*, "r") represents the portion of net income that is "plowed back" into the Company as a means of funding growth. The "sv" term is represented as:

$$\left(\frac{m}{b} - 1\right) \times \text{Growth rate in Common Shares} \quad [6]$$

⁶³ See, Schedule RBH-2.

1 where $\frac{m}{b}$ is the Market-to-Book ratio. In this form, the “sv” term reflects an element of
2 growth as the product of (a) the growth in shares outstanding, and (b) that portion of the
3 market-to-book ratio that exceeds unity. As shown in Schedule RBH-2, all of the
4 components of the Retention Growth model can be derived from data provided by Value
5 Line.

6 **Q. HOW DID YOU CALCULATE THE DCF RESULTS?**

7 A. For each proxy company, I calculated the mean, mean high, and mean low results. For the
8 mean result, I combined the average of the EPS growth rate estimates reported by Value
9 Line, Zacks, First Call, and the Retention Growth method with the subject company’s
10 dividend yield for each proxy company and then calculated the average result for those
11 estimates. I calculated the high DCF result by combining the maximum EPS growth rate
12 estimate as reported by Value Line, Zacks, First Call, and the Retention Growth method
13 with the subject company’s dividend yield. The mean high result simply is the average of
14 those estimates. I used the same approach to calculate the low DCF result, using instead
15 the minimum of the Value Line, Zacks, First Call, and the Retention Growth method
16 estimate for each proxy company, and calculating the average result for those estimates.

17 **Q. WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF ANALYSIS?**

18 A. My Constant Growth DCF results are summarized in Table 11, below (*see* also Schedule
19 RBH-3).

Table 11: Constant Growth DCF Model Results⁶⁴

	Median Low	Median	Median High
30-Day Average	7.81%	9.83%	12.16%
90-Day Average	7.81%	9.79%	12.12%
180-Day Average	7.83%	9.85%	12.17%

Q. DID YOU UNDERTAKE ANY ADDITIONAL ANALYSES TO SUPPORT YOUR RECOMMENDATION?

A. Yes. As noted earlier, I also applied the CAPM and Bond Yield Plus Risk Premium approaches.

B. CAPITAL ASSET PRICING MODEL

Q. PLEASE DESCRIBE THE GENERAL FORM OF THE CAPM.

A. The CAPM is a risk premium method that estimates the Cost of Equity for a given security as a function of a risk-free return plus a risk premium (to compensate investors for the non-diversifiable or “systematic” risk of that security). The CAPM describes the relationship between a security’s investment risk and the market rate of return. The CAPM assumes that all other risk, *i.e.*, all non-market or unsystematic risk, can be eliminated through diversification. The risk that cannot be eliminated through diversification is called market, or systematic, risk. In addition, the CAPM presumes that investors require compensation only for systematic risk that is the result of macroeconomic and other events that affect the returns on all assets.

As shown in Equation [7], the CAPM is defined by four components, each of which theoretically must be a forward-looking estimate:

⁶⁴ See, Schedule RBH-3.

$$k = r_f + \beta(r_m - r_f) \quad [7]$$

where:

k = the required market ROE for a security;

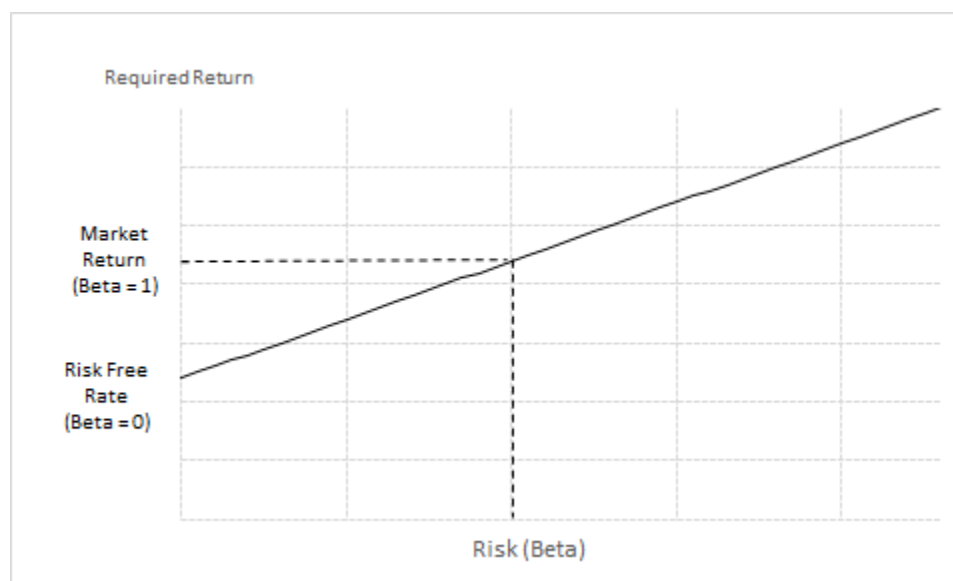
β = the Beta coefficient of that security;

r_f = the risk-free rate of return; and

r_m = the required return on the market as a whole.

Equation [7] describes the Security Market Line, or the CAPM risk-return relationship, which is graphically depicted in Chart 6 below. The intercept is the risk-free rate (r_f) which has a Beta coefficient of zero, the slope is the expected market risk premium ($r_m - r_f$). By definition, r_m , the return on the market has a Beta coefficient of 1.00. CAPM states that in well-behaving capital markets, the expected equity risk premium on a given security is proportional to its Beta coefficient.

Chart 6: Security Market Line (“SML”)



Intuitively, higher Beta coefficients indicate the subject company's returns have been relatively volatile, and have moved in tandem with the overall market. Consequently,

if a company has a Beta coefficient of 1.00, it is considered as risky as the market, and does not provide diversification benefits.

In Equation [7], the term $(r_m - r_f)$ represents the Market Risk Premium.⁶⁵ According to the theory underlying the CAPM, because unsystematic risk can be diversified away by adding securities to investment portfolios, the market will not compensate investors for bearing that risk. Therefore, investors should be concerned only with systematic or non-diversifiable risk. Non-diversifiable risk is measured by the Beta coefficient, which is defined as:

$$\beta_j = \frac{\sigma_j}{\sigma_m} \times \rho_{j,m} \quad [8]$$

where σ_j is the standard deviation of returns for company “j,” σ_m is the standard deviation of returns for the broad market (as measured, for example, by the S&P 500 Index), and $\rho_{j,m}$ is the correlation of returns in between company j and the broad market. The Beta coefficient therefore represents both relative volatility (*i.e.*, the standard deviation) of returns, and the correlation in returns between the subject company and the overall market.

Q. WHAT ASSUMPTIONS DID YOU INCLUDE IN YOUR CAPM ANALYSIS?

A. It is important to select the term (or maturity) of the risk-free rate that best matches the life of the underlying investment. Natural gas utilities typically are long-duration investments and, as such, the 30-year Treasury yield is more suitable for the purpose of calculating the Cost of Equity. As such, I used two different measures of the risk-free rate: (1) the current 30-day average yield on 30-year Treasury bonds (*i.e.*, 3.03 percent)⁶⁶; (2) the near-term

⁶⁵ The Market Risk Premium is defined as the incremental return of the market portfolio over the risk-free rate.

⁶⁶ Source: Bloomberg Professional Services.

1 projected 30-year Treasury yield (*i.e.*, 3.33 percent)⁶⁷; and (3) the long-term projected 30-
2 year Treasury yield (*i.e.*, 4.05 percent).⁶⁸

3 **Q. PLEASE DESCRIBE YOUR EX-ANTE APPROACH TO ESTIMATING THE**
4 **MARKET RISK PREMIUM (“MRP”).**

5 A. The approach is based on the market required return, less the current 30-year Treasury
6 yield. To estimate the market required return, I calculated the market capitalization
7 weighted average ROE based on the Constant Growth DCF model. To do so, I relied on
8 data from two sources: (1) Bloomberg; and (2) Value Line.⁶⁹ With respect to Bloomberg-
9 derived growth estimates, I calculated the expected dividend yield (using the same one-
10 half growth rate assumption described earlier), and combined that amount with the
11 projected earnings growth rate to arrive at the market capitalization weighted average DCF
12 result. I performed that calculation for each of the S&P 500 companies for which
13 Bloomberg provided consensus growth rates. I then subtracted the current 30-year
14 Treasury yield from that amount to arrive at the market DCF-derived *ex-ante* market risk
15 premium estimate. In the case of Value Line, I performed the same calculation, again using
16 all companies for which five-year earnings growth rates were available. The results of
17 those calculations are provided in Schedule RBH-4.

67 See, Blue Chip Financial Forecasts, Vol. 38, No. 2, February 1, 2019, at 2. Consensus projections of the 30-year Treasury yield for the six quarters ending June 2020.

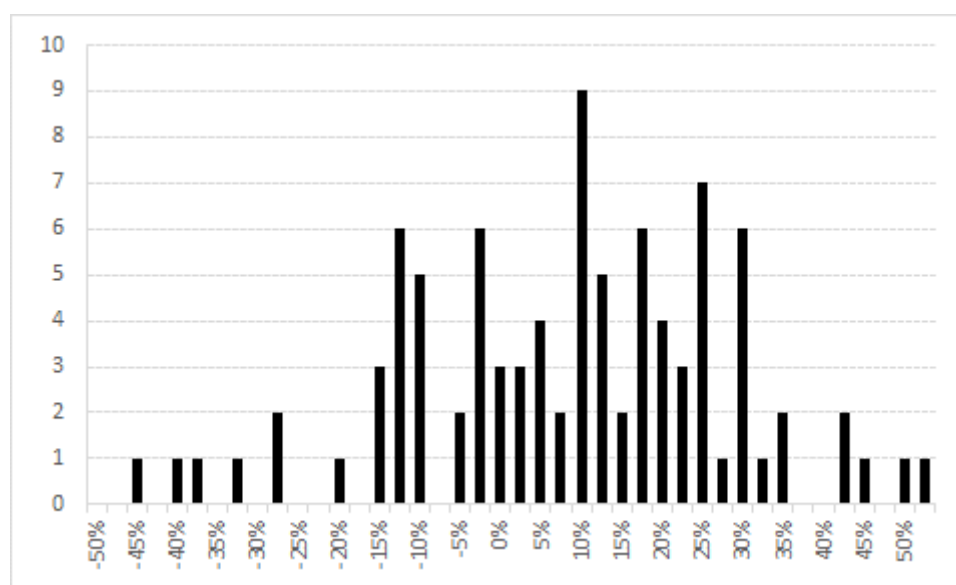
68 See, Blue Chip Financial Forecasts, Vol. 37, No. 12, December 1, 2018, at 14. Consensus projections of the 30-year Treasury yield for the periods 2020-2024 and 2025-2029.

69 See, Schedule RBH-4.

Q. HAVE YOU UNDERTAKEN ANY ANALYSES TO DETERMINE THE REASONABLENESS OF THE EX-ANTE MRP CALCULATION?

A. Yes, I have considered how often various ranges of MRPs have been observed over the 1926 to 2017 period. To perform that analysis, I gathered the annual Market Risk Premia reported by Duff & Phelps and produced a histogram of those observations. The results of that analysis, which are presented in Chart 7, demonstrate that MRPs in the range of approximately 12.81 percent (the average of my MRP estimates) and higher occurred quite often.

Chart 7: Frequency Distribution of MRP, 1926 -2017⁷⁰



Q. HOW DID YOU APPLY YOUR EXPECTED MARKET RISK PREMIUM AND RISK-FREE RATE ESTIMATES?

A. I relied on the *ex-ante* Market Risk Premia discussed above, together with the current and near-term projected 30-year Treasury yields as inputs to my CAPM analyses.

⁷⁰ Source: Duff & Phelps, 2018 SBBJ, Appendix A-1, A-7.

Q. WHAT BETA COEFFICIENT DID YOU USE IN YOUR CAPM MODEL?

A. As shown in Schedule RBH-5, I considered the Beta coefficients reported by two sources: Bloomberg and Value Line. Although both services adjust their calculated (or “raw”) Beta coefficients to reflect the tendency of the Beta coefficient to regress to the market mean of 1.00, Value Line calculates the Beta coefficient over a five-year period, while Bloomberg’s calculation is based on two years of data.

Q. WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

A. The results of the CAPM analyses are shown in Table 12 below (*see* also Schedule RBH-6).

Table 12: Summary of CAPM Results⁷¹

	Bloomberg Derived Market Risk Premium	Value Line Derived Market Risk Premium
<i>Average Bloomberg Beta Coefficient</i>		
Current 30-Year Treasury (3.03%)	9.56%	10.96%
Near Term Projected 30-Year Treasury (3.33%)	9.86%	11.26%
Long Term Projected 30-Year Treasury (4.05%)	10.58%	11.98%
<i>Average Value Line Beta Coefficient</i>		
Current 30-Year Treasury (3.03%)	10.61%	12.24%
Near Term Projected 30-Year Treasury (3.33%)	10.91%	12.54%
Long Term Projected 30-Year Treasury (4.05%)	11.63%	13.25%

C. BOND YIELD PLUS RISK PREMIUM APPROACH

Q. PLEASE DESCRIBE THE BOND YIELD PLUS RISK PREMIUM APPROACH.

A. This approach is based on the basic financial tenet of risk and return, namely, that equity investors bear the residual risk associated with ownership and therefore require a premium

⁷¹ See Schedule RBH-6.

over the return they would have earned as a bondholder. That is, because returns to equity holders are more risky than returns to bondholders, equity investors must be compensated for bearing that additional risk. Risk premium approaches, therefore, estimate the Cost of Equity as the sum of the equity risk premium and the yield on a particular class of bonds. As noted in my discussion of the CAPM, because the equity risk premium is not directly observable, it typically is estimated using a variety of approaches, some of which incorporate *ex-ante*, or forward-looking estimates of the Cost of Equity, and others that consider historical, or *ex-post*, estimates. An alternative approach is to use actual authorized returns for natural gas utilities to estimate the Equity Risk Premium.

Q. PLEASE EXPLAIN HOW YOU PERFORMED YOUR BOND YIELD PLUS RISK PREMIUM ANALYSIS.

A. As indicated above, I first defined the Risk Premium as the difference between the authorized ROE and the then-prevailing level of long-term (*i.e.*, 30-year) Treasury yield. I then gathered data for 1,116 natural gas utility rate proceedings between January 1, 1980 and January 31, 2019. In addition to the authorized ROE, I calculated the average period between the filing of the case and the date of the final order (the “lag period”). To reflect the prevailing level of interest rates during the pendency of the proceedings, I calculated the average 30-year Treasury yield over the average lag period (approximately 187 days).

Because the data cover a number of economic cycles⁷², the analysis also may be used to assess the stability of the Equity Risk Premium. Prior research, for example, has

⁷² See National Bureau of Economic Research, *U.S. Business Cycle Expansion and Contractions*.

1 shown that the Equity Risk Premium is inversely related to the level of interest rates.⁷³

2 That analysis is particularly relevant given the relatively low, but increasing level of current
3 Treasury yields.

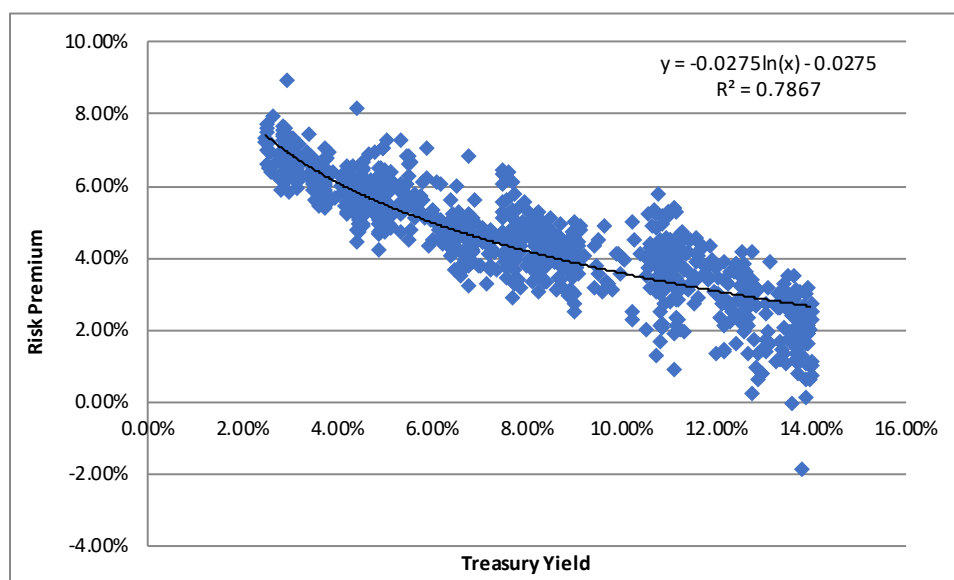
4 **Q. HOW DID YOU ANALYZE THE RELATIONSHIP BETWEEN INTEREST**
5 **RATES AND THE EQUITY RISK PREMIUM?**

6 A. The basic method used was regression analysis, in which the observed Equity Risk
7 Premium is the dependent variable, and the average 30-year Treasury yield is the
8 independent variable. Relative to the long-term historical average, the analytical period
9 includes interest rates and authorized ROEs that are quite high during one period (*i.e.*, the
10 1980s) and that are quite low during another (*i.e.*, the post-Lehman bankruptcy period). To
11 account for that variability, I used the semi-log regression, in which the Equity Risk
12 Premium is expressed as a function of the natural log of the 30-year Treasury yield:

$$RP = \alpha + \beta(LN(T_{30})) \quad [9]$$

14 As shown on Chart 8 (below), the semi-log form is useful when measuring an
15 absolute change in the dependent variable (in this case, the Risk Premium) relative to a
16 proportional change in the independent variable (the 30-year Treasury yield).

73 See, e.g., Robert S. Harris and Felicia C. Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management, Summer 1992, at 63-70; Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management, Spring 1985, at 33-45; and Farris M. Maddox, Donna T. Pippert, and Rodney N. Sullivan, *An Empirical Study of Ex Ante Risk Premiums for the Electric Utility Industry*, Financial Management, Autumn 1995, at 89-95.

Chart 8: Equity Risk Premium⁷⁴

As Chart 8 illustrates, over time there has been a statistically significant, negative relationship between the 30-year Treasury yield and the Equity Risk Premium. Consequently, simply applying the long-term average Equity Risk Premium of 4.69 percent would significantly understate the Cost of Equity and produce results well below any reasonable estimate. Based on the regression coefficients in Chart 8, however, the implied ROE is between 9.89 percent and 10.11 percent (*see* Table 13 and Schedule RBH-7).

Table 13: Summary of Bond Yield Plus Risk Premium Results⁷⁵

	Return on Equity
Current 30-Year Treasury (3.03%)	9.89%
Near Term Projected 30-Year Treasury (3.33%)	9.93%
Long Term Projected 30-Year Treasury (4.05%)	10.11%

⁷⁴ *See*, Schedule RBH-7.

⁷⁵ *See*, Schedule RBH-7.

1 The Bond Yield Plus Risk Premium approach relies on the same data over an
2 approximately 38-year period, while also considering the inverse relationship between
3 Treasury yields and the Equity Risk Premium. That is, the Bond Yield Plus Risk Premium
4 approach provides additional information beyond a simple average of authorized ROEs in
5 that it accounts for different market environments and considers the long-term relationship
6 between the inputs to the analysis.



Resume of:
Robert B. Hevert, Partner
Rates, Regulation & Planning Practice Leader

Summary

Bob Hevert is a financial and economic consultant with more than 30 years of broad experience in the energy and utility industries. He has an extensive background in the areas of corporate finance, mergers and acquisitions, project finance, asset and business unit valuation, rate and regulatory matters, energy market assessment, and corporate strategic planning. He has provided expert testimony on a wide range of financial, strategic, and economic matters on more than 250 occasions at the state, provincial, and federal levels.

Prior to joining ScottMadden, Bob served as managing partner at Sussex Economic Advisors, LLC. Throughout the course of his career, he has worked with numerous leading energy companies and financial institutions throughout North America. He has provided expert testimony and support of litigation in various regulatory proceedings on a variety of energy and economic issues. Bob earned a B.S. in business and economics from the University of Delaware and an M.B.A. with a concentration in finance from the University of Massachusetts at Amherst. Bob also holds the Chartered Financial Analyst designation.

Areas of Specialization

- Regulation and rates
- Utilities
- Fossil/hydro generation
- Markets and RTOs
- Nuclear generation
- Mergers and acquisitions
- Regulatory strategy and rate case support
- Capital project planning
- Strategic and business planning

Recent Expert Testimony Submission/Appearance

- Federal Energy Regulatory Commission – Return on Equity
- New Jersey Board of Public Utilities – Merger Approval
- New Mexico Public Regulation Commission – Cost of Capital and Financial Integrity
- United States District Court – PURPA and FERC Regulations
- Alberta Utilities Commission – Return on Equity and Capital Structure

Recent Assignments

- Provided expert testimony on the cost of capital for ratemaking purposes before numerous state utility regulatory agencies, the Alberta Utilities Commission, and the Federal Energy Regulatory Commission
- For an independent electric transmission provider in Texas, prepared an expert report on the economic damages with respect to failure to meet guaranteed completion dates. The report was filed as part of an arbitration proceeding and included a review of the ratemaking implications of economic damages
- Advised the board of directors of a publicly traded electric and natural gas combination utility on dividend policy issues, earnings payout trends and related capital market considerations
- Assisted a publicly traded utility with a strategic buy-side evaluation of a gas utility with more than \$1 billion in assets. The assignment included operational performance benchmarking, calculation of merger synergies, risk analysis, and review of the regulatory implications of the transaction
- Provided testimony before the Arkansas Public Service Commission in support of the acquisition of SourceGas LLC by Black Hills Corporation. The testimony addressed certain balance sheet capitalization and credit rating issues
- For the State of Maine Public Utility Commission, prepared a report that summarized the Northeast and Atlantic Canada natural gas power markets and analyzed the potential benefits and costs associated with natural gas pipeline expansions. The independent report was filed at the Maine Public Utility Commission



Testimony Listing of:
Robert B. Hevert, Partner
Rates, Regulation and Planning Practice Leader

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Regulatory Commission of Alaska				
Cook Inlet Natural Gas Storage Alaska, LLC	06/18	Cook Inlet Natural Gas Storage Alaska, LLC	Docket No. U-18-043	Return on Equity
ENSTAR Natural Gas Company	06/16	ENSTAR Natural Gas Company	Matter No. TA 285-4	Return on Equity
ENSTAR Natural Gas Company	08/14	ENSTAR Natural Gas Company	Matter No. TA 262-4	Return on Equity
Alberta Utilities Commission				
AltaLink, L.P., and EPCOR Distribution & Transmission, Inc., and FortisAlberta Inc.	10/17	AltaLink, L.P., and EPCOR Distribution & Transmission, Inc., and FortisAlberta Inc.	2018 General Cost of Capital, Proceeding ID. 22570	Rate of Return
EPCOR Energy Alberta G.P. Inc.	01/17	EPCOR Energy Alberta G.P. Inc.	Proceeding 22357	Energy Price Setting Plan
AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	02/16	AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	2016 General Cost of Capital, Proceeding ID. 20622	Rate of Return
Arizona Corporation Commission				
Southwest Gas Corporation	05/16	Southwest Gas Corporation	Docket No. G-01551A-16-0107	Return on Equity
Southwest Gas Corporation	11/10	Southwest Gas Corporation	Docket No. G-01551A-10-0458	Return on Equity
Arkansas Public Service Commission				
Southwestern Electric Power Company	02/19	Southwestern Electric Power Company	Docket No. 19-008-U	Return on Equity
Oklahoma Gas and Electric Company	09/16	Oklahoma Gas and Electric Company	Docket No. 16-052-U	Return on Equity
SourceGas Arkansas, Inc.	12/15	SourceGas Arkansas, Inc.	Docket No. 15-078-U	Response to Direct Testimony by Arkansas Attorney General related to Compliance Issues
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	11/15	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	Docket No. 15-098-U	Return on Equity
SourceGas Arkansas, Inc.	04/15	SourceGas Arkansas, Inc.	Docket No. 15-011-U	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	01/07	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	Docket No. 06-161-U	Return on Equity
California Public Utilities Commission				
Southwest Gas Corporation	12/12	Southwest Gas Corporation	Docket No. A-12-12-024	Return on Equity
Colorado Public Utilities Commission				
Atmos Energy Corporation	06/17	Atmos Energy Corporation	Docket No. 17AL-0429G	Return on Equity
Xcel Energy, Inc.	03/15	Public Service Company of Colorado	Docket No. 15AL-0135G	Return on Equity (gas)
Xcel Energy, Inc.	06/14	Public Service Company of Colorado	Docket No. 14AL-0660E	Return on Equity (electric)



Testimony Listing of:
Robert B. Hevert, Partner
Rates, Regulation and Planning Practice Leader

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Xcel Energy, Inc.	12/12	Public Service Company of Colorado	Docket No. 12AL-1268G	Return on Equity (gas)
Xcel Energy, Inc.	11/11	Public Service Company of Colorado	Docket No. 11AL-947E	Return on Equity (electric)
Xcel Energy, Inc.	12/10	Public Service Company of Colorado	Docket No. 10AL-963G	Return on Equity (electric)
Atmos Energy Corporation	07/09	Atmos Energy Colorado-Kansas Division	Docket No. 09AL-507G	Return on Equity (gas)
Xcel Energy, Inc.	12/06	Public Service Company of Colorado	Docket No. 06S-656G	Return on Equity (gas)
Xcel Energy, Inc.	04/06	Public Service Company of Colorado	Docket No. 06S-234EG	Return on Equity (electric)
Xcel Energy, Inc.	08/05	Public Service Company of Colorado	Docket No. 05S-369ST	Return on Equity (steam)
Xcel Energy, Inc.	05/05	Public Service Company of Colorado	Docket No. 05S-246G	Return on Equity (gas)
Connecticut Public Utilities Regulatory Authority				
Connecticut Light and Power Company	11/17	Connecticut Light and Power Company	Docket No. 17-10-46	Return on Equity
Connecticut Light and Power Company	06/14	Connecticut Light and Power Company	Docket No. 14-05-06	Return on Equity
Southern Connecticut Gas Company	09/08	Southern Connecticut Gas Company	Docket No. 08-08-17	Return on Equity
Southern Connecticut Gas Company	12/07	Southern Connecticut Gas Company	Docket No. 05-03-17PH02	Return on Equity
Connecticut Natural Gas Corporation	12/07	Connecticut Natural Gas Corporation	Docket No. 06-03-04PH02	Return on Equity
Council of the City of New Orleans				
Entergy New Orleans, LLC	09/18	Entergy New Orleans, LLC	Docket No. UD-18-07	Return on Equity
Delaware Public Service Commission				
Delmarva Power & Light Company	08/17	Delmarva Power & Light Company	Docket No. 17-0977 (Electric)	Return on Equity
Delmarva Power & Light Company	08/17	Delmarva Power & Light Company	Docket No. 17-0978 (Gas)	Return on Equity
Delmarva Power & Light Company	05/16	Delmarva Power & Light Company	Case No. 16-649 (Electric)	Return on Equity
Delmarva Power & Light Company	05/16	Delmarva Power & Light Company	Case No. 16-650 (Gas)	Return on Equity
Delmarva Power & Light Company	03/13	Delmarva Power & Light Company	Case No. 13-115	Return on Equity
Delmarva Power & Light Company	12/12	Delmarva Power & Light Company	Case No. 12-546	Return on Equity
Delmarva Power & Light Company	03/12	Delmarva Power & Light Company	Case No. 11-528	Return on Equity
District of Columbia Public Service Commission				
Potomac Electric Power Company	12/17	Potomac Electric Power Company	Formal Case No. 1150	Return on Equity
Potomac Electric Power Company	06/16	Potomac Electric Power Company	Formal Case No. 1139	Return on Equity
Washington Gas Light Company	02/16	Washington Gas Light Company	Formal Case No. 1137	Return on Equity
Potomac Electric Power Company	03/13	Potomac Electric Power Company	Formal Case No. 1103-2013-E	Return on Equity



Testimony Listing of:
Robert B. Hevert, Partner
Rates, Regulation and Planning Practice Leader

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Potomac Electric Power Company	07/11	Potomac Electric Power Company	Formal Case No. 1087	Return on Equity
Federal Energy Regulatory Commission				
Sabine Pipeline, LLC	09/15	Sabine Pipeline, LLC	Docket No. RP15-1322-000	Return on Equity
NextEra Energy Transmission West, LLC	07/15	NextEra Energy Transmission West, LLC	Docket No. ER15-2239-000	Return on Equity
Maritimes & Northeast Pipeline, LLC	05/15	Maritimes & Northeast Pipeline, LLC	Docket No. RP15-1026-000	Return on Equity
Public Service Company of New Mexico	12/12	Public Service Company of New Mexico	Docket No. ER13-685-000	Return on Equity
Public Service Company of New Mexico	10/10	Public Service Company of New Mexico	Docket No. ER11-1915-000	Return on Equity
Portland Natural Gas Transmission System	05/10	Portland Natural Gas Transmission System	Docket No. RP10-729-000	Return on Equity
Florida Gas Transmission Company, LLC	10/09	Florida Gas Transmission Company, LLC	Docket No. RP10-21-000	Return on Equity
Maritimes and Northeast Pipeline, LLC	07/09	Maritimes and Northeast Pipeline, LLC	Docket No. RP09-809-000	Return on Equity
Spectra Energy	02/08	Saltville Gas Storage	Docket No. RP08-257-000	Return on Equity
Panhandle Energy Pipelines	08/07	Panhandle Energy Pipelines	Docket No. PL07-2-000	Response to draft policy statement regarding inclusion of MLPs in proxy groups for determination of gas pipeline ROEs
Southwest Gas Storage Company	08/07	Southwest Gas Storage Company	Docket No. RP07-541-000	Return on Equity
Southwest Gas Storage Company	06/07	Southwest Gas Storage Company	Docket No. RP07-34-000	Return on Equity
Sea Robin Pipeline LLC	06/07	Sea Robin Pipeline LLC	Docket No. RP07-513-000	Return on Equity
Transwestern Pipeline Company	09/06	Transwestern Pipeline Company	Docket No. RP06-614-000	Return on Equity
GPU International and Aquila	11/00	GPU International	Docket No. EC01-24-000	Market Power Study
Florida Public Service Commission				
Florida Power & Light Company	03/16	Florida Power & Light Company	Docket No. 160021-EI	Return on Equity
Tampa Electric Company	04/13	Tampa Electric Company	Docket No. 130040-EI	Return on Equity
Georgia Public Service Commission				
Atlanta Gas Light Company	05/10	Atlanta Gas Light Company	Docket No. 31647-U	Return on Equity
Hawaii Public Utilities Commission				
Hawai'i Electric Light Company, Inc.	12/18	Hawai'i Electric Light Company, Inc.	Docket No. 2018-0368	Return on Equity
Maui Electric Company, Limited	10/17	Maui Electric Company, Limited	Docket No. 2017-0150	Return on Equity
Hawaiian Electric Company, Inc.	12/16	Hawaiian Electric Company, Inc.	Docket No. 2016-0328	Return on Equity



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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Hawai'i Electric Light Company, Inc.	09/16	Hawai'i Electric Light Company, Inc.	Docket No. 2015-0170	Return on Equity
Maui Electric Company, Limited	12/14	Maui Electric Company, Limited	Docket No. 2014-0318	Return on Equity
Hawaiian Electric Company, Inc.	06/14	Hawaiian Electric Company, Inc.	Docket No. 2013-0373	Return on Equity
Hawai'i Electric Light Company, Inc.	08/12	Hawai'i Electric Light Company, Inc.	Docket No. 2012-0099	Return on Equity
Illinois Commerce Commission				
Ameren Illinois Company d/b/a Ameren Illinois	01/18	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 18-0463	Return on Equity
Ameren Illinois Company d/b/a Ameren Illinois	01/15	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 15-0142	Return on Equity
Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	04/14	Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	Docket No. 14-0371	Return on Equity
Ameren Illinois Company d/b/a Ameren Illinois	01/13	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 13-0192	Return on Equity
Ameren Illinois Company d/b/a Ameren Illinois	02/11	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 11-0279	Return on Equity (electric)
Ameren Illinois Company d/b/a Ameren Illinois	02/11	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 11-0282	Return on Equity (gas)
Indiana Utility Regulatory Commission				
Indiana Michigan Power Company	7/17	Indiana Michigan Power Company	Cause No. 44967	Return on Equity
Duke Energy Indiana, Inc.	12/15	Duke Energy Indiana, Inc.	Cause No. 44720	Return on Equity
Duke Energy Indiana, Inc.	12/14	Duke Energy Indiana, Inc.	Cause No. 44526	Return on Equity
Northern Indiana Public Service Company	05/09	Northern Indiana Public Service Company	Cause No. 43894	Assessment of Valuation Approaches
Kansas Corporation Commission				
Empire District Electric Company	02/19	Empire District Electric Company	Docket No. 19-EPDE-223-RTS	Return on Equity
Empire District Electric Company	12/18	Empire District Electric Company	Docket No. 19-EPDE-223-RTS	Alternative Ratemaking Mechanisms
Kansas City Power & Light Company	05/18	Kansas City Power & Light Company	Docket No. 18-KCPE-480-RTS	Return on Equity
Westar Energy	02/18	Westar Energy	Docket No. 18-WSEE-328-RTS	Return on Equity



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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Great Plains Energy, Inc. and Kansas City Power & Light Company	01/17	Great Plains Energy, Inc. and Kansas City Power & Light Company	Docket No. 16-KCPE-593-ACQ	Response to Direct Testimony by Commission Staff related to the ratemaking capital structure processes
Kansas City Power & Light Company	01/15	Kansas City Power & Light Company	Docket No. 15-KCPE-116-RTS	Return on Equity
Maine Public Utilities Commission				
Northern Utilities, Inc.	05/17	Northern Utilities, Inc.	Docket No. 2017-00065	Return on Equity
Central Maine Power Company	06/11	Central Maine Power Company	Docket No. 2010-327	Response to Bench Analysis provided by Commission Staff relating to the Company's credit and collections processes
Maryland Public Service Commission				
Potomac Electric Power Company	01/19	Potomac Electric Power Company	Case No. 9602	Return on Equity
Washington Gas Light Company	05/18	Washington Gas Light Company	Case No. 9481	Return on Equity
Potomac Electric Power Company	01/18	Potomac Electric Power Company	Case No. 9472	Return on Equity
Delmarva Power & Light Company	07/17	Delmarva Power & Light Company	Case No. 9455	Return on Equity
Potomac Electric Power Company	03/17	Potomac Electric Power Company	Case No. 9443	Return on Equity
Delmarva Power & Light Company	06/16	Delmarva Power & Light Company	Case No. 9424	Return on Equity
Potomac Electric Power Company	06/16	Potomac Electric Power Company	Case No. 9418	Return on Equity
Potomac Electric Power Company	12/13	Potomac Electric Power Company	Case No. 9336	Return on Equity
Delmarva Power & Light Company	03/13	Delmarva Power & Light Company	Case No. 9317	Return on Equity
Potomac Electric Power Company	11/12	Potomac Electric Power Company	Case No. 9311	Return on Equity
Potomac Electric Power Company	12/11	Potomac Electric Power Company	Case No. 9286	Return on Equity
Delmarva Power & Light Company	12/11	Delmarva Power & Light Company	Case No. 9285	Return on Equity
Delmarva Power & Light Company	12/10	Delmarva Power & Light Company	Case No. 9249	Return on Equity
Massachusetts Department of Public Utilities				
NSTAR Electric Company d/b/a Eversource Energy; Massachusetts Electric Company & Nantucket Electric Company, d/b/a National Grid; and Fitchburg Gas and Electric Light Company, d/b/a Unitil	02/19	NSTAR Electric Company d/b/a Eversource Energy; Massachusetts Electric Company & Nantucket Electric Company, d/b/a National Grid; and Fitchburg Gas and Electric Light Company, d/b/a Unitil	DPU 18-64/DPU 18-65/DPU 18-66	Response to Direct Testimony by Attorney General Witness regarding Remuneration Rate Section 83D



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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
National Grid	11/18	Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid	DPU 18-150	Return on Equity
NSTAR Electric Company d/b/a Eversource Energy	11/18	NSTAR Electric Company d/b/a Eversource Energy	DPU 18-76/DPU 18-77/DPU 18-78	Response to Direct Testimony by Attorney General Witness regarding Remuneration Rate Section 83C
Boston Gas Company, Colonial Gas Company each d/b/a National Grid	11/17	Boston Gas Company, Colonial Gas Company each d/b/a National Grid	DPU 17-170	Return on Equity
NSTAR Electric Company Western and Massachusetts Electric Company each d/b/a Eversource Energy	01/17	NSTAR Electric Company Western Massachusetts Electric Company each d/b/a Eversource Energy	DPU 17-05	Return on Equity
National Grid	11/15	Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid	DPU 15-155	Return on Equity
Fitchburg Gas and Electric Light Company d/b/a Unitil	06/15	Fitchburg Gas and Electric Light Company d/b/a Unitil	DPU 15-80	Return on Equity
NSTAR Gas Company	12/14	NSTAR Gas Company	DPU 14-150	Return on Equity
Fitchburg Gas and Electric Light Company d/b/a Unitil	07/13	Fitchburg Gas and Electric Light Company d/b/a Unitil	DPU 13-90	Return on Equity
Bay State Gas Company d/b/a Columbia Gas of Massachusetts	04/12	Bay State Gas Company d/b/a Columbia Gas of Massachusetts	DPU 12-25	Capital Cost Recovery
National Grid	08/09	Massachusetts Electric Company d/b/a National Grid	DPU 09-39	Revenue Decoupling and Return on Equity
National Grid	08/09	Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid	DPU 09-38	Return on Equity – Solar Generation
Bay State Gas Company	04/09	Bay State Gas Company	DPU 09-30	Return on Equity
NSTAR Electric	09/04	NSTAR Electric	DTE 04-85	Divestiture of Power Purchase Agreement
NSTAR Electric	08/04	NSTAR Electric	DTE 04-78	Divestiture of Power Purchase Agreement



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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
NSTAR Electric	07/04	NSTAR Electric	DTE 04-68	Divestiture of Power Purchase Agreement
NSTAR Electric	07/04	NSTAR Electric	DTE 04-61	Divestiture of Power Purchase Agreement
NSTAR Electric	06/04	NSTAR Electric	DTE 04-60	Divestiture of Power Purchase Agreement
Unitil Corporation	01/04	Fitchburg Gas and Electric	DTE 03-52	Integrated Resource Plan; Gas Demand Forecast
Bay State Gas Company	01/93	Bay State Gas Company	DPU 93-14	Divestiture of Shelf Registration
Bay State Gas Company	01/91	Bay State Gas Company	DPU 91-25	Divestiture of Shelf Registration
Michigan Public Service Commission				
Indiana Michigan Power Company	05/17	Indiana Michigan Power Company	Case No. U-18370	Return on Equity
Minnesota Public Utilities Commission				
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	08/17	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-17-285	Return on Equity
ALLETE, Inc., d/b/a Minnesota Power Inc.	11/16	ALLETE, Inc., d/b/a Minnesota Power Inc.	Docket No. E015/GR-16-664	Return on Equity
Otter Tail Power Corporation	02/16	Otter Tail Power Company	Docket No. E017/GR-15-1033	Return on Equity
Minnesota Energy Resources Corporation	09/15	Minnesota Energy Resources Corporation	Docket No. G-011/GR-15-736	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	08/15	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-15-424	Return on Equity
Xcel Energy, Inc.	11/13	Northern States Power Company	Docket No. E002/GR-13-868	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	08/13	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-13-316	Return on Equity
Xcel Energy, Inc.	11/12	Northern States Power Company	Docket No. E002/GR-12-961	Return on Equity
Otter Tail Power Corporation	04/10	Otter Tail Power Company	Docket No. E-017/GR-10-239	Return on Equity
Minnesota Power a division of ALLETE, Inc.	11/09	Minnesota Power	Docket No. E-015/GR-09-1151	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	11/08	CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-08-1075	Return on Equity
Otter Tail Power Corporation	10/07	Otter Tail Power Company	Docket No. E-017/GR-07-1178	Return on Equity
Xcel Energy, Inc.	11/05	Northern States Power Company -Minnesota	Docket No. E-002/GR-05-1428	Return on Equity (electric)



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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Xcel Energy, Inc.	09/04	Northern States Power Company - Minnesota	Docket No. G-002/GR-04-1511	Return on Equity (gas)
Mississippi Public Service Commission				
CenterPoint Energy Resources, Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Mississippi Gas	07/09	CenterPoint Energy Mississippi Gas	Docket No. 09-UN-334	Return on Equity
Missouri Public Service Commission				
Union Electric Company d/b/a Ameren Missouri	12/18	Union Electric Company d/b/a Ameren Missouri	Case No. GR-2019-0077	Return on Equity
KCP&L Greater Missouri Operations Company	01/18	KCP&L Greater Missouri Operations Company	Case No. ER-2018-0146	Return on Equity
Kansas City Power & Light Company	01/18	Kansas City Power & Light Company	Case No. ER-2018-0145	Return on Equity
Laclede Gas Company and Missouri Gas Energy	11/17	Laclede Gas Company and Missouri Gas Energy	Case No. GR-2017-0215 Case No. GR-2017-0216	Goodwill Adjustment on Capital Structure
Liberty Utilities (Midstates Natural Gas) Corp. d/b/a/ Liberty Utilities	09/17	Liberty Utilities (Midstates Natural Gas) Corp. d/b/a/ Liberty Utilities	Case No. GR-2018-0013	New Ratemaking Mechanisms
Union Electric Company d/b/a Ameren Missouri	07/16	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2016-0179	Return on Equity (electric)
Kansas City Power & Light Company	07/16	Kansas City Power & Light Company	Case No. ER-2016-0285	Return on Equity (electric)
Kansas City Power & Light Company	02/16	Kansas City Power & Light Company	Case No. ER-2016-0156	Return on Equity (electric)
Kansas City Power & Light Company	10/14	Kansas City Power & Light Company	Case No. ER-2014-0370	Return on Equity (electric)
Union Electric Company d/b/a Ameren Missouri	07/14	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2014-0258	Return on Equity (electric)
Union Electric Company d/b/a Ameren Missouri	06/14	Union Electric Company d/b/a Ameren Missouri	Case No. EC-2014-0223	Return on Equity (electric)
Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	02/14	Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	Case No. GR-2014-0152	Return on Equity
Laclede Gas Company	12/12	Laclede Gas Company	Case No. GR-2013-0171	Return on Equity
Union Electric Company d/b/a Ameren Missouri	02/12	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2012-0166	Return on Equity (electric)
Union Electric Company d/b/a AmerenUE	09/10	Union Electric Company d/b/a AmerenUE	Case No. ER-2011-0028	Return on Equity (electric)
Union Electric Company d/b/a AmerenUE	06/10	Union Electric Company d/b/a AmerenUE	Case No. GR-2010-0363	Return on Equity (gas)



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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Montana Public Service Commission				
Northwestern Corporation	09/12	Northwestern Corporation d/b/a Northwestern Energy	Docket No. D2012.9.94	Return on Equity (gas)
Nevada Public Utilities Commission				
Southwest Gas Corporation	05/18	Southwest Gas Corporation	Docket No. 18-05031	Return on Equity (gas)
Southwest Gas Corporation	04/12	Southwest Gas Corporation	Docket No. 12-04005	Return on Equity (gas)
Nevada Power Company	06/11	Nevada Power Company	Docket No. 11-06006	Return on Equity (electric)
New Hampshire Public Utilities Commission				
Northern Utilities, Inc.	06/17	Northern Utilities, Inc.	Docket No. DG 17-070	Return on Equity
Liberty Utilities d/b/a EnergyNorth Natural Gas	04/17	Liberty Utilities d/b/a EnergyNorth Natural Gas	Docket No. DG 17-048	Return on Equity
Unitil Energy Systems, Inc.	04/16	Unitil Energy Systems, Inc.	Docket No. DE 16-384	Return on Equity
Liberty Utilities d/b/a Granite State Electric Company	04/16	Liberty Utilities d/b/a Granite State Electric Company	Docket No. DE 16-383	Return on Equity
Liberty Utilities d/b/a EnergyNorth Natural Gas	08/14	Liberty Utilities d/b/a EnergyNorth Natural Gas	Docket No. DG 14-180	Return on Equity
Liberty Utilities d/b/a Granite State Electric Company	03/13	Liberty Utilities d/b/a Granite State Electric Company	Docket No. DE 13-063	Return on Equity
EnergyNorth Natural Gas d/b/a National Grid NH	02/10	EnergyNorth Natural Gas d/b/a National Grid NH	Docket No. DG 10-017	Return on Equity
Unitil Energy Systems, Inc., EnergyNorth Natural Gas, Inc. d/b/a National Grid NH, Granite State Electric Company d/b/a National Grid, and Northern Utilities, Inc. – New Hampshire Division	08/08	Unitil Energy Systems, Inc., EnergyNorth Natural Gas, Inc. d/b/a National Grid NH, Granite State Electric Company d/b/a National Grid, and Northern Utilities, Inc. – New Hampshire Division	Docket No. DG 07-072	Carrying Charge Rate on Cash Working Capital
New Jersey Board of Public Utilities				
Atlantic City Electric Company	10/18	Atlantic City Electric Company	Docket No. EO18020196	Return on Equity
Atlantic City Electric Company	08/18	Atlantic City Electric Company	Docket No. ER18080925	Return on Equity
Atlantic City Electric Company	06/18	Atlantic City Electric Company	Docket No. ER18060638	Return on Equity
Atlantic City Electric Company	03/17	Atlantic City Electric Company	Docket No. ER17030308	Return on Equity



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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Pivotal Utility Holdings, Inc.	08/16	Elizabethtown Gas	Docket No. GR16090826	Return on Equity
The Southern Company; AGL Resources Inc.; AMS Corp. and Pivotal Holdings, Inc. d/b/a Elizabethtown Gas	04/16	The Southern Company; AGL Resources Inc.; AMS Corp. and Pivotal Holdings, Inc. d/b/a Elizabethtown Gas	BPU Docket No. GM15101196	Merger Approval
Atlantic City Electric Company	03/16	Atlantic City Electric Company	Docket No. ER16030252	Return on Equity
Pepco Holdings, Inc.	03/14	Atlantic City Electric Company	Docket No. ER14030245	Return on Equity
Orange and Rockland Utilities	11/13	Rockland Electric Company	Docket No. ER13111135	Return on Equity
Atlantic City Electric Company	12/12	Atlantic City Electric Company	Docket No. ER12121071	Return on Equity
Atlantic City Electric Company	08/11	Atlantic City Electric Company	Docket No. ER11080469	Return on Equity
Pepco Holdings, Inc.	09/06	Atlantic City Electric Company	Docket No. EM06090638	Divestiture and Valuation of Electric Generating Assets
Pepco Holdings, Inc.	12/05	Atlantic City Electric Company	Docket No. EM05121058	Market Value of Electric Generation Assets; Auction
Conectiv	06/03	Atlantic City Electric Company	Docket No. EO03020091	Market Value of Electric Generation Assets; Auction Process
New Mexico Public Regulation Commission				
Public Service Company of New Mexico	12/16	Public Service Company of New Mexico	Case No. 16-00276-UT	Return on Equity (electric)
Public Service Company of New Mexico	08/15	Public Service Company of New Mexico	Case No. 15-00261-UT	Return on Equity (electric)
Public Service Company of New Mexico	12/14	Public Service Company of New Mexico	Case No. 14-00332-UT	Return on Equity (electric)
Public Service Company of New Mexico	12/14	Public Service Company of New Mexico	Case No. 13-00390-UT	Cost of Capital and Financial Integrity
Southwestern Public Service Company	02/11	Southwestern Public Service Company	Case No. 10-00395-UT	Return on Equity (electric)
Public Service Company of New Mexico	06/10	Public Service Company of New Mexico	Case No. 10-00086-UT	Return on Equity (electric)
Public Service Company of New Mexico	09/08	Public Service Company of New Mexico	Case No. 08-00273-UT	Return on Equity (electric)
Xcel Energy, Inc.	07/07	Southwestern Public Service Company	Case No. 07-00319-UT	Return on Equity (electric)
New York State Public Service Commission				
Consolidated Edison Company of New York, Inc.	01/15	Consolidated Edison Company of New York, Inc.	Case No. 15-E-0050	Return on Equity (electric)
Orange and Rockland Utilities, Inc.	11/14	Orange and Rockland Utilities, Inc.	Case Nos. 14-E-0493 and 14-G-0494	Return on Equity (electric and gas)



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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Consolidated Edison Company of New York, Inc.	01/13	Consolidated Edison Company of New York, Inc.	Case No. 13-E-0030	Return on Equity (electric)
Niagara Mohawk Corporation d/b/a National Grid for Electric Service	04/12	Niagara Mohawk Corporation d/b/a National Grid for Electric Service	Case No. 12-E-0201	Return on Equity (electric)
Niagara Mohawk Corporation d/b/a National Grid for Gas Service	04/12	Niagara Mohawk Corporation d/b/a National Grid for Gas Service	Case No. 12-G-0202	Return on Equity (gas)
Orange and Rockland Utilities, Inc.	07/11	Orange and Rockland Utilities, Inc.	Case No. 11-E-0408	Return on Equity (electric)
Orange and Rockland Utilities, Inc.	07/10	Orange and Rockland Utilities, Inc.	Case No. 10-E-0362	Return on Equity (electric)
Consolidated Edison Company of New York, Inc.	11/09	Consolidated Edison Company of New York, Inc.	Case No. 09-G-0795	Return on Equity (gas)
Consolidated Edison Company of New York, Inc.	11/09	Consolidated Edison Company of New York, Inc.	Case No. 09-S-0794	Return on Equity (steam)
Niagara Mohawk Power Corporation	07/01	Niagara Mohawk Power Corporation	Case No. 01-E-1046	Power Purchase and Sale Agreement; Standard Offer Service Agreement
North Carolina Utilities Commission				
Piedmont Natural Gas Company, Inc.	04/19	Piedmont Natural Gas Company, Inc.	Docket No. G-9, Sub 743	Return on Equity
Virginia Electric and Power Company d/b/a Dominion North Carolina Power	03/19	Virginia Electric and Power Company d/b/a Dominion North Carolina Power	Docket No. E-22, Sub 562	Return on Equity
Duke Energy Carolinas, LLC	08/17	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1146	Return on Equity
Duke Energy Progress, LLC	06/17	Duke Energy Progress, LLC	Docket No. E-2, Sub 1142	Return on Equity
Public Service Company of North Carolina, Inc.	03/16	Public Service Company of North Carolina, Inc.	Docket No. G-5, Sub 565	Return on Equity
Dominion North Carolina Power	03/16	Dominion North Carolina Power	Docket No. E-22, Sub 532	Return on Equity
Duke Energy Carolinas, LLC	02/13	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1026	Return on Equity
Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.	10/12	Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.	Docket No. E-2, Sub 1023	Return on Equity
Virginia Electric and Power Company d/b/a Dominion North Carolina Power	03/12	Virginia Electric and Power Company d/b/a Dominion North Carolina Power	Docket No. E-22, Sub 479	Return on Equity
Duke Energy Carolinas, LLC	07/11	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 989	Return on Equity



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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
North Dakota Public Service Commission				
Otter Tail Power Company	11/17	Otter Tail Power Company	Docket No. 17-398	Return on Equity (electric)
Otter Tail Power Company	11/08	Otter Tail Power Company	Docket No. 08-862	Return on Equity (electric)
Oklahoma Corporation Commission				
CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	03/16	CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	Cause No. PUD201600094	Return on Equity
Oklahoma Gas & Electric Company	12/15	Oklahoma Gas & Electric Company	Cause No. PUD201500273	Return on Equity
Public Service Company of Oklahoma	07/15	Public Service Company of Oklahoma	Cause No. PUD201500208	Return on Equity
Oklahoma Gas & Electric Company	07/11	Oklahoma Gas & Electric Company	Cause No. PUD201100087	Return on Equity
CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	03/09	CenterPoint Energy Oklahoma Gas	Cause No. PUD200900055	Return on Equity
Pennsylvania Public Utility Commission				
Pike County Light & Power Company	01/14	Pike County Light & Power Company	Docket No. R-2013-2397237	Return on Equity (electric & gas)
Veolia Energy Philadelphia, Inc.	12/13	Veolia Energy Philadelphia, Inc.	Docket No. R-2013-2386293	Return on Equity (steam)
Rhode Island Public Utilities Commission				
The Narragansett Electric Company d/b/a National Grid	02/19	The Narragansett Electric Company d/b/a National Grid	Docket No. 4929	Support for financial remuneration under new power purchase agreement
The Narragansett Electric Company d/b/a National Grid	11/17	The Narragansett Electric Company d/b/a National Grid	Docket No. 4770	Return on Equity (electric & gas)
The Narragansett Electric Company d/b/a National Grid	04/12	The Narragansett Electric Company d/b/a National Grid	Docket No. 4323	Return on Equity (electric & gas)
National Grid RI – Gas	08/08	National Grid RI – Gas	Docket No. 3943	Revenue Decoupling and Return on Equity
South Carolina Public Service Commission				
Duke Energy Carolinas, LLC	11/18	Duke Energy Carolinas, LLC	Docket No. 2018-319-E	Return on Equity
Duke Energy Progress, LLC	11/18	Duke Energy Progress, LLC	Docket No. 2018-318-E	Return on Equity
South Carolina Electric & Gas	08/18	South Carolina Electric & Gas	Docket No. 2017-370-E	Return on Equity
South Carolina Electric & Gas	12/17	South Carolina Electric & Gas	Docket No. 2017-305-E	Return on Equity
Duke Energy Progress, LLC	07/16	Duke Energy Progress, LLC	Docket No. 2016-227-E	Return on Equity



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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Duke Energy Carolinas, LLC	03/13	Duke Energy Carolinas, LLC	Docket No. 2013-59-E	Return on Equity
South Carolina Electric & Gas	06/12	South Carolina Electric & Gas	Docket No. 2012-218-E	Return on Equity
Duke Energy Carolinas, LLC	08/11	Duke Energy Carolinas, LLC	Docket No. 2011-271-E	Return on Equity
South Carolina Electric & Gas	03/10	South Carolina Electric & Gas	Docket No. 2009-489-E	Return on Equity
South Dakota Public Utilities Commission				
Otter Tail Power Company	04/18	Otter Tail Power Company	Docket No. EL18-021	Return on Equity (electric)
Otter Tail Power Company	08/10	Otter Tail Power Company	Docket No. EL10-011	Return on Equity (electric)
Northern States Power Company	06/09	South Dakota Division of Northern States Power	Docket No. EL09-009	Return on Equity (electric)
Otter Tail Power Company	10/08	Otter Tail Power Company	Docket No. EL08-030	Return on Equity (electric)
Texas Public Utility Commission				
CenterPoint Energy Houston Electric LLC	04/19	CenterPoint Energy Houston Electric LLC	Docket No. 49421	Return on Equity
Texas-New Mexico Power Company	05/18	Texas-New Mexico Power Company	Docket No. 48401	Return on Equity
Entergy Texas, Inc.	05/18	Entergy Texas, Inc.	Docket No. 48371	Return on Equity
Southwestern Public Service Company	08/17	Southwestern Public Service Company	Docket No. 47527	Return on Equity
Oncor Electric Delivery Company, LLC	03/17	Oncor Electric Delivery Company, LLC	Docket No. 46957	Return on Equity
El Paso Electric Company	02/17	El Paso Electric Company	Docket No. 46831	Return on Equity
Southwestern Electric Power Company	12/16	Southwestern Electric Power Company	Docket No. 46449	Return on Equity (electric)
Sharyland Utilities, L.P.	04/16	Sharyland Utilities, L.P.	Docket No. 45414	Return on Equity
Southwestern Public Service Company	02/16	Southwestern Public Service Company	Docket No. 44524	Return on Equity (electric)
Wind Energy Transmission Texas, LLC	05/15	Wind Energy Transmission Texas, LLC	Docket No. 44746	Return on Equity
Cross Texas Transmission	12/14	Cross Texas Transmission	Docket No. 43950	Return on Equity
Southwestern Public Service Company	12/14	Southwestern Public Service Company	Docket No. 43695	Return on Equity (electric)
Sharyland Utilities, L.P.	05/13	Sharyland Utilities, L.P.	Docket No. 41474	Return on Equity
Wind Energy Texas Transmission, LLC	08/12	Wind Energy Texas Transmission, LLC	Docket No. 40606	Return on Equity
Southwestern Electric Power Company	07/12	Southwestern Electric Power Company	Docket No. 40443	Return on Equity
Oncor Electric Delivery Company, LLC	01/11	Oncor Electric Delivery Company, LLC	Docket No. 38929	Return on Equity
Texas-New Mexico Power Company	08/10	Texas-New Mexico Power Company	Docket No. 38480	Return on Equity (electric)
CenterPoint Energy Houston Electric LLC	06/10	CenterPoint Energy Houston Electric LLC	Docket No. 38339	Return on Equity



Testimony Listing of:
Robert B. Hevert, Partner
Rates, Regulation and Planning Practice Leader

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Xcel Energy, Inc.	05/10	Southwestern Public Service Company	Docket No. 38147	Return on Equity (electric)
Texas-New Mexico Power Company	08/08	Texas-New Mexico Power Company	Docket No. 36025	Return on Equity (electric)
Xcel Energy, Inc.	05/06	Southwestern Public Service Company	Docket No. 32766	Return on Equity (electric)
Texas Railroad Commission				
Atmos Energy Corporation – Mid-Tex Division	10/18	Atmos Energy Corporation – Mid-Tex Division	GUD 10779	Return on Equity
Atmos Energy Corporation – West Texas Division	06/18	Atmos Energy Corporation – West Texas Division	GUD 10743	Return on Equity
Atmos Energy Corporation – Mid-Texas Division	06/18	Atmos Energy Corporation – Mid-Texas Division	GUD 10742	Return on Equity
CenterPoint Energy Resources Corp. D/B/A CenterPoint Energy Entex And CenterPoint Energy Texas Gas	11/17	CenterPoint Energy Resources Corp. D/B/A CenterPoint Energy Entex And CenterPoint Energy Texas Gas	GUD 10669	Return on Equity
Atmos Pipeline - Texas	01/17	Atmos Pipeline - Texas	GUD 10580	Return on Equity
CenterPoint Energy Resources Corp. D/B/A CenterPoint Energy Entex And CenterPoint Energy Texas Gas	12/16	CenterPoint Energy Resources Corp. D/B/A CenterPoint Energy Entex And CenterPoint Energy Texas Gas	GUD 10567	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	03/15	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10432	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	07/12	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10182	Return on Equity
Atmos Energy Corporation – West Texas Division	06/12	Atmos Energy Corporation – West Texas Division	GUD 10174	Return on Equity
Atmos Energy Corporation – Mid-Texas Division	06/12	Atmos Energy Corporation – Mid-Texas Division	GUD 10170	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	12/10	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10038	Return on Equity
Atmos Pipeline – Texas	09/10	Atmos Pipeline - Texas	GUD 10000	Return on Equity



Testimony Listing of:
Robert B. Hevert, Partner
Rates, Regulation and Planning Practice Leader

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	07/09	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 9902	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Texas Gas	03/08	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Texas Gas	GUD 9791	Return on Equity
Utah Public Service Commission				
Questar Gas Company	12/07	Questar Gas Company	Docket No. 07-057-13	Return on Equity
Vermont Public Service Board				
Central Vermont Public Service Corporation; Green Mountain Power	02/12	Central Vermont Public Service Corporation; Green Mountain Power	Docket No. 7770	Merger Policy
Central Vermont Public Service Corporation	12/10	Central Vermont Public Service Corporation	Docket No. 7627	Return on Equity (electric)
Green Mountain Power	04/06	Green Mountain Power	Docket Nos. 7175 and 7176	Return on Equity (electric)
Vermont Gas Systems, Inc.	12/05	Vermont Gas Systems	Docket Nos. 7109 and 7160	Return on Equity (gas)
Virginia State Corporation Commission				
Virginia Electric and Power Company	03/19	Virginia Electric and Power Company	Case No. PUR-2019-00050	Return on Equity
Virginia Electric and Power Company	03/17	Virginia Electric and Power Company	Case No. PUR-2017-00038	Return on Equity
Virginia Natural Gas, Inc.	03/17	Virginia Natural Gas, Inc.	Case No. PUE-2016-00143	Return on Equity
Virginia Electric and Power Company	10/16	Virginia Electric and Power Company	Case No. PUE-2016-00112; PUE-2016-00113; PUE-2016-00136	Return on Equity
Washington Gas Light Company	06/16	Washington Gas Light Company	Case No. PUE-2016-00001	Return on Equity
Virginia Electric and Power Company	06/16	Virginia Electric and Power Company	Case Nos. PUE-2016-00063; PUE-2016-00062; PUE-2016-00061; PUE-2016-00060; PUE-2016-00059	Return on Equity
Virginia Electric and Power Company	12/15	Virginia Electric and Power Company	Case Nos. PUE-2015-00058; PUE-2015-00059; PUE-2015-00060; PUE-2015-00061; PUE-2015-00075; PUE-2015-00089; PUE-2015-00102; PUE-2015-00104	Return on Equity
Virginia Electric and Power Company	03/15	Virginia Electric and Power Company	Case No. PUE-2015-00027	Return on Equity
Virginia Electric and Power Company	03/13	Virginia Electric and Power Company	Case No. PUE-2013-00020	Return on Equity



Testimony Listing of:
Robert B. Hevert, Partner
Rates, Regulation and Planning Practice Leader

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Virginia Natural Gas, Inc.	02/11	Virginia Natural Gas, Inc.	Case No. PUE-2010-00142	Capital Structure
Columbia Gas of Virginia, Inc.	06/06	Columbia Gas of Virginia, Inc.	Case No. PUE-2005-00098	Merger Synergies
Dominion Resources	10/01	Virginia Electric and Power Company	Case No. PUE000584	Corporate Structure and Electric Generation Strategy

Expert Reports

United States District Court, District of South Carolina, Columbia Division				
South Carolina Electric & Gas Company	07/18	South Carolina Electric & Gas Company	Case No. 3:18-CV-01795-JMC	Return on Equity
United States District Court, Western District of Texas, Austin Division				
Southwestern Public Service Company	02/12	Southwestern Public Service Company	C.A. No. A-09-CA-917-SS	PURPA and FERC regulations
American Arbitration Association				
Confidential Client	11/14	Confidential Client	Confidential	Economic harm related to failure to perform

Retention Growth Estimate

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]
		Projected Earnings per share 2021-2023	Projected Dividend Declared per share 2021-23	Retention Ratio (B)	Projected Book Value per Share 2021-23	Return on Book Value (R)	B x R	Projected Common Shares Outstanding 2019	Projected Common Shares Outstanding 2021-23	Common Shares Growth Rate	2018 High Price	2018 Low Price	2018 price midpoint	Projected Book Value per Share 2018	Market/Book Ratio	"S"	"V"	S x V	BR + SV
Company	Ticker																		
Atmos Energy Corporation	ATO	5.15	2.60	49.51%	46.55	11.06%	5.48%	116.00	130.00	3.83%	\$ 99.80	\$ 76.50	\$ 88.15	42.85	2.06	7.88%	51.39%	4.05%	9.53%
Chesapeake Utilities Corporation	CPK	4.50	2.00	55.56%	45.50	9.89%	5.49%	17.50	20.00	4.51%	\$ 93.10	\$ 66.40	\$ 79.75	31.80	2.51	11.30%	60.13%	6.79%	12.29%
New Jersey Resources Corporation	NJR	2.95	1.24	57.97%	22.70	13.00%	7.53%	86.50	86.50	0.00%	\$ 50.40	\$ 35.60	\$ 43.00	15.95	2.70	0.00%	62.91%	0.00%	7.53%
Northwest Natural Gas Company	NWN	3.50	2.20	37.14%	29.40	11.90%	4.42%	30.00	32.00	2.15%	\$ 71.80	\$ 51.50	\$ 61.65	26.30	2.34	5.05%	57.34%	2.89%	7.32%
ONE Gas, Inc.	OGS	4.75	2.50	47.37%	43.40	10.94%	5.18%	53.00	55.00	1.23%	\$ 85.30	\$ 62.20	\$ 73.75	38.85	1.90	2.33%	47.32%	1.10%	6.29%
Southwest Gas Corporation	SWX	5.40	2.60	51.85%	54.55	9.90%	5.13%	51.00	55.00	2.52%	\$ 86.00	\$ 62.50	\$ 74.25	40.40	1.84	4.64%	45.59%	2.11%	7.25%
Spire Inc.	SR	5.00	3.00	40.00%	51.00	9.80%	3.92%	52.00	55.00	1.87%	\$ 80.80	\$ 60.10	\$ 70.45	44.51	1.58	2.96%	36.82%	1.09%	5.01%
Average:																		7.89%	

Notes:

- [1] Source: Value Line
 [2] Source: Value Line
 [3] Equals 1 - [2] / [1]
 [4] Source: Value Line
 [5] Equals [1] / [4]
 [6] Equals [3] x [5]
 [7] Source: Value Line
 [8] Source: Value Line
 [9] Equals ([8] / [7]) ^ 0.33 - 1
 [10] Source: Value Line
 [11] Source: Value Line
 [12] Equals Average ([10], [11])
 [13] Source: Value Line
 [14] Equals [12] / [13]
 [15] Equals [9] x [14]
 [16] Equals 1 - (1 / [14])
 [17] Equals [15] x [16]
 [18] Equals [6] + [17]

Constant Growth Discounted Cash Flow Model
30 Day Average Stock Price

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Retention Growth Estimate	Average Earnings Growth	Low ROE	Mean ROE	High ROE
Atmos Energy Corporation	ATO	\$2.10	\$93.27	2.25%	2.34%	6.50%	6.45%	7.50%	9.53%	7.49%	8.77%	9.83%	11.89%
Chesapeake Utilities Corporation	CPK	\$1.48	\$84.37	1.75%	1.83%	6.00%	6.00%	8.50%	12.29%	8.20%	7.81%	10.02%	14.15%
New Jersey Resources Corporation	NJR	\$1.17	\$46.09	2.54%	2.63%	7.00%	6.00%	9.50%	7.53%	7.51%	8.61%	10.14%	12.16%
Northwest Natural Gas Company	NWN	\$1.90	\$60.49	3.14%	3.32%	4.30%	4.00%	30.50%	7.32%	11.53%	7.20%	14.85%	34.12%
ONE Gas, Inc.	OGS	\$2.00	\$79.77	2.51%	2.60%	5.90%	5.50%	10.50%	6.29%	7.05%	8.08%	9.64%	13.14%
Southwest Gas Corporation	SWX	\$2.08	\$77.00	2.70%	2.79%	5.00%	6.20%	9.00%	7.25%	6.86%	7.77%	9.66%	11.82%
Spire Inc.	SR	\$2.37	\$75.12	3.15%	3.23%	4.00%	2.70%	6.50%	5.01%	4.55%	5.90%	7.78%	9.76%
Proxy Group Mean				2.58%	2.68%	5.53%	5.26%	11.71%	7.89%	7.60%	7.73%	10.27%	15.29%
Proxy Group Median				2.54%	2.63%	5.90%	6.00%	9.00%	7.32%	7.49%	7.81%	9.83%	12.16%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, equals indicated number of trading day average as of January 31, 2019

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [9])

[5] Source: Zacks

[6] Source: Yahoo! Finance

[7] Source: Value Line

[8] Source: Exhibit (RBH)-3, Schedule 4, Value Line

[9] Equals Average([5], [6], [7], [8])

[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])

[11] Equals [4] + [9]

[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8])

Constant Growth Discounted Cash Flow Model
90 Day Average Stock Price

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Retention Growth Estimate	Average Earnings Growth	Low ROE	Mean ROE	High ROE
Atmos Energy Corporation	ATO	\$2.10	\$94.96	2.21%	2.29%	6.50%	6.45%	7.50%	9.53%	7.49%	8.73%	9.79%	11.85%
Chesapeake Utilities Corporation	CPK	\$1.48	\$84.04	1.76%	1.83%	6.00%	6.00%	8.50%	12.29%	8.20%	7.81%	10.03%	14.16%
New Jersey Resources Corporation	NJR	\$1.17	\$46.79	2.50%	2.59%	7.00%	6.00%	9.50%	7.53%	7.51%	8.58%	10.10%	12.12%
Northwest Natural Gas Company	NWN	\$1.90	\$65.33	2.91%	3.08%	4.30%	4.00%	30.50%	7.32%	11.53%	6.97%	14.60%	33.85%
ONE Gas, Inc.	OGS	\$2.00	\$81.74	2.45%	2.53%	5.90%	5.50%	10.50%	6.29%	7.05%	8.01%	9.58%	13.08%
Southwest Gas Corporation	SWX	\$2.08	\$79.34	2.62%	2.71%	5.00%	6.20%	9.00%	7.25%	6.86%	7.69%	9.57%	11.74%
Spire Inc.	SR	\$2.37	\$75.43	3.14%	3.21%	4.00%	2.70%	6.50%	5.01%	4.55%	5.88%	7.77%	9.74%
Proxy Group Mean				2.51%	2.61%	5.53%	5.26%	11.71%	7.89%	7.60%	7.67%	10.21%	15.22%
Proxy Group Median				2.50%	2.59%	5.90%	6.00%	9.00%	7.32%	7.49%	7.81%	9.79%	12.12%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, equals indicated number of trading day average as of January 31, 2019

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [9])

[5] Source: Zacks

[6] Source: Yahoo! Finance

[7] Source: Value Line

[8] Source: Exhibit (RBH)-3, Schedule 4, Value Line

[9] Equals Average([5], [6], [7], [8])

[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])

[11] Equals [4] + [9]

[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8])

Constant Growth Discounted Cash Flow Model
180 Day Average Stock Price

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Retention Growth Estimate	Average Earnings Growth	Low ROE	Mean ROE	High ROE
Atmos Energy Corporation	ATO	\$2.10	\$92.68	2.27%	2.35%	6.50%	6.45%	7.50%	9.53%	7.49%	8.79%	9.85%	11.90%
Chesapeake Utilities Corporation	CPK	\$1.48	\$83.20	1.78%	1.85%	6.00%	6.00%	8.50%	12.29%	8.20%	7.83%	10.05%	14.18%
New Jersey Resources Corporation	NJR	\$1.17	\$45.92	2.55%	2.64%	7.00%	6.00%	9.50%	7.53%	7.51%	8.62%	10.15%	12.17%
Northwest Natural Gas Company	NWN	\$1.90	\$64.28	2.96%	3.13%	4.30%	4.00%	30.50%	7.32%	11.53%	7.02%	14.66%	33.91%
ONE Gas, Inc.	OGS	\$2.00	\$78.88	2.54%	2.62%	5.90%	5.50%	10.50%	6.29%	7.05%	8.11%	9.67%	13.17%
Southwest Gas Corporation	SWX	\$2.08	\$78.39	2.65%	2.74%	5.00%	6.20%	9.00%	7.25%	6.86%	7.72%	9.61%	11.77%
Spire Inc.	SR	\$2.37	\$73.89	3.21%	3.28%	4.00%	2.70%	6.50%	5.01%	4.55%	5.95%	7.83%	9.81%
Proxy Group Mean				2.56%	2.66%	5.53%	5.26%	11.71%	7.89%	7.60%	7.72%	10.26%	15.27%
Proxy Group Median				2.55%	2.64%	5.90%	6.00%	9.00%	7.32%	7.49%	7.83%	9.85%	12.17%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, equals indicated number of trading day average as of January 31, 2019

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [9])

[5] Source: Zacks

[6] Source: Yahoo! Finance

[7] Source: Value Line

[8] Source: Exhibit (RBH)-3, Schedule 4, Value Line

[9] Equals Average([5], [6], [7], [8])

[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])

[11] Equals [4] + [9]

[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8])

Ex-Ante Market Risk Premium
Market DCF Method Based - Bloomberg

[1]	[2]	[3]
S&P 500	Current 30-Year	
Est. Required	Treasury (30-day	Implied Market
Market Return	average)	Risk Premium
14.70%	3.03%	11.66%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
Agilent Technologies Inc	A	24,224.44	0.10%	0.89%	9.50%	10.43%	0.0105%
American Airlines Group Inc	AAL	16,475.00	0.07%	1.14%	15.20%	16.42%	0.0113%
Advance Auto Parts Inc	AAP	11,604.68	0.05%	0.15%	17.37%	17.53%	0.0085%
Apple Inc	AAPL	784,811.20	3.27%	1.76%	9.40%	11.25%	0.3677%
AbbVie Inc	ABBV	120,773.53	0.50%	5.38%	8.81%	14.43%	0.0726%
AmerisourceBergen Corp	ABC	17,598.56	0.07%	1.93%	8.92%	10.94%	0.0080%
ABIOMED Inc	ABMD	15,818.53	N/A	0.00%	N/A	N/A	N/A
Abbott Laboratories	ABT	128,177.18	0.53%	1.68%	11.69%	13.46%	0.0719%
Accenture PLC	ACN	98,027.58	0.41%	1.91%	10.27%	12.27%	0.0501%
Adobe Inc	ADBE	120,868.24	0.50%	0.00%	16.75%	16.75%	0.0844%
Analog Devices Inc	ADI	36,508.98	0.15%	2.00%	8.43%	10.52%	0.0160%
Archer-Daniels-Midland Co	ADM	25,172.93	0.10%	2.98%	11.10%	14.24%	0.0149%
Automatic Data Processing Inc	ADP	60,918.45	0.25%	2.07%	14.00%	16.22%	0.0412%
Alliance Data Systems Corp	ADS	9,673.95	0.04%	1.28%	12.18%	13.54%	0.0055%
Autodesk Inc	ADSK	32,238.10	0.13%	0.00%	54.78%	54.78%	0.0736%
Ameren Corp	AEE	16,921.73	0.07%	2.68%	8.30%	11.10%	0.0078%
American Electric Power Co Inc	AEP	39,014.77	0.16%	3.40%	5.96%	9.46%	0.0154%
AES Corp/VA	AES	10,855.06	0.05%	3.17%	8.66%	11.97%	0.0054%
Aflac Inc	AFL	36,313.02	0.15%	2.35%	9.28%	11.73%	0.0178%
Allergan PLC	AGN	48,562.43	0.20%	2.06%	7.11%	9.24%	0.0187%
American International Group Inc	AIG	38,243.35	0.16%	2.99%	11.00%	14.15%	0.0225%
Apartment Investment & Management Co	AIV	7,707.50	0.03%	3.07%	-2.64%	0.39%	0.0001%
Assurant Inc	AIZ	5,981.38	N/A	2.45%	N/A	N/A	N/A
Arthur J Gallagher & Co	AJG	13,720.64	0.06%	2.27%	10.91%	13.31%	0.0076%
Akamai Technologies Inc	AKAM	10,602.58	0.04%	0.00%	16.57%	16.57%	0.0073%
Albemarle Corp	ALB	8,574.00	0.04%	1.66%	9.81%	11.55%	0.0041%
Align Technology Inc	ALGN	19,912.11	0.08%	0.00%	23.19%	23.19%	0.0192%
Alaska Air Group Inc	ALK	7,882.41	0.03%	2.09%	5.60%	7.75%	0.0025%
Allstate Corp/The	ALL	30,266.14	0.13%	2.09%	9.00%	11.19%	0.0141%
Allegion PLC	ALLE	8,161.49	0.03%	0.98%	11.97%	13.01%	0.0044%
Alexion Pharmaceuticals Inc	ALXN	27,431.96	0.11%	0.00%	16.41%	16.41%	0.0188%
Applied Materials Inc	AMAT	37,276.71	0.16%	2.20%	7.34%	9.62%	0.0149%
Advanced Micro Devices Inc	AMD	24,395.53	0.10%	0.00%	15.67%	15.67%	0.0159%
AMETEK Inc	AME	16,921.25	0.07%	0.77%	10.44%	11.25%	0.0079%
Affiliated Managers Group Inc	AMG	5,528.02	0.02%	1.14%	2.88%	4.03%	0.0009%
Amgen Inc	AMGN	117,879.30	0.49%	3.03%	6.16%	9.28%	0.0456%
Ameriprise Financial Inc	AMP	17,255.58	0.07%	3.02%	11.80%	14.99%	0.0108%
American Tower Corp	AMT	76,133.92	0.32%	1.82%	15.19%	17.14%	0.0544%
Amazon.com Inc	AMZN	840,405.05	3.50%	0.00%	49.33%	49.33%	1.7274%
Arista Networks Inc	ANET	16,200.28	0.07%	0.00%	27.64%	27.64%	0.0187%
ANSYS Inc	ANSS	13,733.09	0.06%	0.00%	12.40%	12.40%	0.0071%
Anthem Inc	ANTM	78,368.55	0.33%	1.02%	11.14%	12.21%	0.0399%
Aon PLC	AON	37,627.08	0.16%	1.00%	11.70%	12.76%	0.0200%
AO Smith Corp	AOS	8,133.85	0.03%	1.80%	9.33%	11.22%	0.0038%
Apache Corp	APA	12,456.62	0.05%	3.04%	-3.09%	-0.09%	0.0000%
Anadarko Petroleum Corp	APC	23,867.62	0.10%	1.97%	21.38%	23.56%	0.0234%
Air Products & Chemicals Inc	APD	36,105.17	0.15%	2.78%	12.30%	15.25%	0.0229%
Amphenol Corp	APH	26,492.68	0.11%	1.02%	9.75%	10.83%	0.0120%
Aptiv PLC	APTIV	20,848.56	0.09%	1.24%	10.39%	11.70%	0.0102%
Alexandria Real Estate Equities Inc	ARE	14,162.33	0.06%	2.82%	5.64%	8.54%	0.0050%
Arconic Inc	ARNC	9,094.62	0.04%	1.29%	11.60%	12.96%	0.0049%
Activision Blizzard Inc	ATVI	36,046.52	0.15%	0.74%	10.89%	11.66%	0.0175%
AvalonBay Communities Inc	AVB	26,665.90	0.11%	3.04%	5.99%	9.12%	0.0101%
Broadcom Inc	AVGO	109,250.42	0.46%	3.65%	14.32%	18.23%	0.0830%
Avery Dennison Corp	AVY	9,056.89	0.04%	2.02%	5.75%	7.83%	0.0030%
American Water Works Co Inc	AWK	17,277.89	0.07%	1.83%	8.45%	10.36%	0.0075%
American Express Co	AXP	86,986.90	0.36%	1.57%	14.99%	16.68%	0.0604%
AutoZone Inc	AZO	21,357.31	0.09%	0.00%	12.80%	12.80%	0.0114%
Boeing Co/The	BA	218,987.96	0.91%	2.05%	16.70%	18.92%	0.1727%
Bank of America Corp	BAC	275,284.58	1.15%	2.41%	9.70%	12.23%	0.1403%
Baxter International Inc	BAX	38,574.90	0.16%	1.14%	12.40%	13.62%	0.0219%
BB&T Corp	BBT	37,250.31	0.16%	3.51%	10.93%	14.63%	0.0227%
Best Buy Co Inc	BBY	15,941.58	0.07%	3.04%	11.10%	14.31%	0.0095%
Becton Dickinson and Co	BDX	67,217.54	0.28%	1.30%	13.29%	14.67%	0.0411%
Franklin Resources Inc	BEN	15,086.60	0.06%	3.44%	10.00%	13.61%	0.0086%
Brown-Forman Corp	BF/B	22,499.17	0.09%	1.39%	9.86%	11.32%	0.0106%
Brighthouse Financial Inc	BHF	4,428.57	0.02%	0.00%	8.64%	8.64%	0.0016%
Baker Hughes a GE Co	BHGE	24,393.50	0.10%	2.79%	43.79%	47.19%	0.0480%
Biogen Inc	BIIB	67,250.86	0.28%	0.00%	5.81%	5.81%	0.0163%
Bank of New York Mellon Corp/The	BK	50,249.49	0.21%	2.31%	7.33%	9.72%	0.0204%

Company	Ticker	[4]	[5]	[6]	[7]	[8]	[9]
		Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Booking Holdings Inc	BKNG	84,913.33	0.35%	0.00%	15.78%	15.78%	0.0558%
BlackRock Inc	BLK	65,864.45	0.27%	3.20%	9.25%	12.60%	0.0346%
Ball Corp	BLL	17,732.99	0.07%	0.81%	5.63%	6.46%	0.0048%
Bristol-Myers Squibb Co	BMJ	80,594.78	0.34%	3.33%	12.78%	16.33%	0.0548%
Broadridge Financial Solutions Inc	BR	11,771.95	0.05%	1.88%	10.00%	11.97%	0.0059%
Berkshire Hathaway Inc	BRK/B	508,485.30	2.12%	0.00%	-5.60%	-5.60%	-0.1186%
Boston Scientific Corp	BSX	52,792.00	0.22%	0.00%	38.58%	38.58%	0.0848%
BorgWarner Inc	BWA	8,518.35	0.04%	1.66%	6.02%	7.73%	0.0027%
Boston Properties Inc	BXP	20,368.44	0.08%	2.91%	6.45%	9.45%	0.0080%
Citigroup Inc	C	157,420.14	0.66%	3.02%	11.07%	14.26%	0.0935%
Conagra Brands Inc	CAG	10,509.29	0.04%	3.89%	8.50%	12.55%	0.0055%
Cardinal Health Inc	CAH	14,888.13	0.06%	3.92%	18.34%	22.62%	0.0140%
Caterpillar Inc	CAT	78,578.61	0.33%	2.63%	13.35%	16.16%	0.0529%
Chubb Ltd	CB	61,310.15	0.26%	2.18%	10.00%	12.29%	0.0314%
Cboe Global Markets Inc	CBOE	10,465.07	0.04%	1.24%	13.10%	14.43%	0.0063%
CBRE Group Inc	CBRE	15,595.27	0.06%	0.00%	11.00%	11.00%	0.0071%
CBS Corp	CBS	18,507.26	0.08%	1.53%	16.37%	18.02%	0.0139%
Crown Castle International Corp	CCI	48,579.90	0.20%	3.91%	18.23%	22.50%	0.0455%
Carnival Corp	CCL	39,655.24	0.17%	3.56%	11.76%	15.52%	0.0256%
Cadence Design Systems Inc	CDNS	13,551.28	0.06%	0.00%	10.90%	10.90%	0.0062%
Celanese Corp	CE	12,808.66	0.05%	2.46%	7.05%	9.59%	0.0051%
Celgene Corp	CELG	61,943.12	0.26%	0.00%	20.70%	20.70%	0.0534%
Cerner Corp	CERN	18,092.20	0.08%	0.00%	12.47%	12.47%	0.0094%
CF Industries Holdings Inc	CF	10,074.05	0.04%	2.75%	16.65%	19.63%	0.0082%
Citizens Financial Group Inc	CFG	15,806.99	0.07%	3.97%	16.69%	20.99%	0.0138%
Church & Dwight Co Inc	CHD	15,909.10	0.07%	1.35%	9.07%	10.49%	0.0070%
CH Robinson Worldwide Inc	CHRW	11,931.26	0.05%	2.32%	10.60%	13.04%	0.0065%
Charter Communications Inc	CHTR	83,147.70	0.35%	0.00%	47.90%	47.90%	0.1659%
Cigna Corp	CI	76,083.21	0.32%	0.02%	18.35%	18.37%	0.0582%
Cincinnati Financial Corp	CINF	13,201.28	N/A	2.61%	N/A	N/A	N/A
Colgate-Palmolive Co	CL	56,098.25	0.23%	2.69%	6.69%	9.47%	0.0221%
Clorox Co/The	CLX	18,941.02	0.08%	2.62%	4.95%	7.63%	0.0060%
Comerica Inc	CMA	12,598.40	0.05%	3.31%	16.41%	19.99%	0.0105%
Comcast Corp	CMCSA	166,375.39	0.69%	2.29%	11.34%	13.76%	0.0954%
CME Group Inc	CME	65,212.64	0.27%	2.91%	13.78%	16.89%	0.0459%
Chipotle Mexican Grill Inc	CMG	14,716.43	0.06%	0.00%	21.66%	21.66%	0.0133%
Cummins Inc	CMI	23,620.17	0.10%	3.01%	10.64%	13.81%	0.0136%
CMS Energy Corp	CMS	14,772.90	0.06%	2.93%	6.93%	9.96%	0.0061%
Centene Corp	CNC	26,921.44	0.11%	0.00%	17.51%	17.51%	0.0196%
CenterPoint Energy Inc	CNP	15,496.76	0.06%	3.63%	6.90%	10.65%	0.0069%
Capital One Financial Corp	COF	37,691.94	0.16%	2.05%	4.54%	6.63%	0.0104%
Cabot Oil & Gas Corp	COG	10,757.94	0.04%	1.02%	33.27%	34.45%	0.0154%
Cooper Cos Inc/The	COO	13,723.93	0.06%	0.02%	10.50%	10.52%	0.0060%
ConocoPhillips	COP	77,927.56	0.32%	1.83%	6.00%	7.88%	0.0256%
Costco Wholesale Corp	COST	94,542.47	0.39%	1.10%	10.58%	11.73%	0.0462%
Coty Inc	COTY	5,828.34	0.02%	6.44%	8.78%	15.50%	0.0038%
Campbell Soup Co	CPB	10,665.46	0.04%	4.01%	3.05%	7.11%	0.0032%
Capri Holdings Ltd	CPRI	6,381.88	0.03%	0.00%	6.27%	6.27%	0.0017%
Copart Inc	CPRT	11,848.20	0.05%	0.00%	10.00%	10.00%	0.0049%
salesforce.com Inc	CRM	116,257.05	0.48%	0.00%	23.98%	23.98%	0.1162%
Cisco Systems Inc	CSCO	212,614.03	0.89%	2.93%	5.74%	8.75%	0.0775%
CSX Corp	CSX	55,478.42	0.23%	1.40%	10.47%	11.94%	0.0276%
Cintas Corp	CTAS	19,603.03	0.08%	1.07%	12.11%	13.25%	0.0108%
CenturyLink Inc	CTL	16,555.70	0.07%	14.10%	-21.81%	-9.25%	-0.0064%
Cognizant Technology Solutions Corp	CTSH	40,346.67	0.17%	1.00%	13.20%	14.27%	0.0240%
Citrix Systems Inc	CTXS	13,818.47	0.06%	0.00%	11.85%	11.85%	0.0068%
CVS Health Corp	CVS	84,762.36	0.35%	3.04%	11.30%	14.52%	0.0513%
Chevron Corp	CVX	219,070.28	0.91%	3.92%	7.17%	11.22%	0.1024%
Concho Resources Inc	CXO	23,997.98	0.10%	0.00%	31.00%	31.00%	0.0310%
Dominion Energy Inc	D	56,758.64	0.24%	4.75%	6.03%	10.93%	0.0258%
Delta Air Lines Inc	DAL	33,890.13	0.14%	2.92%	13.07%	16.18%	0.0228%
Deere & Co	DE	52,460.43	0.22%	1.77%	10.83%	12.70%	0.0278%
Discover Financial Services	DFS	22,339.19	0.09%	2.44%	8.80%	11.34%	0.0106%
Dollar General Corp	DG	30,344.74	0.13%	1.00%	15.00%	16.07%	0.0203%
Quest Diagnostics Inc	DGX	11,885.90	0.05%	2.23%	7.98%	10.30%	0.0051%
DR Horton Inc	DHI	14,358.12	0.06%	1.57%	11.80%	13.46%	0.0081%
Danaher Corp	DHR	77,266.87	0.32%	0.60%	10.95%	11.58%	0.0373%
Walt Disney Co/The	DIS	166,240.50	0.69%	1.61%	12.98%	14.70%	0.1018%
Discovery Inc	DISCA	19,886.09	0.08%	0.00%	12.30%	12.30%	0.0102%
DISH Network Corp	DISH	14,343.56	0.06%	0.00%	-20.68%	-20.68%	-0.0124%
Digital Realty Trust Inc	DLR	23,252.21	0.10%	3.73%	17.99%	22.05%	0.0214%
Dollar Tree Inc	DLTR	23,042.63	0.10%	0.00%	9.96%	9.96%	0.0096%
Dover Corp	DOV	12,852.40	0.05%	2.26%	11.70%	14.09%	0.0075%
Duke Realty Corp	DRE	10,477.26	0.04%	2.94%	4.81%	7.83%	0.0034%
Darden Restaurants Inc	DRI	12,959.81	0.05%	2.86%	10.31%	13.32%	0.0072%
DTE Energy Co	DTE	21,421.67	0.09%	3.02%	5.87%	8.98%	0.0080%
Duke Energy Corp	DUK	62,587.14	0.26%	4.13%	5.00%	9.24%	0.0241%
DaVita Inc	DVA	9,317.58	0.04%	0.00%	18.34%	18.34%	0.0071%
Devon Energy Corp	DVN	12,477.53	0.05%	1.09%	10.92%	12.07%	0.0063%
DowDuPont Inc	DWDP	123,453.26	0.51%	3.02%	6.17%	9.28%	0.0477%
DXC Technology Co	DXC	17,960.89	0.07%	1.19%	6.44%	7.67%	0.0057%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
Electronic Arts Inc	EA	27,868.35	0.12%	3.37%	12.63%	16.22%	0.0188%
eBay Inc	EBAY	30,785.73	0.13%	0.21%	10.71%	10.93%	0.0140%
Ecolab Inc	ECL	45,691.05	0.19%	1.04%	13.00%	14.11%	0.0269%
Consolidated Edison Inc	ED	25,245.01	0.11%	3.69%	3.73%	7.48%	0.0079%
Equifax Inc	EFX	12,903.94	0.05%	1.46%	6.60%	8.11%	0.0044%
Edison International	EIX	18,561.46	0.08%	4.26%	5.84%	10.23%	0.0079%
Estee Lauder Cos Inc/The	EL	49,500.34	0.21%	1.21%	11.52%	12.80%	0.0264%
Eastman Chemical Co	EMN	11,290.19	0.05%	2.94%	7.40%	10.45%	0.0049%
Emerson Electric Co	EMR	40,795.79	0.17%	3.00%	8.93%	12.06%	0.0205%
EOG Resources Inc	EOG	57,526.38	0.24%	0.81%	11.06%	11.91%	0.0286%
Equinix Inc	EQIX	31,673.86	0.13%	2.31%	19.40%	21.94%	0.0289%
Equity Residential	EQR	26,804.04	0.11%	3.08%	6.31%	9.49%	0.0106%
Eversource Energy	ES	21,995.04	0.09%	2.92%	5.62%	8.62%	0.0079%
Essex Property Trust Inc	ESS	17,916.85	0.07%	2.88%	6.15%	9.11%	0.0068%
E*TRADE Financial Corp	ETFC	11,501.46	0.05%	1.07%	12.08%	13.21%	0.0063%
Eaton Corp PLC	ETN	33,046.75	0.14%	3.75%	9.58%	13.51%	0.0186%
Entergy Corp	ETR	16,156.07	0.07%	4.03%	-0.73%	3.28%	0.0022%
Evergy Inc	EVRG	15,101.25	0.06%	2.86%	8.22%	11.20%	0.0070%
Edwards Lifesciences Corp	EW	35,626.18	0.15%	0.00%	14.00%	14.00%	0.0208%
Exelon Corp	EXC	46,131.70	0.19%	2.89%	4.94%	7.90%	0.0152%
Expeditors International of Washington I	EXPD	11,960.49	0.05%	1.28%	9.60%	10.94%	0.0055%
Expedia Group Inc	EXPE	17,765.20	0.07%	0.97%	17.20%	18.26%	0.0135%
Extra Space Storage Inc	EXR	12,475.68	0.05%	3.39%	5.34%	8.82%	0.0046%
Ford Motor Co	F	35,005.55	0.15%	6.55%	-4.80%	1.59%	0.0023%
Diamondback Energy Inc	FANG	16,920.47	0.07%	0.46%	15.26%	15.76%	0.0111%
Fastenal Co	FAST	17,285.63	0.07%	2.82%	14.85%	17.88%	0.0129%
Facebook Inc	FB	479,734.71	2.00%	0.00%	21.88%	21.88%	0.4374%
Fortune Brands Home & Security Inc	FBHS	6,405.64	0.03%	1.85%	11.16%	13.12%	0.0035%
Freepoint-McMoRan Inc	FCX	16,866.75	0.07%	1.93%	-12.55%	-10.74%	-0.0075%
FedEx Corp	FDX	46,353.52	0.19%	1.45%	14.30%	15.85%	0.0306%
FirstEnergy Corp	FE	20,048.66	0.08%	3.67%	-0.02%	3.66%	0.0031%
F5 Networks Inc	FFIV	9,658.36	0.04%	0.00%	9.39%	9.39%	0.0038%
Fidelity National Information Services I	FIS	34,232.35	0.14%	1.21%	12.00%	13.29%	0.0190%
Fiserv Inc	FISV	33,045.18	0.14%	0.00%	7.40%	7.40%	0.0102%
Fifth Third Bancorp	FITB	17,342.64	0.07%	3.61%	3.95%	7.63%	0.0055%
Foot Locker Inc	FL	6,309.43	0.03%	2.44%	6.24%	8.76%	0.0023%
FLIR Systems Inc	FLIR	6,762.45	N/A	1.24%	N/A	N/A	N/A
Fluor Corp	FLR	5,144.24	0.02%	2.30%	19.23%	21.75%	0.0047%
Flowservice Corp	FLS	5,762.94	0.02%	1.75%	20.07%	21.99%	0.0053%
FleetCor Technologies Inc	FLT	17,890.15	0.07%	0.00%	16.50%	16.50%	0.0123%
FMC Corp	FMC	10,745.70	0.04%	0.87%	17.07%	18.01%	0.0081%
Twenty-First Century Fox Inc	FOXA	91,294.75	0.38%	0.82%	9.22%	10.07%	0.0383%
First Republic Bank/CA	FRC	16,103.51	0.07%	0.79%	11.82%	12.65%	0.0085%
Federal Realty Investment Trust	FRT	9,792.04	0.04%	3.06%	4.25%	7.38%	0.0030%
TechnipFMC PLC	FTI	10,362.36	0.04%	2.32%	5.58%	7.96%	0.0034%
Fortinet Inc	FTNT	13,045.25	0.05%	0.00%	19.22%	19.22%	0.0104%
Fortive Corp	FTV	25,043.88	0.10%	0.38%	12.69%	13.09%	0.0137%
General Dynamics Corp	GD	50,691.95	0.21%	2.31%	10.09%	12.52%	0.0264%
General Electric Co	GE	88,372.85	0.37%	0.39%	1.60%	2.00%	0.0074%
Gilead Sciences Inc	GILD	90,566.31	0.38%	3.26%	5.45%	8.80%	0.0332%
General Mills Inc	GIS	26,519.52	0.11%	4.44%	5.90%	10.47%	0.0116%
Corning Inc	GLW	26,621.27	0.11%	2.40%	10.39%	12.92%	0.0143%
General Motors Co	GM	55,072.97	0.23%	3.91%	11.08%	15.21%	0.0349%
Alphabet Inc	GOOGL	779,466.73	3.25%	0.00%	17.82%	17.82%	0.5789%
Genuine Parts Co	GPC	14,649.51	0.06%	2.86%	5.62%	8.56%	0.0052%
Global Payments Inc	GPN	17,764.12	0.07%	0.04%	14.67%	14.71%	0.0109%
Gap Inc/The	GPS	9,703.68	0.04%	3.81%	8.63%	12.60%	0.0051%
Garmin Ltd	GRMN	13,061.81	0.05%	3.04%	6.03%	9.15%	0.0050%
Goldman Sachs Group Inc/The	GS	76,545.75	0.32%	1.72%	7.27%	9.04%	0.0288%
Goodyear Tire & Rubber Co/The	GT	4,937.27	N/A	2.56%	N/A	N/A	N/A
WW Grainger Inc	GWW	16,636.50	0.07%	1.93%	12.47%	14.52%	0.0101%
Halliburton Co	HAL	27,472.81	0.11%	2.22%	30.08%	32.63%	0.0374%
Hasbro Inc	HAS	11,456.52	0.05%	2.77%	9.73%	12.63%	0.0060%
Huntington Bancshares Inc/OH	HBAN	13,859.20	0.06%	4.47%	8.20%	12.86%	0.0074%
Hanesbrands Inc	HBI	5,407.38	0.02%	4.00%	1.83%	5.86%	0.0013%
HCA Healthcare Inc	HCA	47,986.30	0.20%	0.94%	13.72%	14.72%	0.0294%
HCP Inc	HCP	15,059.86	0.06%	4.69%	2.29%	7.04%	0.0044%
Home Depot Inc/The	HD	207,302.23	0.86%	2.25%	13.01%	15.40%	0.1330%
Hess Corp	HES	15,997.67	0.07%	1.88%	-9.49%	-7.70%	-0.0051%
HollyFrontier Corp	HFC	9,762.18	0.04%	2.36%	7.07%	9.51%	0.0039%
Hartford Financial Services Group Inc/Th	HIG	16,831.84	0.07%	2.34%	9.50%	11.96%	0.0084%
Huntington Ingalls Industries Inc	HII	8,867.91	0.04%	1.43%	40.00%	41.72%	0.0154%
Hilton Worldwide Holdings Inc	HLT	22,088.53	0.09%	0.81%	9.53%	10.38%	0.0096%
Harley-Davidson Inc	HOG	6,002.02	0.03%	4.13%	8.97%	13.28%	0.0033%
Hologic Inc	HOLX	12,934.38	0.05%	0.00%	3.10%	3.10%	0.0017%
Honeywell International Inc	HON	106,327.61	0.44%	2.30%	13.55%	16.01%	0.0709%
Helmerich & Payne Inc	HP	6,125.60	0.03%	5.08%	87.01%	94.30%	0.0241%
Hewlett Packard Enterprise Co	HPE	21,805.40	0.09%	3.00%	4.86%	7.92%	0.0072%
HP Inc	HPQ	34,223.48	0.14%	2.88%	6.06%	9.02%	0.0129%
H&R Block Inc	HRB	4,848.40	0.02%	4.25%	10.00%	14.46%	0.0029%
Hormel Foods Corp	HRL	22,624.09	0.09%	1.97%	5.80%	7.83%	0.0074%

Company	Ticker	[4]	[5]	[6]	[7]	[8]	[9]
		Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Harris Corp	HRS	18,049.17	0.08%	1.76%	7.00%	8.82%	0.0066%
Henry Schein Inc	HSIC	11,844.41	0.05%	0.00%	9.57%	9.57%	0.0047%
Host Hotels & Resorts Inc	HST	13,401.65	0.06%	4.61%	4.57%	9.28%	0.0052%
Hershey Co/The	HSY	22,260.61	0.09%	2.77%	7.28%	10.15%	0.0094%
Humana Inc	HUM	42,389.37	0.18%	0.65%	14.26%	14.96%	0.0264%
International Business Machines Corp	IBM	122,160.06	0.51%	4.83%	3.59%	8.50%	0.0433%
Intercontinental Exchange Inc	ICE	43,721.26	0.18%	1.25%	11.57%	12.89%	0.0235%
IDEXX Laboratories Inc	IDXX	18,348.80	0.08%	0.00%	16.33%	16.33%	0.0125%
International Flavors & Fragrances Inc	IFF	15,116.47	0.06%	1.98%	9.00%	11.07%	0.0070%
Illumina Inc	ILMN	41,661.26	0.17%	0.00%	25.16%	25.16%	0.0437%
Incyte Corp	INCY	17,150.21	0.07%	0.00%	57.27%	57.27%	0.0409%
IHS Markit Ltd	INFO	20,630.93	0.09%	0.00%	11.21%	11.21%	0.0096%
Intel Corp	INTC	215,055.68	0.90%	2.68%	8.54%	11.33%	0.1016%
Intuit Inc	INTU	56,012.90	0.23%	0.86%	15.87%	16.80%	0.0392%
International Paper Co	IP	19,210.50	0.08%	4.24%	8.25%	12.67%	0.0101%
Interpublic Group of Cos Inc/The	IPG	8,744.00	0.04%	3.71%	8.53%	12.39%	0.0045%
IPG Photonics Corp	IPGP	7,102.22	0.03%	0.00%	9.24%	9.24%	0.0027%
IQVIA Holdings Inc	IQV	25,549.94	0.11%	0.00%	15.23%	15.23%	0.0162%
Ingersoll-Rand PLC	IR	24,575.45	0.10%	2.18%	11.49%	13.79%	0.0141%
Iron Mountain Inc	IRM	10,647.37	0.04%	6.35%	7.16%	13.74%	0.0061%
Intuitive Surgical Inc	ISRG	59,799.83	0.25%	0.00%	12.95%	12.95%	0.0323%
Gartner Inc	IT	12,341.26	0.05%	0.00%	14.47%	14.47%	0.0074%
Illinois Tool Works Inc	ITW	45,559.66	0.19%	2.50%	9.51%	12.13%	0.0230%
Invesco Ltd	IVZ	7,494.54	0.03%	6.84%	1.84%	8.74%	0.0027%
JB Hunt Transport Services Inc	JBHT	11,686.23	0.05%	0.95%	18.78%	19.81%	0.0096%
Johnson Controls International plc	JCI	30,807.63	0.13%	3.22%	6.90%	10.23%	0.0131%
Jacobs Engineering Group Inc	JEC	9,223.33	0.04%	0.96%	13.25%	14.27%	0.0055%
Jefferies Financial Group Inc	JEF	6,723.15	N/A	2.40%	N/A	N/A	N/A
Jack Henry & Associates Inc	JKHY	10,323.19	0.04%	1.11%	11.00%	12.17%	0.0052%
Johnson & Johnson	JNJ	356,917.63	1.49%	2.86%	7.26%	10.23%	0.1521%
Juniper Networks Inc	JNPR	8,953.31	0.04%	2.90%	8.07%	11.09%	0.0041%
JPMorgan Chase & Co	JPM	344,180.01	1.43%	3.26%	9.33%	12.75%	0.1828%
Nordstrom Inc	JWN	7,765.50	0.03%	3.23%	9.00%	12.38%	0.0040%
Kellogg Co	K	20,477.72	0.09%	3.73%	4.91%	8.74%	0.0075%
KeyCorp	KEY	16,791.21	0.07%	4.49%	13.17%	17.96%	0.0126%
Keysight Technologies Inc	KEYS	13,889.24	0.06%	0.00%	17.00%	17.00%	0.0098%
Kraft Heinz Co/The	KHC	58,606.04	0.24%	5.26%	3.82%	9.18%	0.0224%
Kimco Realty Corp	KIM	7,167.82	0.03%	6.64%	3.54%	10.29%	0.0031%
KLA-Tencor Corp	KLAC	16,130.86	0.07%	2.80%	7.15%	10.05%	0.0068%
Kimberly-Clark Corp	KMB	38,571.00	0.16%	3.69%	6.34%	10.14%	0.0163%
Kinder Morgan Inc/DE	KMI	39,947.03	0.17%	5.51%	10.00%	15.78%	0.0263%
CarMax Inc	KMX	9,997.72	0.04%	0.00%	12.92%	12.92%	0.0054%
Coca-Cola Co/The	KO	204,866.01	0.85%	3.23%	7.49%	10.84%	0.0925%
Kroger Co/The	KR	22,600.06	0.09%	1.92%	6.43%	8.42%	0.0079%
Kohl's Corp	KSS	11,342.74	0.05%	3.55%	16.00%	19.84%	0.0094%
Kansas City Southern	KSU	10,674.57	0.04%	1.44%	8.97%	10.47%	0.0047%
Loews Corp	L	15,049.73	N/A	0.52%	N/A	N/A	N/A
L Brands Inc	LB	7,659.48	0.03%	8.64%	10.72%	19.82%	0.0063%
Leggett & Platt Inc	LEG	5,341.91	0.02%	3.64%	10.00%	13.82%	0.0031%
Lennar Corp	LEN	15,022.45	0.06%	0.34%	12.74%	13.10%	0.0082%
Laboratory Corp of America Holdings	LH	14,060.42	0.06%	0.00%	8.78%	8.78%	0.0051%
Linde PLC	LIN	89,013.89	0.37%	1.86%	18.10%	20.13%	0.0747%
LKQ Corp	LKQ	8,343.27	0.03%	0.00%	13.85%	13.85%	0.0048%
L3 Technologies Inc	LLL	15,493.97	0.06%	1.68%	10.49%	12.26%	0.0079%
Eli Lilly & Co	LLY	126,970.37	0.53%	1.88%	12.86%	14.86%	0.0786%
Lockheed Martin Corp	LMT	82,395.28	0.34%	3.08%	9.15%	12.37%	0.0425%
Lincoln National Corp	LNC	12,493.74	N/A	2.33%	N/A	N/A	N/A
Alliant Energy Corp	LNT	10,869.20	0.05%	3.01%	6.49%	9.60%	0.0043%
Lowe's Cos Inc	LOW	77,212.35	0.32%	1.88%	15.17%	17.18%	0.0553%
Lam Research Corp	LRCX	25,876.80	0.11%	2.41%	-0.42%	1.99%	0.0022%
Southwest Airlines Co	LUV	31,916.52	0.13%	1.23%	10.67%	11.97%	0.0159%
Lamb Weston Holdings Inc	LW	10,591.37	0.04%	1.09%	11.02%	12.17%	0.0054%
LyondellBasell Industries NV	LYB	33,366.71	0.14%	4.61%	8.20%	12.99%	0.0181%
Macy's Inc	M	8,086.39	0.03%	5.83%	0.60%	6.45%	0.0022%
Mastercard Inc	MA	217,675.03	0.91%	0.54%	16.68%	17.27%	0.1566%
Mid-America Apartment Communities Inc	MAA	11,529.49	N/A	3.80%	N/A	N/A	N/A
Macerich Co/The	MAC	6,510.91	0.03%	6.48%	2.58%	9.15%	0.0025%
Marriott International Inc/MD	MAR	39,069.65	0.16%	1.36%	12.10%	13.54%	0.0220%
Masco Corp	MAS	9,901.20	0.04%	1.34%	15.46%	16.90%	0.0070%
Mattel Inc	MAT	4,086.59	0.02%	0.00%	10.00%	10.00%	0.0017%
McDonald's Corp	MCD	137,823.33	0.57%	2.61%	8.92%	11.65%	0.0669%
Microchip Technology Inc	MCHP	19,008.28	0.08%	1.82%	12.03%	13.95%	0.0110%
McKesson Corp	MCK	24,601.59	0.10%	1.15%	7.94%	9.14%	0.0094%
Moody's Corp	MCO	30,370.52	0.13%	1.12%	12.80%	14.00%	0.0177%
Mondelez International Inc	MDLZ	67,254.43	0.28%	2.25%	7.33%	9.66%	0.0271%
Medtronic PLC	MDT	118,711.78	0.49%	2.24%	7.94%	10.27%	0.0508%
MetLife Inc	MET	45,068.90	0.19%	3.63%	13.36%	17.24%	0.0324%
MGM Resorts International	MGM	15,805.44	0.07%	1.63%	2.26%	3.91%	0.0026%
Mohawk Industries Inc	MHK	9,556.08	0.04%	0.00%	4.95%	4.95%	0.0020%
McCormick & Co Inc/MD	MKC	16,338.33	0.07%	1.84%	6.10%	8.00%	0.0054%
Martin Marietta Materials Inc	MLM	11,079.97	0.05%	1.04%	12.23%	13.33%	0.0062%

Company	Ticker	[4]	[5]	[6]	[7]	[8]	[9]
		Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Marsh & McLennan Cos Inc	MMC	44,422.02	0.19%	1.97%	11.80%	13.89%	0.0257%
3M Co	MMM	116,632.11	0.49%	2.86%	7.70%	10.67%	0.0519%
Monster Beverage Corp	MNST	31,651.63	0.13%	0.00%	15.40%	15.40%	0.0203%
Altria Group Inc	MO	92,484.74	0.39%	6.62%	8.50%	15.40%	0.0593%
Mosaic Co/The	MOS	12,442.97	0.05%	0.31%	7.00%	7.32%	0.0038%
Marathon Petroleum Corp	MPC	45,775.95	0.19%	2.81%	16.14%	19.18%	0.0366%
Merck & Co Inc	MRK	193,546.02	0.81%	2.60%	8.60%	11.31%	0.0912%
Marathon Oil Corp	MRO	13,125.85	0.05%	1.27%	5.00%	6.30%	0.0034%
Morgan Stanley	MS	71,910.00	0.30%	3.08%	13.50%	16.79%	0.0503%
MSCI Inc	MSCI	14,336.73	0.06%	1.29%	13.10%	14.47%	0.0086%
Microsoft Corp	MSFT	801,209.25	3.34%	1.71%	12.16%	13.98%	0.4667%
Motorola Solutions Inc	MSI	19,118.04	0.08%	1.81%	6.30%	8.16%	0.0065%
M&T Bank Corp	MTB	23,094.46	0.10%	2.61%	10.45%	13.19%	0.0127%
Mettler-Toledo International Inc	MTD	15,982.74	0.07%	0.00%	13.01%	13.01%	0.0087%
Micron Technology Inc	MU	42,846.41	0.18%	0.37%	-3.30%	-2.93%	-0.0052%
Maxim Integrated Products Inc	MXIM	15,036.20	0.06%	3.39%	8.93%	12.47%	0.0078%
Mylan NV	MYL	15,443.16	0.06%	0.00%	6.67%	6.67%	0.0043%
Noble Energy Inc	NBL	10,718.71	0.04%	1.90%	25.55%	27.70%	0.0124%
Norwegian Cruise Line Holdings Ltd	NCLH	11,313.37	0.05%	0.00%	19.54%	19.54%	0.0092%
Nasdaq Inc	NDAQ	14,434.78	0.06%	2.11%	8.16%	10.35%	0.0062%
NextEra Energy Inc	NEE	85,542.64	0.36%	2.78%	8.40%	11.30%	0.0403%
Newmont Mining Corp	NEM	18,235.71	0.08%	1.62%	-3.00%	-1.40%	-0.0011%
Netflix Inc	NFLX	148,225.22	0.62%	0.00%	36.80%	36.80%	0.2273%
Newfield Exploration Co	NFX	3,673.06	0.02%	0.00%	17.71%	17.71%	0.0027%
NiSource Inc	NI	10,147.16	0.04%	2.82%	5.79%	8.69%	0.0037%
NIKE Inc	NKE	128,862.54	0.54%	1.03%	13.35%	14.46%	0.0776%
Nektar Therapeutics	NKTR	7,328.43	N/A	0.00%	N/A	N/A	N/A
Nielsen Holdings PLC	NLSN	9,121.73	N/A	5.40%	N/A	N/A	N/A
Northrop Grumman Corp	NOC	46,771.17	0.19%	1.88%	12.71%	14.71%	0.0287%
National Oilwell Varco Inc	NOV	11,301.65	0.05%	0.64%	86.26%	87.17%	0.0410%
NRG Energy Inc	NRG	11,861.04	0.05%	0.29%	46.03%	46.39%	0.0229%
Norfolk Southern Corp	NSC	44,970.84	0.19%	1.99%	8.64%	10.71%	0.0201%
NetApp Inc	NTAP	16,062.77	0.07%	2.51%	19.39%	22.15%	0.0148%
Northern Trust Corp	NTRS	19,584.63	0.08%	2.75%	12.82%	15.74%	0.0128%
Nucor Corp	NUE	19,225.23	0.08%	2.58%	0.85%	3.44%	0.0028%
NVIDIA Corp	NVDA	87,687.50	0.37%	0.43%	10.57%	11.02%	0.0402%
Newell Brands Inc	NWL	9,900.83	0.04%	4.34%	1.98%	6.36%	0.0026%
News Corp	NWSA	7,523.53	0.03%	1.59%	18.80%	20.54%	0.0064%
Realty Income Corp	O	20,271.54	0.08%	3.83%	6.59%	10.55%	0.0089%
ONEOK Inc	OKE	26,413.52	0.11%	5.10%	23.23%	28.93%	0.0318%
Omnicom Group Inc	OMC	17,453.35	0.07%	3.10%	6.64%	9.84%	0.0072%
Oracle Corp	ORCL	180,271.40	0.75%	1.52%	7.35%	8.92%	0.0670%
O'Reilly Automotive Inc	ORLY	27,608.76	0.12%	0.00%	15.51%	15.51%	0.0178%
Occidental Petroleum Corp	OXY	50,420.63	0.21%	4.64%	13.85%	18.81%	0.0395%
Paychex Inc	PAYX	25,423.66	0.11%	3.22%	9.25%	12.62%	0.0134%
People's United Financial Inc	PBCT	6,183.70	0.03%	4.36%	2.00%	6.40%	0.0016%
PACCAR Inc	PCAR	22,709.23	0.09%	4.14%	6.10%	10.37%	0.0098%
Public Service Enterprise Group Inc	PEG	27,572.28	0.11%	3.30%	6.64%	10.04%	0.0115%
PepsiCo Inc	PEP	159,041.37	0.66%	3.16%	6.68%	9.94%	0.0659%
Pfizer Inc	PFE	245,381.15	1.02%	3.39%	5.45%	8.94%	0.0914%
Principal Financial Group Inc	PFG	14,172.24	0.06%	4.47%	5.88%	10.48%	0.0062%
Procter & Gamble Co/The	PG	241,327.39	1.01%	3.01%	5.70%	8.79%	0.0884%
Progressive Corp/The	PGR	39,243.53	0.16%	2.16%	9.80%	12.06%	0.0197%
Parker-Hannifin Corp	PH	21,812.41	0.09%	1.82%	9.52%	11.42%	0.0104%
PulteGroup Inc	PHM	7,707.32	0.03%	1.57%	7.17%	8.80%	0.0028%
Packaging Corp of America	PKG	8,912.99	0.04%	3.26%	8.25%	11.64%	0.0043%
PerkinElmer Inc	PKI	10,067.15	0.04%	0.32%	15.49%	15.83%	0.0066%
Prologis Inc	PLD	43,537.23	0.18%	2.93%	6.85%	9.88%	0.0179%
Philip Morris International Inc	PM	119,263.07	0.50%	5.84%	8.77%	14.86%	0.0738%
PNC Financial Services Group Inc/The	PNC	56,060.19	0.23%	3.34%	7.37%	10.83%	0.0253%
Pentair PLC	PNR	7,150.63	0.03%	1.93%	10.22%	12.25%	0.0037%
Pinnacle West Capital Corp	PNW	9,876.47	0.04%	3.22%	4.99%	8.29%	0.0034%
PPG Industries Inc	PPG	25,293.46	0.11%	1.84%	7.49%	9.40%	0.0099%
PPL Corp	PPL	22,541.07	0.09%	5.24%	6.17%	11.56%	0.0109%
Perrigo Co PLC	PRGO	6,310.54	0.03%	1.59%	1.17%	2.76%	0.0007%
Prudential Financial Inc	PRU	38,053.82	0.16%	3.91%	9.00%	13.08%	0.0207%
Public Storage	PSA	37,055.94	0.15%	3.77%	4.45%	8.30%	0.0128%
Phillips 66	PSX	43,995.97	0.18%	2.44%	5.70%	8.21%	0.0150%
PVH Corp	PVH	8,263.47	0.03%	0.14%	11.03%	11.18%	0.0038%
Quanta Services Inc	PWR	5,177.90	0.02%	0.00%	25.00%	25.00%	0.0054%
Pioneer Natural Resources Co	PXD	24,260.16	0.10%	0.19%	28.80%	29.02%	0.0293%
PayPal Holdings Inc	PYPL	104,204.24	0.43%	0.00%	22.12%	22.12%	0.0961%
QUALCOMM Inc	QCOM	59,934.34	0.25%	5.10%	11.71%	17.10%	0.0427%
Qorvo Inc	QRVO	8,163.79	0.03%	0.00%	11.42%	11.42%	0.0039%
Royal Caribbean Cruises Ltd	RCL	25,092.48	0.10%	2.30%	13.52%	15.97%	0.0167%
Everest Re Group Ltd	RE	8,903.94	0.04%	2.40%	10.00%	12.52%	0.0046%
Regency Centers Corp	REG	11,024.58	0.05%	3.42%	6.04%	9.56%	0.0044%
Regeneron Pharmaceuticals Inc	REGN	46,461.85	0.19%	0.00%	13.78%	13.78%	0.0267%
Regions Financial Corp	RF	15,683.81	0.07%	3.99%	14.52%	18.80%	0.0123%
Robert Half International Inc	RHI	7,826.64	0.03%	1.89%	13.20%	15.21%	0.0050%
Red Hat Inc	RHT	31,435.08	0.13%	0.00%	18.40%	18.40%	0.0241%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
Raymond James Financial Inc	RJF	11,318.30	0.05%	1.61%	12.30%	14.01%	0.0066%
Ralph Lauren Corp	RL	9,342.09	0.04%	2.10%	6.69%	8.86%	0.0034%
ResMed Inc	RMD	13,561.70	0.06%	1.58%	12.50%	14.17%	0.0080%
Rockwell Automation Inc	ROK	20,265.09	0.08%	2.29%	8.42%	10.81%	0.0091%
Rollins Inc	ROL	12,189.34	0.05%	2.11%	10.00%	12.21%	0.0062%
Roper Technologies Inc	ROP	29,297.82	0.12%	0.57%	9.20%	9.80%	0.0120%
Ross Stores Inc	ROST	34,138.64	0.14%	0.98%	10.50%	11.53%	0.0164%
Republic Services Inc	RSG	24,897.81	0.10%	1.85%	11.85%	13.81%	0.0143%
Raytheon Co	RTN	46,886.91	0.20%	2.25%	13.54%	15.94%	0.0311%
SBA Communications Corp	SBAC	20,684.56	0.09%	0.00%	45.90%	45.90%	0.0396%
Starbucks Corp	SBUX	84,738.90	0.35%	2.19%	13.12%	15.45%	0.0546%
Charles Schwab Corp/The	SCHW	63,160.68	0.26%	1.27%	19.78%	21.18%	0.0557%
Sealed Air Corp	SEE	6,198.54	0.03%	1.65%	3.82%	5.50%	0.0014%
Sherwin-Williams Co/The	SHW	39,465.37	0.16%	0.99%	10.92%	11.97%	0.0197%
SVB Financial Group	SIVB	12,272.64	0.05%	0.01%	8.88%	8.89%	0.0045%
JM Smucker Co/The	SJM	11,930.95	0.05%	3.20%	3.41%	6.66%	0.0033%
Schlumberger Ltd	SLB	61,140.85	0.25%	4.55%	33.69%	39.00%	0.0994%
SL Green Realty Corp	SLG	7,829.46	0.03%	3.70%	-0.59%	3.10%	0.0010%
Snap-on Inc	SNA	9,242.62	0.04%	2.06%	8.23%	10.37%	0.0040%
Synopsys Inc	SNPS	13,957.23	0.06%	0.00%	15.20%	15.20%	0.0088%
Southern Co/The	SO	49,287.01	0.21%	4.91%	3.38%	8.37%	0.0172%
Simon Property Group Inc	SPG	56,330.52	0.23%	4.36%	5.20%	9.67%	0.0227%
S&P Global Inc	SPGI	48,084.99	0.20%	1.04%	12.10%	13.21%	0.0265%
Sempra Energy	SRE	32,012.77	0.13%	3.06%	9.96%	13.17%	0.0176%
SunTrust Banks Inc	STI	26,554.08	0.11%	3.58%	9.18%	12.93%	0.0143%
State Street Corp	STT	26,938.22	0.11%	2.85%	8.69%	11.67%	0.0131%
Seagate Technology PLC	STX	12,673.00	0.05%	5.74%	3.59%	9.43%	0.0050%
Constellation Brands Inc	STZ	32,900.56	0.14%	1.70%	8.64%	10.41%	0.0143%
Stanley Black & Decker Inc	SWK	19,100.04	0.08%	2.12%	10.50%	12.73%	0.0101%
Skyworks Solutions Inc	SWKS	12,713.33	0.05%	2.14%	8.42%	10.65%	0.0056%
Synchrony Financial	SYF	21,592.75	0.09%	3.01%	6.20%	9.30%	0.0084%
Stryker Corp	SYK	66,444.44	0.28%	1.27%	8.64%	9.96%	0.0276%
Symantec Corp	SYMC	13,429.43	0.06%	1.46%	8.50%	10.02%	0.0056%
Sysco Corp	SYU	33,188.44	0.14%	2.35%	11.32%	13.81%	0.0191%
AT&T Inc	T	218,896.92	0.91%	6.81%	4.85%	11.82%	0.1078%
Molson Coors Brewing Co	TAP	14,426.30	0.06%	2.50%	0.00%	2.50%	0.0015%
TransDigm Group Inc	TDG	20,662.42	0.09%	0.00%	14.04%	14.04%	0.0121%
TE Connectivity Ltd	TEL	27,430.27	0.11%	2.19%	10.13%	12.43%	0.0142%
Teleflex Inc	TFX	12,576.11	0.05%	0.50%	12.95%	13.48%	0.0071%
Target Corp	TGT	38,093.85	0.16%	3.53%	6.44%	10.08%	0.0160%
Tiffany & Co	TIF	10,815.94	0.05%	2.41%	12.54%	15.11%	0.0068%
TJX Cos Inc/The	TJX	61,324.31	0.26%	1.53%	11.18%	12.79%	0.0327%
Torchmark Corp	TMK	9,342.62	0.04%	0.76%	13.70%	14.52%	0.0057%
Thermo Fisher Scientific Inc	TMO	98,900.94	0.41%	0.29%	11.00%	11.31%	0.0466%
Tapestry Inc	TPR	11,218.00	0.05%	3.53%	10.33%	14.04%	0.0066%
TripAdvisor Inc	TRIP	7,899.30	0.03%	0.00%	17.25%	17.25%	0.0057%
T Rowe Price Group Inc	TROW	22,252.83	0.09%	3.20%	6.11%	9.41%	0.0087%
Travelers Cos Inc/The	TRV	33,092.34	0.14%	2.57%	17.65%	20.45%	0.0282%
Tractor Supply Co	TSCO	10,424.61	0.04%	1.58%	12.76%	14.44%	0.0063%
Tyson Foods Inc	TSN	22,640.43	0.09%	2.34%	-5.00%	-2.71%	-0.0026%
Total System Services Inc	TSS	16,348.58	0.07%	0.59%	14.15%	14.79%	0.0101%
Take-Two Interactive Software Inc	TTWO	12,019.20	0.05%	1.91%	12.30%	14.33%	0.0072%
Twitter Inc	TWTR	25,547.56	0.11%	0.00%	56.40%	56.40%	0.0600%
Texas Instruments Inc	TXN	96,707.49	0.40%	3.12%	10.48%	13.76%	0.0554%
Textron Inc	TXT	12,932.84	0.05%	0.16%	12.56%	12.73%	0.0069%
Under Armour Inc	UA	8,860.77	0.04%	0.00%	30.02%	30.02%	0.0111%
United Continental Holdings Inc	UAL	23,777.97	0.10%	0.00%	14.17%	14.17%	0.0140%
UDR Inc	UDR	12,055.05	0.05%	2.95%	5.68%	8.71%	0.0044%
Universal Health Services Inc	UHS	12,260.66	0.05%	0.26%	9.82%	10.09%	0.0052%
Ulta Beauty Inc	ULTA	17,314.40	0.07%	0.00%	20.80%	20.80%	0.0150%
UnitedHealth Group Inc	UNH	259,941.64	1.08%	1.35%	13.73%	15.16%	0.1642%
Unum Group	UNM	7,603.70	0.03%	2.82%	9.00%	11.95%	0.0038%
Union Pacific Corp	UNP	117,201.20	0.49%	2.19%	10.86%	13.17%	0.0643%
United Parcel Service Inc	UPS	90,433.20	0.38%	3.61%	10.18%	13.97%	0.0526%
United Rentals Inc	URI	9,969.58	0.04%	0.00%	17.76%	17.76%	0.0074%
US Bancorp	USB	82,265.28	0.34%	3.10%	7.83%	11.05%	0.0379%
United Technologies Corp	UTX	101,939.77	0.42%	2.53%	9.80%	12.45%	0.0529%
Visa Inc	V	271,015.95	1.13%	0.73%	17.79%	18.59%	0.2099%
Varian Medical Systems Inc	VAR	12,036.55	0.05%	0.00%	16.10%	16.10%	0.0081%
VF Corp	VFC	33,399.19	0.14%	2.15%	-16.64%	-14.67%	-0.0204%
Viacom Inc	VIAB	12,093.13	0.05%	2.74%	3.48%	6.27%	0.0032%
Valero Energy Corp	VLO	37,262.75	0.16%	4.07%	16.26%	20.66%	0.0321%
Vulcan Materials Co	VMC	13,422.66	0.06%	1.10%	16.04%	17.22%	0.0096%
Vornado Realty Trust	VNO	13,302.88	0.06%	3.61%	3.70%	7.37%	0.0041%
Verisk Analytics Inc	VRSK	19,328.05	0.08%	0.00%	12.91%	12.91%	0.0104%
VeriSign Inc	VRSN	20,462.78	0.09%	0.00%	13.40%	13.40%	0.0114%
Vertex Pharmaceuticals Inc	VRTX	48,788.58	0.20%	0.00%	46.02%	46.02%	0.0936%
Ventas Inc	VTR	22,988.61	0.10%	4.91%	2.29%	7.26%	0.0070%
Verizon Communications Inc	VZ	227,507.92	0.95%	4.43%	2.30%	6.78%	0.0643%
Waters Corp	WAT	17,513.93	0.07%	0.00%	11.10%	11.10%	0.0081%
Walgreens Boots Alliance Inc	WBA	68,173.32	0.28%	2.47%	9.77%	12.36%	0.0351%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
WellCare Health Plans Inc	WCG	13,821.75	0.06%	0.00%	18.46%	18.46%	0.0106%
Western Digital Corp	WDC	13,021.22	0.05%	4.45%	2.72%	7.22%	0.0039%
WEC Energy Group Inc	WEC	23,042.87	0.10%	3.02%	4.89%	7.99%	0.0077%
Welltower Inc	WELL	29,108.69	0.12%	4.49%	7.21%	11.86%	0.0144%
Wells Fargo & Co	WFC	224,071.38	0.93%	3.72%	11.26%	15.18%	0.1417%
Whirlpool Corp	WHR	8,512.64	0.04%	3.57%	5.75%	9.42%	0.0033%
Willis Towers Watson PLC	WLTW	21,152.70	0.09%	1.46%	10.00%	11.53%	0.0102%
Waste Management Inc	WM	40,788.62	0.17%	1.94%	11.78%	13.84%	0.0235%
Williams Cos Inc/The	WMB	32,599.90	0.14%	5.05%	3.90%	9.05%	0.0123%
Walmart Inc	WMT	278,411.07	1.16%	2.19%	5.01%	7.25%	0.0841%
Westrock Co	WRK	10,409.87	0.04%	4.45%	5.10%	9.66%	0.0042%
Western Union Co/The	WU	8,081.23	0.03%	4.16%	3.19%	7.42%	0.0025%
Weyerhaeuser Co	WY	19,659.01	0.08%	5.03%	10.50%	15.79%	0.0129%
Wynn Resorts Ltd	WYNN	13,375.93	0.06%	2.46%	31.10%	33.94%	0.0189%
Cimarex Energy Co	XEC	7,203.91	0.03%	0.77%	63.18%	64.19%	0.0193%
Xcel Energy Inc	XEL	27,404.31	0.11%	3.06%	5.98%	9.13%	0.0104%
Xilinx Inc	XLNX	28,339.17	0.12%	1.29%	8.60%	9.94%	0.0117%
Exxon Mobil Corp	XOM	310,253.39	1.29%	4.41%	11.59%	16.25%	0.2101%
DENTSPLY SIRONA Inc	XRAY	9,335.87	0.04%	0.83%	6.90%	7.76%	0.0030%
Xerox Corp	XRX	6,477.66	0.03%	3.63%	0.20%	3.83%	0.0010%
Xylem Inc/NY	XYL	12,806.57	0.05%	1.33%	14.57%	15.99%	0.0085%
Yum! Brands Inc	YUM	29,350.13	0.12%	1.53%	12.97%	14.60%	0.0179%
Zimmer Biomet Holdings Inc	ZBH	22,347.64	0.09%	0.88%	3.85%	4.75%	0.0044%
Zions Bancorp NA	ZION	8,925.69	0.04%	2.76%	6.78%	9.63%	0.0036%
Zoetis Inc	ZTS	41,395.65	0.17%	0.58%	16.18%	16.81%	0.0290%
Total Market Capitalization:		24,001,039.67					14.70%

Notes:

- [1] Equals sum of Col. [9]
[2] Source: Bloomberg Professional
[3] Equals [1] - [2]
[4] Source: Bloomberg Professional
[5] Equals weight in S&P 500 based on market capitalization
[6] Source: Bloomberg Professional
[7] Source: Bloomberg Professional
[8] Equals $([6] \times (1 + (0.5 \times [7]))) + [7]$
[9] Equals Col. [5] x Col. [8]

Ex-Ante Market Risk Premium
Market DCF Method Based - Value Line

[1]	[2]	[3]
S&P 500	Current 30-Year	
Est. Required	Treasury (30-	Implied Market
Market Return	day average)	Risk Premium
17.19%	3.03%	14.16%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
Agilent Technologies Inc	A	\$ 23,025.42	0.11%	0.91%	12.00%	12.96%	0.0141%
American Airlines Group Inc	AAL	\$ 15,502.42	0.07%	1.19%	-0.50%	0.69%	0.0005%
Advance Auto Parts Inc	AAP	\$ 11,394.06	0.05%	0.15%	13.00%	13.16%	0.0071%
Apple Inc	AAPL	\$ 726,086.40	3.43%	2.11%	17.50%	19.79%	0.6784%
AbbVie Inc	ABBV	\$ 129,177.30	0.61%	4.98%	14.50%	19.84%	0.1210%
AmerisourceBergen Corp	ABC	\$ 17,069.71	0.08%	2.03%	8.50%	10.62%	0.0086%
ABIOMED Inc	ABMD	\$ 15,695.74	0.07%	0.00%	27.50%	27.50%	0.0204%
Abbott Laboratories	ABT	\$ 124,453.80	0.59%	1.81%	10.00%	11.90%	0.0699%
Accenture PLC	ACN	\$ 95,799.60	0.45%	2.04%	9.50%	11.64%	0.0526%
Adobe Inc	ADBE	\$ 118,613.50	0.56%	0.00%	27.00%	27.00%	0.1512%
Analog Devices Inc	ADI	\$ 35,072.66	0.17%	2.03%	10.50%	12.64%	0.0209%
Archer-Daniels-Midland Co	ADM	\$ 24,455.20	0.12%	3.07%	9.50%	12.72%	0.0147%
Automatic Data Processing Inc	ADP	\$ 59,047.45	0.28%	2.35%	15.00%	17.53%	0.0488%
Alliance Data Systems Corp	ADS	\$ 9,534.80	0.05%	1.31%	14.50%	15.90%	0.0072%
Autodesk Inc	ADSK	\$ 29,796.17	N/A	0.00%	N/A	N/A	N/A
Ameren Corp	AEE	\$ 16,788.75	0.08%	2.81%	7.50%	10.42%	0.0083%
American Electric Power Co Inc	AEP	\$ 38,338.29	0.18%	3.50%	4.50%	8.08%	0.0146%
AES Corp/VA	AES	\$ 10,530.52	N/A	3.46%	N/A	N/A	N/A
Aflac Inc	AFL	\$ 36,118.14	0.17%	2.37%	8.50%	10.97%	0.0187%
Allergan PLC	AGN	\$ 53,132.61	0.25%	1.83%	4.50%	6.37%	0.0160%
American International Group Inc	AIG	\$ 37,986.79	0.18%	2.98%	52.00%	55.75%	0.1000%
Apartment Investment & Management Co	AIV	\$ 7,834.50	0.04%	3.20%	5.50%	8.79%	0.0032%
Assurant Inc	AIZ	\$ 6,009.93	0.03%	2.49%	7.50%	10.08%	0.0029%
Arthur J Gallagher & Co	AJG	\$ 13,503.79	0.06%	2.23%	17.00%	19.42%	0.0124%
Akamai Technologies Inc	AKAM	\$ 10,969.99	0.05%	0.00%	17.50%	17.50%	0.0091%
Albemarle Corp	ALB	\$ 7,859.96	0.04%	1.81%	8.50%	10.39%	0.0039%
Align Technology Inc	ALGN	\$ 17,953.49	0.08%	0.00%	27.50%	27.50%	0.0233%
Alaska Air Group Inc	ALK	\$ 8,114.69	0.04%	1.95%	1.50%	3.46%	0.0013%
Allstate Corp/The	ALL	\$ 29,756.25	0.14%	2.13%	12.00%	14.26%	0.0200%
Allegion PLC	ALLE	\$ 7,889.32	0.04%	1.01%	10.50%	11.56%	0.0043%
Alexion Pharmaceuticals Inc	ALXN	\$ 26,305.72	0.12%	0.00%	24.50%	24.50%	0.0304%
Applied Materials Inc	AMAT	\$ 36,571.94	0.17%	2.12%	19.00%	21.32%	0.0368%
Advanced Micro Devices Inc	AMD	\$ 20,829.15	N/A	0.00%	N/A	N/A	N/A
AMETEK Inc	AME	\$ 16,526.66	0.08%	0.79%	10.50%	11.33%	0.0088%
Affiliated Managers Group Inc	AMG	\$ 6,303.38	0.03%	1.49%	6.50%	8.04%	0.0024%
Amgen Inc	AMGN	\$ 128,721.30	0.61%	2.89%	8.50%	11.51%	0.0700%
Ameriprise Financial Inc	AMP	\$ 16,747.64	0.08%	3.01%	16.00%	19.25%	0.0152%
American Tower Corp	AMT	\$ 73,014.38	0.34%	2.08%	11.50%	13.70%	0.0472%
Amazon.com Inc	AMZN	\$ 809,260.80	3.82%	0.00%	56.00%	56.00%	2.1391%
Arista Networks Inc	ANET	\$ 17,072.75	0.08%	0.00%	19.00%	19.00%	0.0153%
ANSYS Inc	ANSS	\$ 13,283.88	0.06%	0.00%	12.00%	12.00%	0.0075%
Anthem Inc	ANTM	\$ 68,772.34	0.32%	1.13%	18.00%	19.23%	0.0624%
Aon PLC	AON	\$ 37,123.09	0.18%	1.04%	9.50%	10.59%	0.0186%
AO Smith Corp	AOS	\$ 7,885.73	0.04%	1.90%	12.50%	14.52%	0.0054%
Apache Corp	APA	\$ 12,149.13	N/A	3.14%	N/A	N/A	N/A
Anadarko Petroleum Corp	APC	\$ 22,842.88	N/A	2.60%	N/A	N/A	N/A
Air Products & Chemicals Inc	APD	\$ 34,354.10	0.16%	2.97%	9.50%	12.61%	0.0204%
Amphenol Corp	APH	\$ 25,676.79	0.12%	1.08%	10.00%	11.13%	0.0135%
Aptiv PLC	APT	\$ 18,967.45	0.09%	1.23%	10.00%	11.29%	0.0101%
Alexandria Real Estate Equities Inc	ARE	\$ 12,298.38	N/A	3.15%	N/A	N/A	N/A
Arconic Inc	ARNC	\$ 8,891.65	N/A	1.30%	N/A	N/A	N/A
Activision Blizzard Inc	ATVI	\$ 36,066.49	0.17%	0.80%	14.50%	15.36%	0.0261%
AvalonBay Communities Inc	AVB	\$ 25,540.49	0.12%	3.30%	5.50%	8.89%	0.0107%
Broadcom Inc	AVGO	\$ 108,846.10	0.51%	4.02%	47.50%	52.47%	0.2696%
Avery Dennison Corp	AVY	\$ 8,351.51	0.04%	2.29%	11.50%	13.92%	0.0055%
American Water Works Co Inc	AWK	\$ 17,091.61	0.08%	2.05%	10.00%	12.15%	0.0098%
American Express Co	AXP	\$ 85,160.88	0.40%	1.66%	9.00%	10.73%	0.0432%
AutoZone Inc	AZO	\$ 20,545.75	0.10%	0.00%	12.50%	12.50%	0.0121%
Boeing Co/The	BA	\$ 203,855.30	0.96%	2.29%	18.00%	20.50%	0.1972%
Bank of America Corp	BAC	\$ 286,678.00	1.35%	2.06%	13.00%	15.19%	0.2056%
Baxter International Inc	BAX	\$ 37,303.00	0.18%	1.09%	13.50%	14.66%	0.0258%
BB&T Corp	BBT	\$ 37,953.04	0.18%	3.33%	10.00%	13.50%	0.0242%
Best Buy Co Inc	BBY	\$ 15,667.20	0.07%	3.82%	12.00%	16.05%	0.0119%
Becton Dickinson and Co	BDX	\$ 64,566.88	0.30%	1.30%	10.00%	11.37%	0.0346%
Franklin Resources Inc	BEN	\$ 16,264.09	0.08%	3.32%	7.50%	10.94%	0.0084%

Company	Ticker	[4]		[5]	[6]	[7]	[8]	[9]
		Market	Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Brown-Forman Corp	BF/B	\$	21,828.95	0.10%	1.45%	15.50%	17.06%	0.0176%
Brighthouse Financial Inc	BHF		N/A	N/A	0.00%	N/A	N/A	N/A
Baker Hughes a GE Co	BHGE	\$	9,492.48	N/A	3.13%	N/A	N/A	N/A
Biogen Inc	BIIB	\$	67,067.65	0.32%	0.00%	6.50%	6.50%	0.0206%
Bank of New York Mellon Corp/The	BK	\$	53,107.21	0.25%	2.09%	9.00%	11.18%	0.0280%
Booking Holdings Inc	BKNG	\$	83,724.91	0.40%	0.00%	13.50%	13.50%	0.0534%
BlackRock Inc	BLK	\$	64,577.18	0.30%	3.08%	11.00%	14.25%	0.0434%
Ball Corp	BLL	\$	17,327.09	0.08%	0.79%	22.00%	22.88%	0.0187%
Bristol-Myers Squibb Co	BMJ	\$	80,010.39	0.38%	3.35%	13.50%	17.08%	0.0645%
Broadridge Financial Solutions Inc	BR	\$	11,773.44	0.06%	1.93%	12.00%	14.05%	0.0078%
Berkshire Hathaway Inc	BRK/B	\$	-	N/A	0.00%	N/A	N/A	N/A
Boston Scientific Corp	BSX	\$	51,515.34	0.24%	0.00%	17.50%	17.50%	0.0426%
BorgWarner Inc	BWA	\$	8,353.83	0.04%	1.70%	8.50%	10.27%	0.0041%
Boston Properties Inc	BXP	\$	18,684.13	0.09%	3.22%	3.50%	6.78%	0.0060%
Citigroup Inc	C	\$	153,146.40	0.72%	3.06%	8.50%	11.69%	0.0845%
Conagra Brands Inc	CAG	\$	10,271.33	0.05%	4.02%	4.50%	8.61%	0.0042%
Cardinal Health Inc	CAH	\$	14,556.00	0.07%	3.96%	11.00%	15.18%	0.0104%
Caterpillar Inc	CAT	\$	78,324.91	0.37%	2.59%	19.00%	21.84%	0.0807%
Chubb Ltd	CB	\$	61,054.39	0.29%	2.21%	9.50%	11.81%	0.0340%
Choe Global Markets Inc	CBOE	\$	10,726.14	0.05%	1.29%	17.00%	18.40%	0.0093%
CBRE Group Inc	CBRE	\$	15,019.17	0.07%	0.00%	11.50%	11.50%	0.0082%
CBS Corp	CBS	\$	18,367.50	0.09%	1.47%	10.50%	12.05%	0.0104%
Crown Castle International Corp	CCI	\$	46,442.65	0.22%	4.11%	12.00%	16.36%	0.0359%
Carnival Corp	CCL	\$	38,514.00	0.18%	3.64%	13.50%	17.39%	0.0316%
Cadence Design Systems Inc	CDNS	\$	12,961.60	0.06%	0.00%	12.50%	12.50%	0.0076%
Celanese Corp	CE	\$	12,964.54	0.06%	2.51%	10.00%	12.64%	0.0077%
Celgene Corp	CELG	\$	60,426.90	0.29%	0.00%	14.50%	14.50%	0.0414%
Cerner Corp	CERN	\$	17,940.76	0.08%	0.00%	9.00%	9.00%	0.0076%
CF Industries Holdings Inc	CF	\$	9,565.80	0.05%	3.15%	48.50%	52.41%	0.0237%
Citizens Financial Group Inc	CFG	\$	16,665.35	0.08%	3.64%	12.50%	16.37%	0.0129%
Church & Dwight Co Inc	CHD	\$	15,819.09	0.07%	1.35%	10.00%	11.42%	0.0085%
CH Robinson Worldwide Inc	CHRW	\$	11,942.52	0.06%	2.31%	10.00%	12.43%	0.0070%
Charter Communications Inc	CHTR	\$	68,854.13	0.33%	0.00%	19.50%	19.50%	0.0634%
Cigna Corp	CI	\$	47,019.11	0.22%	0.02%	13.00%	13.02%	0.0289%
Cincinnati Financial Corp	CINF	\$	12,872.82	0.06%	2.68%	7.00%	9.77%	0.0059%
Colgate-Palmolive Co	CL	\$	53,947.30	0.25%	2.70%	10.50%	13.34%	0.0340%
Clorox Co/The	CLX	\$	19,034.84	0.09%	2.57%	7.50%	10.17%	0.0091%
Comerica Inc	CMA	\$	13,555.72	0.06%	3.28%	18.00%	21.58%	0.0138%
Comcast Corp	CMCSA	\$	164,874.00	0.78%	2.32%	13.00%	15.47%	0.1204%
CME Group Inc	CME	\$	63,323.28	0.30%	1.50%	4.50%	6.03%	0.0180%
Chipotle Mexican Grill Inc	CMG	\$	14,823.97	0.07%	0.00%	18.50%	18.50%	0.0129%
Cummins Inc	CMI	\$	23,094.35	0.11%	3.17%	9.50%	12.82%	0.0140%
CMS Energy Corp	CMS	\$	14,643.78	0.07%	2.96%	7.00%	10.06%	0.0070%
Centene Corp	CNC	\$	26,024.51	0.12%	0.00%	17.00%	17.00%	0.0209%
CenterPoint Energy Inc	CNP	\$	12,998.44	0.06%	3.82%	3.50%	7.39%	0.0045%
Capital One Financial Corp	COF	\$	37,977.82	0.18%	2.00%	10.00%	12.10%	0.0217%
Cabot Oil & Gas Corp	COG	\$	11,058.55	N/A	1.10%	N/A	N/A	N/A
Cooper Cos Inc/The	COO	\$	13,353.73	0.06%	0.02%	16.50%	16.52%	0.0104%
ConocoPhillips	COP	\$	76,120.12	N/A	1.85%	N/A	N/A	N/A
Costco Wholesale Corp	COST	\$	92,651.23	0.44%	1.16%	8.50%	9.71%	0.0425%
Coty Inc	COTY	\$	5,255.60	0.02%	7.14%	11.00%	18.53%	0.0046%
Campbell Soup Co	CPB	\$	11,214.56	N/A	4.03%	N/A	N/A	N/A
Capri Holdings Ltd	CPRI	\$	6,166.66	0.03%	0.00%	7.50%	7.50%	0.0022%
Copart Inc	CPRT	\$	11,585.74	0.05%	0.00%	13.00%	13.00%	0.0071%
salesforce.com Inc	CRM	\$	112,355.50	0.53%	0.00%	65.00%	65.00%	0.3447%
Cisco Systems Inc	CSCO	\$	206,020.40	0.97%	3.09%	8.00%	11.21%	0.1090%
CSX Corp	CSX	\$	54,929.52	0.26%	1.35%	18.50%	19.97%	0.0518%
Cintas Corp	CTAS	\$	19,187.23	0.09%	1.12%	15.00%	16.20%	0.0147%
CenturyLink Inc	CTL	\$	15,895.23	0.08%	14.68%	2.50%	17.36%	0.0130%
Cognizant Technology Solutions Corp	CTSH	\$	39,509.60	0.19%	1.17%	11.50%	12.74%	0.0238%
Citrix Systems Inc	CTXS	\$	13,716.37	0.06%	1.37%	7.50%	8.92%	0.0058%
CVS Health Corp	CVS	\$	66,214.62	0.31%	3.08%	8.50%	11.71%	0.0366%
Chevron Corp	CVX	\$	216,892.00	1.02%	4.02%	31.00%	35.64%	0.3649%
Concho Resources Inc	CXO	\$	23,243.86	0.11%	0.00%	34.50%	34.50%	0.0379%
Dominion Energy Inc	D	\$	45,280.15	0.21%	5.32%	6.50%	11.99%	0.0256%
Delta Air Lines Inc	DAL	\$	32,580.61	0.15%	2.95%	10.50%	13.60%	0.0209%
Deere & Co	DE	\$	50,452.82	0.24%	1.92%	16.50%	18.58%	0.0442%
Discover Financial Services	DFS	\$	22,363.54	0.11%	2.42%	8.00%	10.52%	0.0111%
Dollar General Corp	DG	\$	29,903.05	0.14%	1.02%	13.00%	14.09%	0.0199%
Quest Diagnostics Inc	DGX	\$	11,641.60	0.05%	2.48%	9.50%	12.10%	0.0066%
DR Horton Inc	DHI	\$	14,410.80	0.07%	1.57%	8.00%	9.63%	0.0066%
Danaher Corp	DHR	\$	74,319.84	0.35%	0.60%	10.50%	11.13%	0.0390%
Walt Disney Co/The	DIS	\$	164,498.40	0.78%	1.59%	7.00%	8.65%	0.0671%
Discovery Inc	DISCA	\$	14,302.02	0.07%	0.00%	17.00%	17.00%	0.0115%
DISH Network Corp	DISH	\$	14,086.28	0.07%	0.00%	1.00%	1.00%	0.0007%
Digital Realty Trust Inc	DLR	\$	21,387.37	0.10%	4.13%	6.50%	10.76%	0.0109%

Company	Ticker	[4]		[5]		[6]		[7]		[8]		[9]	
		Market	Capitalization	Weight in Index		Estimated	Dividend Yield	Long-Term	Growth Est.	DCF Result		Weighted	DCF Result
Dollar Tree Inc	DLTR	\$	22,502.44	0.11%		0.00%		17.50%		17.50%		0.0186%	
Dover Corp	DOV	\$	11,585.85	0.05%		2.43%		13.00%		15.59%		0.0085%	
Duke Realty Corp	DRE	\$	10,134.91	0.05%		3.09%		7.00%		10.20%		0.0049%	
Darden Restaurants Inc	DRI	\$	13,267.34	0.06%		2.89%		12.50%		15.57%		0.0098%	
DTE Energy Co	DTE	\$	21,012.34	0.10%		3.33%		7.50%		10.95%		0.0109%	
Duke Energy Corp	DUK	\$	61,817.10	0.29%		4.37%		5.50%		9.99%		0.0292%	
DaVita Inc	DVA	\$	9,359.84	0.04%		0.00%		10.00%		10.00%		0.0044%	
Devon Energy Corp	DVN	\$	12,584.46	0.06%		1.20%		23.50%		24.84%		0.0148%	
DowDuPont Inc	DWDP	\$	129,223.30	N/A		2.98%		N/A		N/A		N/A	
DXC Technology Co	DXC	\$	17,542.56	0.08%		1.22%		14.00%		15.31%		0.0127%	
Electronic Arts Inc	EA	\$	27,809.92	0.13%		0.00%		11.50%		11.50%		0.0151%	
eBay Inc	EBAY	\$	31,441.95	0.15%		0.00%		17.50%		17.50%		0.0260%	
Ecolab Inc	ECL	\$	43,885.59	0.21%		1.21%		9.50%		10.77%		0.0223%	
Consolidated Edison Inc	ED	\$	24,184.80	0.11%		3.81%		3.00%		6.87%		0.0078%	
Equifax Inc	EFX	\$	12,520.69	0.06%		1.50%		7.50%		9.06%		0.0054%	
Edison International	EIX	\$	17,965.22	0.08%		4.46%		4.50%		9.06%		0.0077%	
Estee Lauder Cos Inc/The	EL	\$	45,639.45	0.22%		1.37%		12.50%		13.96%		0.0301%	
Eastman Chemical Co	EMN	\$	10,927.70	0.05%		3.18%		9.50%		12.83%		0.0066%	
Emerson Electric Co	EMR	\$	39,664.77	0.19%		3.13%		14.00%		17.35%		0.0325%	
EOG Resources Inc	EOG	\$	56,382.77	N/A		0.93%		N/A		N/A		N/A	
Equinix Inc	EQIX	\$	29,699.80	0.14%		2.80%		25.50%		28.66%		0.0402%	
Equity Residential	EQR	\$	25,890.07	0.12%		3.07%		-15.00%		-12.16%		-0.0149%	
Eversource Energy	ES	\$	21,694.02	0.10%		3.08%		5.00%		8.16%		0.0084%	
Essex Property Trust Inc	ESS	\$	17,279.72	0.08%		2.92%		0.50%		3.43%		0.0028%	
E*TRADE Financial Corp	ETFC	\$	12,704.73	0.06%		1.13%		26.00%		27.28%		0.0164%	
Eaton Corp PLC	ETN	\$	30,407.35	0.14%		3.76%		10.00%		13.95%		0.0200%	
Entergy Corp	ETR	\$	16,053.64	0.08%		4.13%		1.00%		5.15%		0.0039%	
Every Inc	EVRG	\$	-	N/A		3.40%		N/A		N/A		N/A	
Edwards Lifesciences Corp	EW	\$	35,379.72	0.17%		0.00%		16.00%		16.00%		0.0267%	
Exelon Corp	EXC	\$	45,410.32	0.21%		3.09%		8.00%		11.21%		0.0240%	
Expeditors International of Washington I	EXPD	\$	11,839.62	0.06%		1.31%		9.50%		10.87%		0.0061%	
Expedia Group Inc	EXPE	\$	17,521.41	0.08%		1.09%		20.50%		21.70%		0.0179%	
Extra Space Storage Inc	EXR	\$	11,596.42	0.05%		3.87%		5.00%		8.97%		0.0049%	
Ford Motor Co	F	\$	34,209.97	0.16%		6.98%		1.50%		8.53%		0.0138%	
Diamondback Energy Inc	FANG	\$	10,021.33	N/A		0.74%		N/A		N/A		N/A	
Fastenal Co	FAST	\$	16,881.82	0.08%		2.72%		11.50%		14.38%		0.0115%	
Facebook Inc	FB	\$	418,969.60	1.98%		0.00%		26.00%		26.00%		0.5142%	
Fortune Brands Home & Security Inc	FBHS	\$	5,939.01	0.03%		2.10%		13.50%		15.74%		0.0044%	
Freeport-McMoRan Inc	FCX	\$	15,504.30	N/A		2.24%		N/A		N/A		N/A	
FedEx Corp	FDX	\$	45,447.76	0.21%		1.49%		9.50%		11.06%		0.0237%	
FirstEnergy Corp	FE	\$	20,089.56	0.09%		3.87%		3.00%		6.93%		0.0066%	
F5 Networks Inc	FFIV	\$	9,398.96	0.04%		0.00%		10.50%		10.50%		0.0047%	
Fidelity National Information Services I	FIS	\$	34,492.48	0.16%		1.22%		15.50%		16.81%		0.0274%	
Fiserv Inc	FISV	\$	33,198.79	0.16%		0.00%		11.00%		11.00%		0.0172%	
Fifth Third Bancorp	FITB	\$	18,127.78	0.09%		3.18%		7.00%		10.29%		0.0088%	
Foot Locker Inc	FL	\$	6,419.07	0.03%		2.44%		8.00%		10.54%		0.0032%	
FLIR Systems Inc	FLIR	\$	6,307.94	0.03%		1.49%		13.50%		15.09%		0.0045%	
Fluor Corp	FLR	\$	5,182.38	0.02%		2.28%		8.50%		10.88%		0.0027%	
Flowserve Corp	FLS	\$	5,445.37	0.03%		1.82%		7.50%		9.39%		0.0024%	
FleetCor Technologies Inc	FLT	\$	17,426.42	0.08%		0.00%		14.50%		14.50%		0.0119%	
FMC Corp	FMC	\$	10,476.39	0.05%		2.06%		22.50%		24.79%		0.0123%	
Twenty-First Century Fox Inc	FOXA	\$	90,589.84	0.43%		0.74%		12.50%		13.29%		0.0568%	
First Republic Bank/CA	FRC	\$	15,708.31	0.07%		0.76%		11.50%		12.30%		0.0091%	
Federal Realty Investment Trust	FRT	\$	9,259.90	0.04%		3.24%		3.50%		6.80%		0.0030%	
TechnipFMC PLC	FTI		N/A	N/A		0.00%		N/A		N/A		N/A	
Fortinet Inc	FTNT	\$	12,350.16	0.06%		0.00%		38.50%		38.50%		0.0224%	
Fortive Corp	FTV	\$	24,832.30	N/A		0.39%		N/A		N/A		N/A	
General Dynamics Corp	GD	\$	50,588.18	0.24%		2.18%		9.00%		11.28%		0.0269%	
General Electric Co	GE	\$	76,369.45	N/A		0.46%		N/A		N/A		N/A	
Gilead Sciences Inc	GILD	\$	87,810.84	0.41%		3.36%		-6.50%		-3.25%		-0.0135%	
General Mills Inc	GIS	\$	25,968.38	0.12%		4.55%		3.00%		7.62%		0.0093%	
Corning Inc	GLW	\$	23,899.91	0.11%		2.41%		15.50%		18.10%		0.0204%	
General Motors Co	GM	\$	53,424.00	0.25%		4.09%		3.00%		7.15%		0.0180%	
Alphabet Inc	GOOGL		N/A	N/A		0.00%		N/A		N/A		N/A	
Genuine Parts Co	GPC	\$	14,021.35	0.07%		3.01%		9.00%		12.15%		0.0080%	
Global Payments Inc	GP	\$	17,753.21	0.08%		0.04%		20.00%		20.04%		0.0168%	
Gap Inc/The	GPS	\$	9,645.50	0.05%		3.84%		7.00%		10.97%		0.0050%	
Garmin Ltd	GRMN	\$	12,842.79	0.06%		3.12%		10.50%		13.78%		0.0084%	
Goldman Sachs Group Inc/The	GS	\$	73,727.77	0.35%		1.62%		9.50%		11.20%		0.0390%	
Goodyear Tire & Rubber Co/The	GT	\$	4,706.60	0.02%		3.27%		12.50%		15.97%		0.0035%	
WW Grainger Inc	GW	\$	16,119.91	0.08%		1.90%		9.50%		11.49%		0.0087%	
Halliburton Co	HAL	\$	27,339.96	N/A		2.31%		N/A		N/A		N/A	
Hasbro Inc	HAS	\$	11,328.41	0.05%		2.82%		8.00%		10.93%		0.0058%	
Huntington Bancshares Inc/OH	HBAN	\$	14,277.57	0.07%		4.16%		13.00%		17.43%		0.0117%	
Hanesbrands Inc	HBI	\$	5,305.32	0.03%		4.08%		4.00%		8.16%		0.0020%	
HCA Healthcare Inc	HCA	\$	45,789.46	0.22%		1.06%		15.00%		16.14%		0.0349%	

Company	Ticker	[4]	[5]	[6]	[7]	[8]	[9]
		Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
HCP Inc	HCP	\$ 13,998.58	0.07%	5.10%	35.50%	41.51%	0.0274%
Home Depot Inc/The	HD	\$ 200,515.00	0.95%	2.60%	12.50%	15.26%	0.1445%
Hess Corp	HES	\$ 15,108.90	N/A	1.96%	N/A	N/A	N/A
HollyFrontier Corp	HFC	\$ 9,394.51	0.04%	2.51%	25.00%	27.82%	0.0123%
Hartford Financial Services Group Inc/Th	HIG	\$ 16,739.41	0.08%	2.57%	13.00%	15.74%	0.0124%
Huntington Ingalls Industries Inc	HII	\$ 8,559.15	0.04%	1.73%	12.50%	14.34%	0.0058%
Hilton Worldwide Holdings Inc	HLT	\$ 21,102.12	0.10%	0.84%	9.00%	9.88%	0.0098%
Harley-Davidson Inc	HOG	\$ 5,943.40	0.03%	4.06%	9.00%	13.24%	0.0037%
Hologic Inc	HOLX	\$ 12,119.88	0.06%	0.00%	24.00%	24.00%	0.0137%
Honeywell International Inc	HON	\$ 104,513.90	0.49%	2.32%	9.00%	11.42%	0.0564%
Helmerich & Payne Inc	HP	\$ 5,727.19	0.03%	5.40%	56.50%	63.43%	0.0171%
Hewlett Packard Enterprise Co	HPE	\$ 21,003.48	0.10%	3.05%	7.50%	10.66%	0.0106%
HP Inc	HPQ	\$ 33,961.20	0.16%	2.94%	9.50%	12.58%	0.0202%
H&R Block Inc	HRB	\$ 5,282.04	0.02%	4.05%	8.50%	12.72%	0.0032%
Hormel Foods Corp	HRL	\$ 22,209.33	0.10%	2.02%	9.00%	11.11%	0.0116%
Harris Corp	HRS	\$ 16,692.67	0.08%	1.93%	13.50%	15.56%	0.0123%
Henry Schein Inc	HSIC	\$ 11,676.75	0.06%	0.00%	9.00%	9.00%	0.0050%
Host Hotels & Resorts Inc	HST	\$ 12,705.13	N/A	4.83%	N/A	N/A	N/A
Hershey Co/The	HSY	\$ 22,098.30	0.10%	2.74%	6.50%	9.33%	0.0097%
Humana Inc	HUM	\$ 41,228.51	0.19%	0.68%	14.00%	14.73%	0.0287%
International Business Machines Corp	IBM	\$ 120,442.50	N/A	4.92%	N/A	N/A	N/A
Intercontinental Exchange Inc	ICE	\$ 42,944.91	0.20%	1.28%	12.50%	13.86%	0.0281%
IDEXX Laboratories Inc	IDXX	\$ 17,842.32	0.08%	0.00%	17.00%	17.00%	0.0143%
International Flavors & Fragrances Inc	IFF	\$ 12,584.49	0.06%	2.17%	9.50%	11.77%	0.0070%
Illumina Inc	ILMN	\$ 44,255.82	0.21%	0.00%	15.00%	15.00%	0.0313%
Incyte Corp	INCY	\$ 16,384.18	N/A	0.00%	N/A	N/A	N/A
IHS Markit Ltd	INFO	\$ 20,269.28	0.10%	0.00%	20.00%	20.00%	0.0191%
Intel Corp	INTC	\$ 227,104.70	1.07%	2.41%	12.50%	15.06%	0.1614%
Intuit Inc	INTU	\$ 55,070.59	0.26%	0.89%	14.50%	15.45%	0.0402%
International Paper Co	IP	\$ 18,739.35	0.09%	4.32%	15.50%	20.15%	0.0178%
Interpublic Group of Cos Inc/The	IPG	\$ 8,698.07	0.04%	3.78%	11.50%	15.50%	0.0064%
IPG Photonics Corp	IPGP	\$ 7,098.18	0.03%	0.00%	10.50%	10.50%	0.0035%
IQVIA Holdings Inc	IQV	\$ 25,309.75	0.12%	0.00%	14.50%	14.50%	0.0173%
Ingersoll-Rand PLC	IR	\$ 23,067.10	0.11%	2.26%	13.50%	15.91%	0.0173%
Iron Mountain Inc	IRM	\$ 10,278.20	0.05%	6.80%	8.50%	15.59%	0.0076%
Intuitive Surgical Inc	ISRG	\$ 61,224.90	0.29%	0.00%	15.00%	15.00%	0.0433%
Gartner Inc	IT	\$ 11,849.72	0.06%	0.00%	15.00%	15.00%	0.0084%
Illinois Tool Works Inc	ITW	\$ 43,442.57	0.21%	3.06%	11.00%	14.23%	0.0292%
Invesco Ltd	IVZ	\$ 7,724.21	0.04%	6.39%	7.00%	13.61%	0.0050%
JB Hunt Transport Services Inc	JBHT	\$ 11,213.47	0.05%	1.01%	13.50%	14.58%	0.0077%
Johnson Controls International plc	JCI	\$ 29,849.97	0.14%	3.22%	6.00%	9.32%	0.0131%
Jacobs Engineering Group Inc	JEC	\$ 8,820.92	0.04%	1.09%	13.00%	14.16%	0.0059%
Jefferies Financial Group Inc	JEF	\$ 6,638.24	0.03%	2.50%	20.50%	23.26%	0.0073%
Jack Henry & Associates Inc	JKHY	\$ 10,136.71	0.05%	1.13%	11.50%	12.69%	0.0061%
Johnson & Johnson	JNJ	\$ 340,841.20	1.61%	2.93%	11.00%	14.09%	0.2267%
Juniper Networks Inc	JNPR	\$ 9,724.92	0.05%	2.70%	4.50%	7.26%	0.0033%
JPMorgan Chase & Co	JPM	\$ 341,652.80	1.61%	3.13%	9.50%	12.78%	0.2061%
Nordstrom Inc	JWN	\$ 7,891.01	0.04%	3.17%	7.00%	10.28%	0.0038%
Kellogg Co	K	\$ 20,008.02	0.09%	3.92%	5.50%	9.53%	0.0090%
KeyCorp	KEY	\$ 17,458.77	0.08%	4.03%	13.00%	17.29%	0.0143%
Keysight Technologies Inc	KEYS	\$ 13,232.74	0.06%	0.00%	7.00%	7.00%	0.0044%
Kraft Heinz Co/The	KHC	\$ 56,732.26	0.27%	5.37%	9.50%	15.13%	0.0405%
Kimco Realty Corp	KIM	\$ 6,980.60	0.03%	6.95%	-0.50%	6.43%	0.0021%
KLA-Tencor Corp	KLAC	\$ 15,045.74	0.07%	3.05%	15.50%	18.79%	0.0133%
Kimberly-Clark Corp	KMB	\$ 38,591.79	0.18%	3.70%	10.50%	14.39%	0.0262%
Kinder Morgan Inc/DE	KMI	\$ 38,552.09	0.18%	4.58%	57.00%	62.89%	0.1144%
CarMax Inc	KMX	\$ 10,210.90	0.05%	0.00%	11.50%	11.50%	0.0055%
Coca-Cola Co/The	KO	\$ 202,968.70	0.96%	3.48%	6.50%	10.09%	0.0967%
Kroger Co/The	KR	\$ 22,910.58	0.11%	2.16%	5.00%	7.21%	0.0078%
Kohl's Corp	KSS	\$ 11,276.10	0.05%	3.83%	11.00%	15.04%	0.0080%
Kansas City Southern	KSU	\$ 10,916.16	0.05%	1.34%	12.50%	13.92%	0.0072%
Loews Corp	L	\$ 14,934.60	0.07%	0.53%	16.50%	17.07%	0.0120%
L Brands Inc	LB	\$ 7,634.00	0.04%	4.32%	-4.50%	-0.28%	-0.0001%
Leggett & Platt Inc	LEG	\$ 5,165.86	0.02%	3.84%	9.00%	13.01%	0.0032%
Lennar Corp	LEN	\$ 14,819.89	0.07%	0.36%	12.00%	12.38%	0.0087%
Laboratory Corp of America Holdings	LH	\$ 13,826.90	0.07%	0.00%	9.50%	9.50%	0.0062%
Linde PLC	LIN	N/A	N/A	0.00%	N/A	N/A	N/A
LKQ Corp	LKQ	\$ 8,349.49	0.04%	0.00%	12.00%	12.00%	0.0047%
L3 Technologies Inc	LLL	\$ 14,342.56	0.07%	1.75%	11.00%	12.85%	0.0087%
Eli Lilly & Co	LLY	\$ 121,811.40	0.57%	2.24%	12.00%	14.37%	0.0826%
Lockheed Martin Corp	LMT	\$ 81,132.52	0.38%	3.23%	13.50%	16.95%	0.0649%
Lincoln National Corp	LNC	\$ 12,551.57	0.06%	2.60%	10.50%	13.24%	0.0078%
Alliant Energy Corp	LNT	\$ 10,362.31	0.05%	3.23%	6.50%	9.83%	0.0048%
Lowe's Cos Inc	LOW	\$ 73,990.80	0.35%	2.29%	13.00%	15.44%	0.0539%
Lam Research Corp	LRCX	\$ 24,725.50	0.12%	2.73%	13.00%	15.91%	0.0186%
Southwest Airlines Co	LUV	\$ 30,482.66	0.14%	1.18%	9.50%	10.74%	0.0154%

Company	Ticker	[4]	[5]	[6]	[7]	[8]	[9]
		Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Lamb Weston Holdings Inc	LW	\$ 10,453.67	N/A	1.12%	N/A	N/A	N/A
LyondellBasell Industries NV	LYB	\$ 32,507.47	0.15%	4.76%	6.50%	11.41%	0.0175%
Macy's Inc	M	\$ 7,536.02	0.04%	6.16%	5.00%	11.31%	0.0040%
Mastercard Inc	MA	\$ 206,782.70	0.98%	0.66%	16.00%	16.71%	0.1631%
Mid-America Apartment Communities Inc	MAA	\$ 11,360.89	0.05%	3.84%	-4.50%	-0.75%	-0.0004%
Macerich Co/The	MAC	\$ 6,343.32	0.03%	6.71%	8.00%	14.98%	0.0045%
Marriott International Inc/MD	MAR	\$ 36,923.91	0.17%	1.52%	12.50%	14.12%	0.0246%
Masco Corp	MAS	\$ 9,538.56	0.05%	1.53%	14.50%	16.14%	0.0073%
Mattel Inc	MAT	\$ 4,217.20	0.02%	0.00%	22.00%	22.00%	0.0044%
McDonald's Corp	MCD	\$ 144,443.50	0.68%	2.48%	10.00%	12.60%	0.0859%
Microchip Technology Inc	MCHP	\$ 18,528.16	0.09%	1.91%	15.00%	17.05%	0.0149%
McKesson Corp	MCK	\$ 24,466.65	0.12%	1.24%	10.50%	11.81%	0.0136%
Moody's Corp	MCO	\$ 29,530.78	0.14%	1.14%	13.00%	14.21%	0.0198%
Mondelez International Inc	MDLZ	\$ 62,698.37	0.30%	2.51%	9.50%	12.13%	0.0359%
Medtronic PLC	MDT	\$ 117,427.20	0.55%	2.29%	8.00%	10.38%	0.0575%
MetLife Inc	MET	\$ 44,418.71	0.21%	3.87%	7.00%	11.01%	0.0231%
MGM Resorts International	MGM	\$ 14,835.72	0.07%	1.72%	31.00%	32.99%	0.0231%
Mohawk Industries Inc	MHK	\$ 9,485.64	0.04%	0.00%	4.50%	4.50%	0.0020%
McCormick & Co Inc/MD	MKC	\$ 16,372.54	0.08%	1.83%	10.00%	11.92%	0.0092%
Martin Marietta Materials Inc	MLM	\$ 11,039.82	0.05%	1.10%	13.00%	14.17%	0.0074%
Marsh & McLennan Cos Inc	MMC	\$ 41,793.41	0.20%	2.00%	9.00%	11.09%	0.0219%
3M Co	MMM	\$ 112,101.90	0.53%	2.83%	9.00%	11.96%	0.0633%
Monster Beverage Corp	MNST	\$ 30,611.42	0.14%	0.00%	15.00%	15.00%	0.0217%
Altria Group Inc	MO	\$ 81,463.35	0.38%	7.39%	10.50%	18.28%	0.0703%
Mosaic Co/The	MOS	\$ 11,953.42	0.06%	0.65%	12.00%	12.69%	0.0072%
Marathon Petroleum Corp	MPC	\$ 28,462.61	0.13%	3.33%	14.50%	18.07%	0.0243%
Merck & Co Inc	MRK	\$ 194,539.90	0.92%	3.01%	5.50%	8.59%	0.0789%
Marathon Oil Corp	MRO	\$ 13,240.40	N/A	1.39%	N/A	N/A	N/A
Morgan Stanley	MS	\$ 72,569.56	0.34%	2.85%	11.00%	14.01%	0.0480%
MSCI Inc	MSCI	\$ 14,329.03	0.07%	1.56%	22.00%	23.73%	0.0161%
Microsoft Corp	MSFT	\$ 815,616.00	3.85%	1.73%	15.00%	16.86%	0.6491%
Motorola Solutions Inc	MSI	\$ 18,768.16	0.09%	1.99%	13.00%	15.12%	0.0134%
M&T Bank Corp	MTB	\$ 23,823.69	0.11%	2.38%	12.00%	14.52%	0.0163%
Mettler-Toledo International Inc	MTD	\$ 15,168.50	0.07%	0.00%	11.00%	11.00%	0.0079%
Micron Technology Inc	MU	\$ 40,980.80	0.19%	0.00%	7.50%	7.50%	0.0145%
Maxim Integrated Products Inc	MXIM	\$ 15,111.02	0.07%	3.37%	11.50%	15.06%	0.0107%
Mylan NV	MYL	\$ 14,545.44	0.07%	0.00%	14.00%	14.00%	0.0096%
Noble Energy Inc	NBL	\$ 10,214.92	N/A	2.07%	N/A	N/A	N/A
Norwegian Cruise Line Holdings Ltd	NCLH	\$ 10,414.06	0.05%	0.00%	16.50%	16.50%	0.0081%
Nasdaq Inc	NDAQ	\$ 13,934.03	0.07%	2.07%	9.50%	11.67%	0.0077%
NextEra Energy Inc	NEE	\$ 86,163.92	0.41%	2.77%	9.00%	11.89%	0.0484%
Newmont Mining Corp	NEM	\$ 17,141.00	0.08%	1.74%	5.00%	6.78%	0.0055%
Netflix Inc	NFLX	\$ 142,455.90	0.67%	0.00%	47.00%	47.00%	0.3160%
Newfield Exploration Co	NFX	\$ 3,668.10	0.02%	0.00%	25.00%	25.00%	0.0043%
NiSource Inc	NI	\$ 9,751.03	0.05%	2.91%	18.00%	21.17%	0.0097%
NIKE Inc	NKE	\$ 126,853.90	0.60%	1.09%	16.00%	17.18%	0.1029%
Nektar Therapeutics	NKTR	\$ 7,481.26	N/A	0.00%	N/A	N/A	N/A
Nielsen Holdings PLC	NLSN	\$ 8,973.97	0.04%	5.54%	3.00%	8.62%	0.0037%
Northrop Grumman Corp	NOC	\$ 46,875.02	0.22%	1.78%	13.00%	14.90%	0.0330%
National Oilwell Varco Inc	NOV	\$ 11,262.68	0.05%	0.68%	41.50%	42.32%	0.0225%
NRG Energy Inc	NRG	\$ 12,098.78	N/A	0.29%	N/A	N/A	N/A
Norfolk Southern Corp	NSC	\$ 45,193.26	0.21%	2.07%	13.50%	15.71%	0.0335%
NetApp Inc	NTAP	\$ 15,740.38	0.07%	2.58%	20.50%	23.34%	0.0173%
Northern Trust Corp	NTRS	\$ 19,786.07	0.09%	2.69%	11.00%	13.84%	0.0129%
Nucor Corp	NUE	\$ 17,853.37	0.08%	2.81%	20.50%	23.60%	0.0199%
NVIDIA Corp	NVDA	\$ 96,282.40	0.45%	0.41%	23.00%	23.46%	0.1066%
Newell Brands Inc	NWL	\$ 10,282.30	0.05%	4.39%	9.50%	14.10%	0.0068%
News Corp	NWSA	\$ 7,275.32	N/A	1.61%	N/A	N/A	N/A
Realty Income Corp	O	\$ 18,263.59	0.09%	4.22%	4.50%	8.81%	0.0076%
ONEOK Inc	OKE	\$ 25,771.64	0.12%	5.59%	20.50%	26.66%	0.0324%
Omnicom Group Inc	OMC	\$ 17,186.61	0.08%	3.13%	7.00%	10.24%	0.0083%
Oracle Corp	ORCL	\$ 178,694.40	0.84%	1.55%	8.50%	10.12%	0.0853%
O'Reilly Automotive Inc	ORLY	\$ 27,312.82	0.13%	0.00%	13.00%	13.00%	0.0168%
Occidental Petroleum Corp	OXY	\$ 48,994.14	N/A	4.83%	N/A	N/A	N/A
Paychex Inc	PAYX	\$ 25,000.54	0.12%	3.39%	11.00%	14.58%	0.0172%
People's United Financial Inc	PBCT	\$ 5,614.71	0.03%	4.33%	11.00%	15.57%	0.0041%
PACCAR Inc	PCAR	\$ 21,614.14	0.10%	5.31%	7.50%	13.01%	0.0133%
Public Service Enterprise Group Inc	PEG	\$ 26,832.96	0.13%	3.53%	4.00%	7.60%	0.0096%
PepsiCo Inc	PEP	\$ 154,614.00	0.73%	3.39%	7.50%	11.02%	0.0804%
Pfizer Inc	PFE	\$ 236,710.40	1.12%	3.52%	14.00%	17.77%	0.1985%
Principal Financial Group Inc	PFG	\$ 13,924.76	0.07%	4.40%	6.50%	11.04%	0.0073%
Procter & Gamble Co/The	PG	\$ 235,899.00	1.11%	3.05%	10.50%	13.71%	0.1527%
Progressive Corp/The	PGR	\$ 38,041.45	0.18%	1.76%	15.50%	17.40%	0.0312%
Parker-Hannifin Corp	PH	\$ 20,920.41	0.10%	1.92%	14.00%	16.05%	0.0159%
PulteGroup Inc	PHM	\$ 7,531.19	0.04%	1.65%	15.50%	17.28%	0.0061%
Packaging Corp of America	PKG	\$ 8,724.24	0.04%	3.42%	9.50%	13.08%	0.0054%

Company	Ticker	[4]	[5]	[6]	[7]	[8]	[9]
		Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
PerkinElmer Inc	PKI	\$ 9,457.95	0.04%	0.33%	12.50%	12.85%	0.0057%
Prologis Inc	PLD	\$ 34,448.40	0.16%	3.09%	9.00%	12.23%	0.0199%
Philip Morris International Inc	PM	\$ 111,225.90	0.53%	6.37%	7.50%	14.11%	0.0741%
PNC Financial Services Group Inc/The	PNC	\$ 57,200.22	0.27%	3.07%	9.50%	12.72%	0.0343%
Pentair PLC	PNR	\$ 7,023.90	0.03%	1.78%	5.50%	7.33%	0.0024%
Pinnacle West Capital Corp	PNW	\$ 9,853.67	0.05%	3.46%	6.00%	9.56%	0.0044%
PPG Industries Inc	PPG	\$ 24,521.04	0.12%	1.88%	4.50%	6.42%	0.0074%
PPL Corp	PPL	\$ 22,152.43	0.10%	5.46%	2.00%	7.51%	0.0079%
Perrigo Co PLC	PRGO	\$ 6,095.90	0.03%	1.87%	0.50%	2.37%	0.0007%
Prudential Financial Inc	PRU	\$ 37,867.05	0.18%	3.94%	6.50%	10.57%	0.0189%
Public Storage	PSA	\$ 35,227.84	0.17%	4.29%	7.00%	11.44%	0.0190%
Phillips 66	PSX	\$ 42,114.55	0.20%	3.73%	8.00%	11.88%	0.0236%
PVH Corp	PVH	\$ 8,045.81	0.04%	0.14%	11.00%	11.15%	0.0042%
Quanta Services Inc	PWR	\$ 5,002.94	0.02%	0.48%	19.50%	20.03%	0.0047%
Pioneer Natural Resources Co	PXD	\$ 23,576.60	0.11%	0.36%	75.00%	75.50%	0.0840%
PayPal Holdings Inc	PYPL	\$ 108,611.60	0.51%	0.00%	18.50%	18.50%	0.0948%
QUALCOMM Inc	QCOM	\$ 61,937.39	0.29%	5.18%	10.50%	15.95%	0.0466%
Qorvo Inc	QRVO	\$ 7,925.42	N/A	0.00%	N/A	N/A	N/A
Royal Caribbean Cruises Ltd	RCL	\$ 22,935.34	0.11%	2.55%	11.00%	13.69%	0.0148%
Everest Re Group Ltd	RE	\$ 8,768.37	0.04%	2.64%	10.00%	12.77%	0.0053%
Regency Centers Corp	REG	\$ 10,493.58	0.05%	3.61%	14.00%	17.86%	0.0088%
Regeneron Pharmaceuticals Inc	REGN	\$ 43,362.55	0.20%	0.00%	16.50%	16.50%	0.0338%
Regions Financial Corp	RF	\$ 17,006.08	0.08%	3.74%	13.50%	17.49%	0.0140%
Robert Half International Inc	RHI	\$ 7,323.77	0.03%	1.99%	9.00%	11.08%	0.0038%
Red Hat Inc	RHT	\$ 31,171.63	0.15%	0.00%	17.50%	17.50%	0.0257%
Raymond James Financial Inc	RJF	\$ 11,712.53	0.06%	1.74%	12.00%	13.84%	0.0077%
Ralph Lauren Corp	RL	\$ 8,930.67	0.04%	2.25%	7.00%	9.33%	0.0039%
ResMed Inc	RMD	\$ 16,714.55	0.08%	1.26%	11.00%	12.33%	0.0097%
Rockwell Automation Inc	ROK	\$ 19,707.81	0.09%	2.42%	10.50%	13.05%	0.0121%
Rollins Inc	ROL	\$ 12,366.07	0.06%	1.11%	15.50%	16.70%	0.0097%
Roper Technologies Inc	ROP	\$ 28,826.22	0.14%	0.66%	14.50%	15.21%	0.0207%
Ross Stores Inc	ROST	\$ 33,840.49	0.16%	1.05%	11.50%	12.61%	0.0201%
Republic Services Inc	RSG	\$ 24,617.66	0.12%	2.02%	13.50%	15.66%	0.0182%
Raytheon Co	RTN	\$ 47,401.20	0.22%	2.09%	11.00%	13.20%	0.0295%
SBA Communications Corp	SBAC	\$ 20,556.21	0.10%	0.00%	45.50%	45.50%	0.0441%
Starbucks Corp	SBUX	\$ 84,751.14	0.40%	2.35%	15.00%	17.53%	0.0701%
Charles Schwab Corp/The	SCHW	\$ 64,045.30	0.30%	1.10%	16.00%	17.19%	0.0520%
Sealed Air Corp	SEE	\$ 5,889.81	0.03%	1.71%	19.00%	20.87%	0.0058%
Sherwin-Williams Co/The	SHW	\$ 36,538.48	0.17%	0.89%	13.00%	13.95%	0.0241%
SVB Financial Group	SIVB	\$ 12,160.17	0.06%	0.00%	21.50%	21.50%	0.0123%
JM Smucker Co/The	SJM	\$ 11,581.43	0.05%	3.40%	4.50%	7.98%	0.0044%
Schlumberger Ltd	SLB	\$ 60,321.97	0.28%	4.59%	26.00%	31.19%	0.0888%
SL Green Realty Corp	SLG	\$ 8,104.64	0.04%	4.00%	6.50%	10.63%	0.0041%
Snap-on Inc	SNA	\$ 9,177.31	0.04%	2.33%	8.00%	10.42%	0.0045%
Synopsys Inc	SNPS	\$ 12,785.82	0.06%	0.00%	10.50%	10.50%	0.0063%
Southern Co/The	SO	\$ 47,912.04	0.23%	5.13%	3.00%	8.21%	0.0186%
Simon Property Group Inc	SPG	\$ 54,536.84	0.26%	4.85%	3.00%	7.92%	0.0204%
S&P Global Inc	SPGI	\$ 47,312.21	0.22%	1.14%	13.50%	14.72%	0.0329%
Sempra Energy	SRE	\$ 31,057.90	0.15%	3.42%	9.50%	13.08%	0.0192%
SunTrust Banks Inc	STI	\$ 27,505.23	0.13%	3.43%	13.50%	17.16%	0.0223%
State Street Corp	STT	\$ 27,065.23	0.13%	2.76%	9.00%	11.88%	0.0152%
Seagate Technology PLC	STX	\$ 11,722.62	0.06%	6.15%	9.00%	15.43%	0.0085%
Constellation Brands Inc	STZ	\$ 31,287.03	0.15%	1.94%	11.00%	13.05%	0.0193%
Stanley Black & Decker Inc	SWK	\$ 17,861.34	0.08%	2.28%	10.00%	12.39%	0.0104%
Skyworks Solutions Inc	SWKS	\$ 12,423.32	0.06%	2.17%	11.00%	13.29%	0.0078%
Synchrony Financial	SYF	\$ 21,424.75	0.10%	2.82%	10.50%	13.47%	0.0136%
Stryker Corp	SYK	\$ 62,601.48	0.30%	1.24%	13.50%	14.82%	0.0438%
Symantec Corp	SYMC	\$ 12,658.96	0.06%	1.50%	7.50%	9.06%	0.0054%
Sysco Corp	SYT	\$ 32,524.98	0.15%	2.50%	13.00%	15.66%	0.0240%
AT&T Inc	T	\$ 222,470.70	1.05%	6.67%	7.00%	13.90%	0.1460%
Molson Coors Brewing Co	TAP	\$ 13,679.56	0.06%	2.59%	11.00%	13.73%	0.0089%
TransDigm Group Inc	TDG	\$ 18,391.51	0.09%	0.00%	8.00%	8.00%	0.0069%
TE Connectivity Ltd	TEL	\$ 27,700.99	0.13%	2.24%	9.50%	11.85%	0.0155%
Teleflex Inc	TFX	\$ 12,231.21	0.06%	0.51%	11.50%	12.04%	0.0070%
Target Corp	TGT	\$ 36,845.07	0.17%	3.63%	7.00%	10.76%	0.0187%
Tiffany & Co	TIF	\$ 10,668.69	0.05%	2.69%	12.00%	14.85%	0.0075%
TJX Cos Inc/The	TJX	\$ 60,029.50	0.28%	1.64%	13.00%	14.75%	0.0418%
Torchmark Corp	TMK	\$ 9,254.98	0.04%	0.78%	10.00%	10.82%	0.0047%
Thermo Fisher Scientific Inc	TMO	\$ 96,851.73	0.46%	0.28%	10.00%	10.29%	0.0471%
Tapestry Inc	TPR	\$ 10,467.58	0.05%	3.74%	13.00%	16.98%	0.0084%
TripAdvisor Inc	TRIP	\$ 7,801.28	0.04%	0.00%	8.50%	8.50%	0.0031%
T Rowe Price Group Inc	TROW	\$ 22,770.34	0.11%	3.08%	11.50%	14.76%	0.0159%
Travelers Cos Inc/The	TRV	\$ 32,935.82	0.16%	2.48%	5.50%	8.05%	0.0125%
Tractor Supply Co	TSCO	\$ 10,696.49	0.05%	1.55%	10.50%	12.13%	0.0061%
Tyson Foods Inc	TSN	\$ 21,992.94	0.10%	2.50%	7.00%	9.59%	0.0100%
Total System Services Inc	TSS	\$ 16,009.20	0.08%	0.59%	10.50%	11.12%	0.0084%

Company	Ticker	[4]	[5]	[6]	[7]	[8]	[9]
		Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Take-Two Interactive Software Inc	TTWO	\$ 11,549.97	0.05%	0.00%	29.50%	29.50%	0.0161%
Twitter Inc	TWTR	\$ 24,036.34	N/A	0.00%	N/A	N/A	N/A
Texas Instruments Inc	TXN	\$ 98,502.86	0.46%	3.02%	12.50%	15.71%	0.0730%
Textron Inc	TXT	\$ 12,610.95	0.06%	0.15%	15.00%	15.16%	0.0090%
Under Armour Inc	UAA	\$ 9,298.26	0.04%	0.00%	11.50%	11.50%	0.0050%
United Continental Holdings Inc	UAL	\$ 22,895.15	0.11%	0.00%	6.00%	6.00%	0.0065%
UDR Inc	UDR	\$ 11,221.74	0.05%	3.08%	-2.50%	0.54%	0.0003%
Universal Health Services Inc	UHS	\$ 12,010.83	0.06%	0.31%	11.00%	11.33%	0.0064%
Ulta Beauty Inc	ULTA	\$ 17,124.17	0.08%	0.00%	20.00%	20.00%	0.0162%
UnitedHealth Group Inc	UNH	\$ 256,017.10	1.21%	1.35%	15.00%	16.45%	0.1988%
Unum Group	UNM	\$ 7,478.14	0.04%	3.04%	9.50%	12.68%	0.0045%
Union Pacific Corp	UNP	\$ 118,253.60	0.56%	2.00%	13.50%	15.64%	0.0873%
United Parcel Service Inc	UPS	\$ 85,642.30	0.40%	3.89%	8.50%	12.56%	0.0508%
United Rentals Inc	URI	\$ 10,055.14	0.05%	0.00%	17.00%	17.00%	0.0081%
US Bancorp	USB	\$ 82,597.16	0.39%	3.03%	7.50%	10.64%	0.0415%
United Technologies Corp	UTX	\$ 92,561.71	0.44%	2.54%	9.50%	12.16%	0.0531%
Visa Inc	V	\$ 280,219.50	1.32%	0.73%	14.50%	15.28%	0.2021%
Varian Medical Systems Inc	VAR	\$ 11,787.03	0.06%	0.00%	9.50%	9.50%	0.0053%
VF Corp	VFC	\$ 33,099.39	0.16%	2.45%	12.00%	14.60%	0.0228%
Viacom Inc	VIAB	\$ 11,746.33	0.06%	2.75%	4.00%	6.81%	0.0038%
Valero Energy Corp	VLO	\$ 33,525.80	0.16%	4.31%	10.00%	14.53%	0.0230%
Vulcan Materials Co	VMC	\$ 13,209.78	0.06%	1.12%	18.00%	19.22%	0.0120%
Vornado Realty Trust	VNO	\$ 12,507.50	0.06%	4.02%	-5.50%	-1.59%	-0.0009%
Verisk Analytics Inc	VRSK	\$ 19,142.80	0.09%	0.00%	9.00%	9.00%	0.0081%
VeriSign Inc	VRSN	\$ 19,806.91	0.09%	0.00%	12.00%	12.00%	0.0112%
Vertex Pharmaceuticals Inc	VRTX	\$ 47,691.90	N/A	0.00%	N/A	N/A	N/A
Ventas Inc	VTR	\$ 22,003.83	0.10%	5.23%	3.50%	8.82%	0.0092%
Verizon Communications Inc	VZ	\$ 235,814.10	1.11%	4.22%	4.50%	8.81%	0.0981%
Waters Corp	WAT	\$ 16,941.56	0.08%	0.00%	9.50%	9.50%	0.0076%
Walgreens Boots Alliance Inc	WBA	\$ 67,286.51	0.32%	2.47%	11.00%	13.61%	0.0432%
WellCare Health Plans Inc	WCG	\$ 13,579.57	0.06%	0.00%	22.50%	22.50%	0.0144%
Western Digital Corp	WDC	\$ 11,600.46	0.05%	4.98%	1.50%	6.52%	0.0036%
WEC Energy Group Inc	WEC	\$ 22,787.29	0.11%	3.27%	7.00%	10.38%	0.0112%
Welltower Inc	WELL	\$ 27,623.25	0.13%	4.79%	8.50%	13.49%	0.0176%
Wells Fargo & Co	WFC	\$ 235,483.80	1.11%	3.60%	6.00%	9.71%	0.1079%
Whirlpool Corp	WHR	\$ 7,865.60	0.04%	3.74%	8.00%	11.89%	0.0044%
Willis Towers Watson PLC	WLTW	\$ 20,489.82	N/A	1.52%	N/A	N/A	N/A
Waste Management Inc	WM	\$ 40,324.87	0.19%	1.97%	10.50%	12.57%	0.0239%
Williams Cos Inc/The	WMB	\$ 32,079.36	0.15%	5.13%	22.50%	28.21%	0.0427%
Walmart Inc	WMT	\$ 285,761.40	1.35%	2.16%	7.00%	9.24%	0.1246%
Westrock Co	WRK	\$ 10,603.91	0.05%	4.35%	14.50%	19.17%	0.0096%
Western Union Co/The	WU	\$ 8,066.47	0.04%	4.18%	7.00%	11.33%	0.0043%
Weyerhaeuser Co	WY	\$ 18,857.34	0.09%	5.40%	17.50%	23.37%	0.0208%
Wynn Resorts Ltd	WYNN	\$ 12,439.91	0.06%	2.62%	20.00%	22.88%	0.0134%
Cimarex Energy Co	XEC	\$ 7,004.83	0.03%	0.98%	39.00%	40.17%	0.0133%
Xcel Energy Inc	XEL	\$ 26,378.44	0.12%	3.11%	5.50%	8.70%	0.0108%
Xilinx Inc	XLNX	\$ 26,837.74	0.13%	1.36%	11.00%	12.43%	0.0158%
Exxon Mobil Corp	XOM	\$ 302,307.60	1.43%	4.68%	18.00%	23.10%	0.3296%
DENTSPLY SIRONA Inc	XRAY	\$ 9,031.27	0.04%	0.86%	2.50%	3.37%	0.0014%
Xerox Corp	XRX	\$ 5,864.28	0.03%	4.18%	2.50%	6.73%	0.0019%
Xylem Inc/NY	XYL	\$ 12,332.81	0.06%	1.22%	15.50%	16.81%	0.0098%
Yum! Brands Inc	YUM	\$ 29,080.83	0.14%	1.72%	10.00%	11.81%	0.0162%
Zimmer Biomet Holdings Inc	ZBH	\$ 21,468.96	0.10%	0.95%	5.00%	5.97%	0.0061%
Zions Bancorp NA	ZION	\$ 9,339.41	0.04%	2.47%	15.00%	17.66%	0.0078%
Zoetis Inc	ZTS	\$ 40,238.79	0.19%	0.79%	13.50%	14.34%	0.0272%
Total Market Capitalization:		21,185,695.09					17.19%

Notes:

- [1] Equals sum of Col. [9]
[2] Source: Bloomberg Professional
[3] Equals [1] - [2]
[4] Source: Value Line
[5] Equals weight in S&P 500 based on market capitalization
[6] Source: Value Line
[7] Source: Value Line
[8] Equals $([6] \times (1 + (0.5 \times [7]))) + [7]$
[9] Equals Col. [5] x Col. [8]

Bloomberg, Value Line, and Calculated Beta Coefficients

Company	Ticker	[1]	[2]
		Bloomberg	Value Line
Atmos Energy Corporation	ATO	0.506	0.600
Chesapeake Utilities Corporation	CPK	0.628	0.650
New Jersey Resources Corporation	NJR	0.621	0.700
Northwest Natural Gas Company	NWN	0.587	0.600
ONE Gas, Inc.	OGS	0.529	0.650
Southwest Gas Corporation	SWX	0.578	0.700
Spire Inc.	SR	0.469	0.650
Mean		0.560	0.650

Notes:

[1] Source: Bloomberg Professional

[2] Source: Value Line

Capital Asset Pricing Model Results
Bloomberg, and Value Line Derived Market Risk Premium

	[1]	[2]	[3]	[4]	[5]	[6]
			Ex-Ante Market Risk Premium		CAPM	
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg MRP	Value Line MRP
PROXY GROUP AVERAGE BLOOMBERG BETA COEFFICIENT						
Current 30-Year Treasury [7]	3.03%	0.560	11.66%	14.16%	9.56%	10.96%
Projected 30-Year Treasury [8]	3.33%	0.560	11.66%	14.16%	9.86%	11.26%
Long-Term Projected 30-Year Treasury [9]	4.05%	0.560	11.66%	14.16%	10.58%	11.98%
Mean					10.00%	11.40%

			Ex-Ante Market Risk Premium		CAPM	
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg MRP	Value Line MRP
PROXY GROUP AVERAGE VALUE LINE AVERAGE BETA COEFFICIENT						
Current 30-Year Treasury [7]	3.03%	0.650	11.66%	14.16%	10.61%	12.24%
Projected 30-Year Treasury [8]	3.33%	0.650	11.66%	14.16%	10.91%	12.54%
Long-Term Projected 30-Year Treasury [9]	4.05%	0.650	11.66%	14.16%	11.63%	13.25%
Mean					11.05%	12.68%

Notes:

[1] See Notes [9], [10], and [11]

[2] Source: Schedule (RBH)-4

[3] Source: Schedule (RBH)-3

[4] Source: Schedule (RBH)-3

[5] Equals Col. [1] + (Col. [2] x Col. [3])

[6] Equals Col. [1] + (Col. [2] x Col. [4])

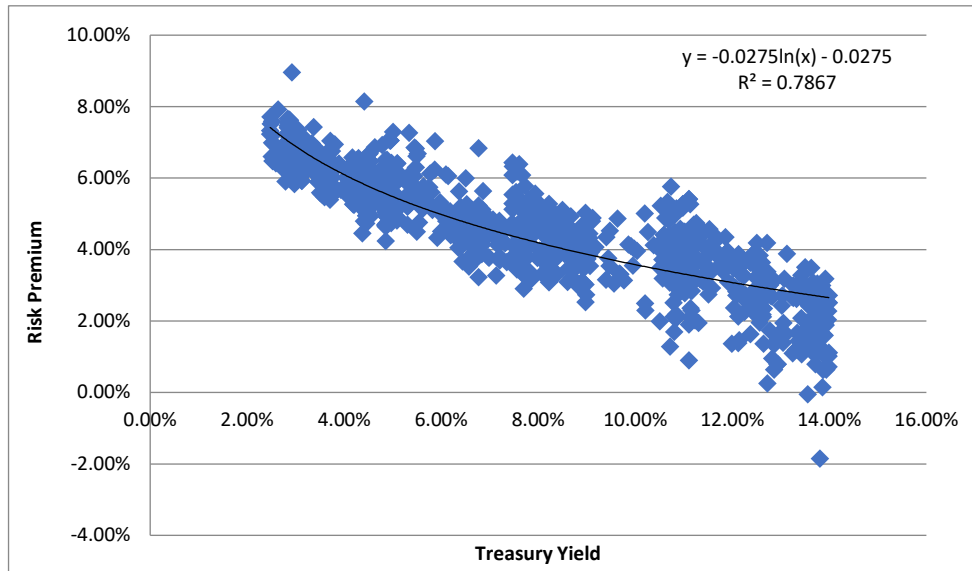
[7] Source: Bloomberg Professional

[8] Source: Blue Chip Financial Forecasts, Vol. 38, No. 2, February 1, 2019, at 2.

[9] Source: Blue Chip Financial Forecasts, Vol. 37, No. 12, December 1, 2018, at 14.

Bond Yield Plus Risk Premium

	[1]	[2]	[3]	[4]	[5]
	Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity
	-2.75%	-2.75%			
Current 30-Year Treasury			3.03%	6.85%	9.89%
Near-Term Projected 30-Year Treasury			3.33%	6.60%	9.93%
Long-Term Projected 30-Year Treasury			4.05%	6.06%	10.11%



Notes:

[1] Constant of regression equation

[2] Slope of regression equation

[3] Source: Current = Bloomberg Professional

Near Term Projected = Blue Chip Financial Forecasts, Vol. 38, No. 2, February 1, 2019, at 2.

Long Term Projected = Blue Chip Financial Forecasts, Vol. 37, No. 12, December 1, 2018, at 14.

[4] Equals [1] + $\ln([3]) \times [2]$

[5] Equals [3] + [4]

[6] Source: S&P Global Market Intelligence

[7] Source: S&P Global Market Intelligence

[8] Source: Bloomberg Professional, equals 187-trading day average (i.e. lag period)

[9] Equals [7] - [8]

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
1/3/1980	12.55%	9.39%	3.16%
1/4/1980	13.75%	9.40%	4.35%
1/14/1980	13.20%	9.44%	3.76%
1/18/1980	14.00%	9.47%	4.53%
1/31/1980	12.61%	9.56%	3.05%
2/8/1980	14.50%	9.63%	4.87%
2/14/1980	13.00%	9.67%	3.33%
2/15/1980	13.00%	9.69%	3.31%
2/29/1980	14.00%	9.86%	4.14%
3/5/1980	14.00%	9.91%	4.09%
3/7/1980	13.50%	9.95%	3.55%
3/14/1980	14.00%	10.04%	3.96%
3/27/1980	12.69%	10.20%	2.49%
4/1/1980	14.75%	10.26%	4.49%
4/29/1980	12.50%	10.51%	1.99%
5/7/1980	14.27%	10.56%	3.71%
5/8/1980	13.75%	10.56%	3.19%
5/19/1980	15.50%	10.62%	4.88%
5/27/1980	14.60%	10.65%	3.95%
5/29/1980	16.00%	10.67%	5.33%
6/10/1980	13.78%	10.71%	3.07%
6/25/1980	14.25%	10.74%	3.51%
7/9/1980	14.51%	10.77%	3.74%
7/17/1980	12.90%	10.79%	2.11%
7/18/1980	13.80%	10.79%	3.01%
7/22/1980	14.10%	10.79%	3.31%
7/23/1980	14.19%	10.79%	3.40%
8/1/1980	12.50%	10.80%	1.70%
8/11/1980	14.85%	10.81%	4.04%
8/21/1980	13.03%	10.84%	2.19%
8/28/1980	13.61%	10.87%	2.74%
8/28/1980	14.00%	10.87%	3.13%
9/4/1980	14.00%	10.90%	3.10%
9/24/1980	15.00%	10.98%	4.02%
10/9/1980	14.50%	11.05%	3.45%
10/9/1980	14.50%	11.05%	3.45%
10/24/1980	14.00%	11.09%	2.91%
10/27/1980	15.20%	11.10%	4.10%
10/27/1980	15.20%	11.10%	4.10%
10/28/1980	12.00%	11.10%	0.90%
10/28/1980	13.00%	11.10%	1.90%
10/31/1980	14.50%	11.12%	3.38%
11/4/1980	15.00%	11.12%	3.88%
11/6/1980	14.35%	11.13%	3.22%
11/10/1980	13.25%	11.14%	2.11%
11/17/1980	15.50%	11.15%	4.35%
11/19/1980	13.50%	11.14%	2.36%
12/5/1980	14.60%	11.13%	3.47%
12/8/1980	16.40%	11.13%	5.27%
12/12/1980	15.45%	11.15%	4.30%
12/17/1980	14.40%	11.16%	3.24%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/17/1980	14.20%	11.16%	3.04%
12/18/1980	14.00%	11.16%	2.84%
12/22/1980	13.45%	11.16%	2.29%
12/26/1980	14.00%	11.15%	2.85%
12/30/1980	14.50%	11.14%	3.36%
12/31/1980	14.56%	11.14%	3.42%
1/7/1981	14.30%	11.13%	3.17%
1/12/1981	14.95%	11.14%	3.81%
1/26/1981	15.25%	11.20%	4.05%
1/30/1981	13.25%	11.23%	2.02%
2/11/1981	14.50%	11.33%	3.17%
2/20/1981	14.50%	11.40%	3.10%
3/12/1981	15.65%	11.60%	4.05%
3/25/1981	15.30%	11.74%	3.56%
4/1/1981	15.30%	11.82%	3.48%
4/9/1981	15.00%	11.91%	3.09%
4/29/1981	13.50%	12.12%	1.38%
4/29/1981	14.25%	12.12%	2.13%
4/30/1981	15.00%	12.14%	2.86%
4/30/1981	13.60%	12.14%	1.46%
5/21/1981	14.00%	12.37%	1.63%
6/3/1981	14.67%	12.46%	2.21%
6/22/1981	16.00%	12.57%	3.43%
6/25/1981	14.75%	12.60%	2.15%
7/2/1981	14.00%	12.64%	1.36%
7/10/1981	16.00%	12.69%	3.31%
7/14/1981	16.90%	12.71%	4.19%
7/21/1981	15.78%	12.78%	3.00%
7/27/1981	13.77%	12.82%	0.95%
7/27/1981	15.50%	12.82%	2.68%
7/31/1981	14.20%	12.86%	1.34%
7/31/1981	13.50%	12.86%	0.64%
8/12/1981	13.72%	12.93%	0.79%
8/12/1981	13.72%	12.93%	0.79%
8/12/1981	14.41%	12.93%	1.48%
8/25/1981	15.45%	13.02%	2.43%
8/27/1981	14.43%	13.04%	1.39%
8/28/1981	15.00%	13.05%	1.95%
9/23/1981	14.34%	13.24%	1.10%
9/24/1981	16.25%	13.26%	2.99%
9/29/1981	14.50%	13.31%	1.19%
9/30/1981	15.94%	13.32%	2.62%
10/2/1981	14.80%	13.36%	1.44%
10/12/1981	16.25%	13.43%	2.82%
10/20/1981	15.25%	13.50%	1.75%
10/20/1981	16.50%	13.50%	3.00%
10/20/1981	17.00%	13.50%	3.50%
10/23/1981	15.50%	13.54%	1.96%
10/26/1981	13.50%	13.56%	-0.06%
10/29/1981	16.50%	13.60%	2.90%
11/4/1981	15.33%	13.62%	1.71%
11/6/1981	15.17%	13.64%	1.53%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/12/1981	15.00%	13.65%	1.35%
11/25/1981	16.10%	13.66%	2.44%
11/25/1981	16.10%	13.66%	2.44%
11/25/1981	15.25%	13.66%	1.59%
11/30/1981	16.75%	13.66%	3.09%
12/1/1981	15.70%	13.66%	2.04%
12/1/1981	16.00%	13.66%	2.34%
12/15/1981	15.81%	13.69%	2.12%
12/17/1981	14.75%	13.70%	1.05%
12/22/1981	16.00%	13.72%	2.28%
12/22/1981	15.70%	13.72%	1.98%
12/30/1981	16.00%	13.74%	2.26%
12/30/1981	16.25%	13.74%	2.51%
1/4/1982	15.50%	13.75%	1.75%
1/14/1982	11.95%	13.80%	-1.85%
1/25/1982	16.25%	13.84%	2.41%
1/27/1982	16.84%	13.85%	2.99%
1/31/1982	14.00%	13.86%	0.14%
2/2/1982	16.24%	13.86%	2.38%
2/8/1982	15.50%	13.87%	1.63%
2/9/1982	14.95%	13.88%	1.07%
2/9/1982	15.75%	13.88%	1.87%
2/11/1982	16.00%	13.89%	2.11%
3/1/1982	15.96%	13.91%	2.05%
3/3/1982	15.00%	13.91%	1.09%
3/8/1982	17.10%	13.92%	3.18%
3/26/1982	16.00%	13.97%	2.03%
3/31/1982	16.25%	13.98%	2.27%
4/1/1982	16.50%	13.98%	2.52%
4/6/1982	15.00%	13.99%	1.01%
4/9/1982	16.50%	13.99%	2.51%
4/12/1982	15.10%	13.99%	1.11%
4/12/1982	16.70%	13.99%	2.71%
4/18/1982	14.70%	13.99%	0.71%
4/27/1982	15.00%	13.97%	1.03%
5/10/1982	14.57%	13.94%	0.63%
5/14/1982	15.80%	13.92%	1.88%
5/20/1982	15.82%	13.91%	1.91%
5/21/1982	15.50%	13.90%	1.60%
5/25/1982	16.25%	13.90%	2.35%
6/2/1982	14.50%	13.87%	0.63%
6/7/1982	16.00%	13.85%	2.15%
6/23/1982	15.50%	13.81%	1.69%
6/25/1982	16.50%	13.81%	2.69%
7/1/1982	16.00%	13.79%	2.21%
7/1/1982	15.55%	13.79%	1.76%
7/2/1982	15.10%	13.79%	1.31%
7/13/1982	16.80%	13.75%	3.05%
7/22/1982	14.50%	13.71%	0.79%
7/28/1982	16.10%	13.68%	2.42%
7/30/1982	14.82%	13.66%	1.16%
8/4/1982	15.58%	13.64%	1.94%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
8/6/1982	16.50%	13.63%	2.87%
8/11/1982	17.11%	13.62%	3.49%
8/25/1982	16.00%	13.59%	2.41%
8/30/1982	16.25%	13.58%	2.67%
9/3/1982	15.50%	13.57%	1.93%
9/9/1982	16.04%	13.55%	2.49%
9/15/1982	16.04%	13.52%	2.52%
9/17/1982	15.25%	13.51%	1.74%
9/29/1982	14.50%	13.43%	1.07%
9/30/1982	16.50%	13.42%	3.08%
9/30/1982	16.70%	13.42%	3.28%
9/30/1982	15.50%	13.42%	2.08%
9/30/1982	14.74%	13.42%	1.32%
10/1/1982	16.50%	13.41%	3.09%
10/8/1982	15.00%	13.33%	1.67%
10/15/1982	15.90%	13.26%	2.64%
10/19/1982	15.90%	13.22%	2.68%
10/27/1982	17.00%	13.12%	3.88%
10/28/1982	14.75%	13.11%	1.64%
11/2/1982	16.25%	13.07%	3.18%
11/4/1982	15.75%	13.03%	2.72%
11/5/1982	14.73%	13.01%	1.72%
11/17/1982	16.00%	12.86%	3.14%
11/23/1982	15.50%	12.79%	2.71%
11/24/1982	16.02%	12.77%	3.25%
11/24/1982	14.50%	12.77%	1.73%
11/30/1982	15.50%	12.72%	2.78%
11/30/1982	16.10%	12.72%	3.38%
11/30/1982	15.50%	12.72%	2.78%
11/30/1982	12.98%	12.72%	0.26%
11/30/1982	15.65%	12.72%	2.93%
11/30/1982	16.00%	12.72%	3.28%
12/3/1982	15.33%	12.68%	2.65%
12/8/1982	15.75%	12.63%	3.12%
12/13/1982	16.00%	12.58%	3.42%
12/14/1982	16.40%	12.57%	3.83%
12/17/1982	16.25%	12.52%	3.73%
12/20/1982	15.00%	12.51%	2.49%
12/21/1982	15.70%	12.49%	3.21%
12/28/1982	15.25%	12.42%	2.83%
12/28/1982	15.25%	12.42%	2.83%
12/29/1982	16.25%	12.41%	3.84%
12/29/1982	16.25%	12.41%	3.84%
1/11/1983	15.90%	12.26%	3.64%
1/12/1983	15.50%	12.24%	3.26%
1/18/1983	15.00%	12.18%	2.82%
1/24/1983	16.00%	12.13%	3.87%
1/24/1983	15.50%	12.13%	3.37%
1/28/1983	14.90%	12.08%	2.82%
1/31/1983	15.00%	12.07%	2.93%
2/10/1983	15.00%	11.97%	3.03%
2/25/1983	15.70%	11.84%	3.86%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
3/2/1983	15.25%	11.79%	3.46%
3/16/1983	16.00%	11.62%	4.38%
3/21/1983	14.96%	11.57%	3.39%
3/23/1983	15.40%	11.53%	3.87%
3/23/1983	16.10%	11.53%	4.57%
3/24/1983	15.00%	11.51%	3.49%
4/12/1983	13.25%	11.30%	1.95%
4/29/1983	15.05%	11.09%	3.96%
5/3/1983	15.40%	11.06%	4.34%
5/9/1983	15.50%	11.00%	4.50%
5/19/1983	14.85%	10.90%	3.95%
5/31/1983	14.00%	10.84%	3.16%
6/2/1983	14.50%	10.82%	3.68%
6/7/1983	14.50%	10.80%	3.70%
6/9/1983	14.85%	10.79%	4.06%
6/20/1983	14.15%	10.74%	3.41%
6/20/1983	16.50%	10.74%	5.76%
6/27/1983	14.50%	10.71%	3.79%
6/30/1983	14.80%	10.70%	4.10%
6/30/1983	15.90%	10.70%	5.20%
7/1/1983	14.80%	10.70%	4.10%
7/5/1983	15.00%	10.69%	4.31%
7/8/1983	15.50%	10.69%	4.81%
7/19/1983	15.10%	10.70%	4.40%
7/19/1983	15.00%	10.70%	4.30%
8/18/1983	15.30%	10.81%	4.49%
8/19/1983	15.79%	10.82%	4.97%
8/29/1983	16.00%	10.85%	5.15%
8/31/1983	15.25%	10.87%	4.38%
8/31/1983	14.75%	10.87%	3.88%
9/8/1983	14.75%	10.89%	3.86%
9/16/1983	15.51%	10.93%	4.58%
9/26/1983	14.50%	10.96%	3.54%
9/28/1983	14.25%	10.97%	3.28%
9/30/1983	16.15%	10.98%	5.17%
9/30/1983	16.25%	10.98%	5.27%
10/1/1983	16.25%	10.98%	5.27%
10/13/1983	15.52%	11.02%	4.50%
10/19/1983	15.20%	11.04%	4.16%
10/26/1983	14.75%	11.06%	3.69%
10/27/1983	15.33%	11.07%	4.26%
10/27/1983	14.88%	11.07%	3.81%
11/9/1983	14.82%	11.10%	3.72%
11/9/1983	16.51%	11.10%	5.41%
11/9/1983	16.51%	11.10%	5.41%
12/1/1983	14.50%	11.17%	3.33%
12/8/1983	15.90%	11.20%	4.70%
12/9/1983	15.30%	11.21%	4.09%
12/12/1983	14.50%	11.22%	3.28%
12/12/1983	15.50%	11.22%	4.28%
12/20/1983	16.00%	11.26%	4.74%
12/20/1983	15.40%	11.26%	4.14%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/22/1983	15.75%	11.27%	4.48%
12/29/1983	15.00%	11.30%	3.70%
12/30/1983	15.00%	11.30%	3.70%
1/10/1984	15.90%	11.34%	4.56%
1/13/1984	15.50%	11.36%	4.14%
1/18/1984	15.53%	11.38%	4.15%
1/26/1984	15.90%	11.42%	4.48%
2/14/1984	14.25%	11.51%	2.74%
2/28/1984	14.50%	11.58%	2.92%
3/20/1984	16.00%	11.70%	4.30%
3/23/1984	15.50%	11.72%	3.78%
4/9/1984	15.20%	11.81%	3.39%
4/18/1984	16.20%	11.86%	4.34%
4/27/1984	15.85%	11.90%	3.95%
5/15/1984	13.35%	11.99%	1.36%
5/16/1984	15.00%	12.00%	3.00%
5/22/1984	14.40%	12.04%	2.36%
6/13/1984	15.50%	12.18%	3.32%
7/10/1984	16.00%	12.37%	3.63%
8/7/1984	16.69%	12.51%	4.18%
8/9/1984	15.33%	12.51%	2.82%
8/17/1984	14.82%	12.54%	2.28%
8/21/1984	14.64%	12.54%	2.10%
8/27/1984	14.52%	12.56%	1.96%
8/28/1984	14.75%	12.57%	2.18%
8/30/1984	15.60%	12.58%	3.02%
9/12/1984	15.90%	12.60%	3.30%
9/12/1984	15.60%	12.60%	3.00%
9/25/1984	16.25%	12.61%	3.64%
10/2/1984	14.80%	12.62%	2.18%
10/9/1984	14.75%	12.63%	2.12%
10/10/1984	15.50%	12.63%	2.87%
10/18/1984	15.00%	12.65%	2.35%
10/24/1984	15.50%	12.65%	2.85%
11/7/1984	15.00%	12.64%	2.36%
11/20/1984	15.92%	12.63%	3.29%
11/30/1984	15.50%	12.60%	2.90%
12/18/1984	15.00%	12.55%	2.45%
12/20/1984	15.00%	12.54%	2.46%
12/28/1984	15.75%	12.51%	3.24%
12/28/1984	16.25%	12.51%	3.74%
1/2/1985	16.00%	12.50%	3.50%
1/31/1985	14.75%	12.37%	2.38%
2/7/1985	14.85%	12.33%	2.52%
2/15/1985	15.00%	12.27%	2.73%
2/20/1985	14.50%	12.25%	2.25%
2/22/1985	14.86%	12.25%	2.61%
3/14/1985	15.50%	12.16%	3.34%
3/28/1985	14.80%	12.08%	2.72%
4/9/1985	15.50%	12.02%	3.48%
4/16/1985	15.70%	11.96%	3.74%
6/10/1985	15.75%	11.58%	4.17%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
6/26/1985	14.82%	11.46%	3.36%
7/9/1985	15.00%	11.38%	3.62%
7/26/1985	14.50%	11.26%	3.24%
8/29/1985	14.50%	11.11%	3.39%
8/30/1985	14.38%	11.11%	3.27%
9/12/1985	15.25%	11.07%	4.18%
9/23/1985	15.30%	11.03%	4.27%
9/25/1985	14.50%	11.02%	3.48%
9/26/1985	13.80%	11.02%	2.78%
9/26/1985	14.50%	11.02%	3.48%
10/25/1985	15.25%	10.91%	4.34%
11/8/1985	12.94%	10.85%	2.09%
11/20/1985	14.90%	10.81%	4.09%
11/25/1985	13.30%	10.79%	2.51%
12/6/1985	12.00%	10.71%	1.29%
12/11/1985	14.90%	10.68%	4.22%
12/20/1985	15.00%	10.59%	4.41%
12/20/1985	14.88%	10.59%	4.29%
12/20/1985	15.00%	10.59%	4.41%
12/30/1985	15.75%	10.53%	5.22%
12/31/1985	14.00%	10.51%	3.49%
12/31/1985	14.50%	10.51%	3.99%
1/17/1986	14.50%	10.38%	4.12%
2/11/1986	12.50%	10.20%	2.30%
2/12/1986	15.20%	10.19%	5.01%
3/11/1986	14.00%	9.98%	4.02%
4/2/1986	12.90%	9.76%	3.14%
4/28/1986	13.01%	9.47%	3.54%
5/21/1986	13.25%	9.18%	4.07%
5/28/1986	14.00%	9.12%	4.88%
5/29/1986	13.90%	9.10%	4.80%
6/2/1986	13.00%	9.08%	3.92%
6/11/1986	14.00%	8.97%	5.03%
6/13/1986	13.55%	8.94%	4.61%
6/27/1986	11.88%	8.77%	3.11%
7/14/1986	12.60%	8.59%	4.01%
7/30/1986	13.30%	8.38%	4.92%
8/14/1986	13.50%	8.22%	5.28%
9/5/1986	13.30%	8.02%	5.28%
9/23/1986	12.75%	7.91%	4.84%
10/30/1986	13.00%	7.67%	5.33%
10/31/1986	13.75%	7.66%	6.09%
11/10/1986	14.00%	7.61%	6.39%
11/19/1986	13.75%	7.56%	6.19%
11/25/1986	13.15%	7.54%	5.61%
12/22/1986	13.80%	7.47%	6.33%
12/30/1986	13.90%	7.47%	6.43%
1/20/1987	12.75%	7.47%	5.28%
1/23/1987	13.55%	7.47%	6.08%
1/27/1987	12.16%	7.47%	4.69%
2/13/1987	12.60%	7.47%	5.13%
2/24/1987	12.00%	7.47%	4.53%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
3/30/1987	12.20%	7.46%	4.74%
3/31/1987	13.00%	7.47%	5.53%
5/5/1987	12.85%	7.60%	5.25%
5/28/1987	13.50%	7.73%	5.77%
6/15/1987	13.20%	7.80%	5.40%
6/30/1987	12.60%	7.85%	4.75%
7/10/1987	12.90%	7.88%	5.02%
7/27/1987	13.50%	7.93%	5.57%
8/25/1987	11.40%	8.09%	3.31%
9/18/1987	13.00%	8.27%	4.73%
10/20/1987	12.60%	8.55%	4.05%
10/20/1987	12.98%	8.55%	4.43%
11/12/1987	12.75%	8.68%	4.07%
11/13/1987	12.75%	8.68%	4.07%
11/24/1987	12.50%	8.73%	3.77%
12/8/1987	12.50%	8.81%	3.69%
12/22/1987	12.00%	8.90%	3.10%
12/31/1987	13.25%	8.94%	4.31%
12/31/1987	12.85%	8.94%	3.91%
1/15/1988	13.15%	8.99%	4.16%
1/20/1988	12.75%	8.99%	3.76%
1/29/1988	13.20%	8.99%	4.21%
2/4/1988	12.60%	8.99%	3.61%
3/23/1988	13.00%	8.95%	4.05%
5/27/1988	13.18%	9.02%	4.16%
6/14/1988	13.50%	9.00%	4.50%
6/17/1988	11.72%	8.99%	2.73%
6/24/1988	11.50%	8.97%	2.53%
7/1/1988	12.75%	8.95%	3.80%
7/8/1988	12.00%	8.93%	3.07%
7/18/1988	12.00%	8.91%	3.09%
7/20/1988	13.40%	8.90%	4.50%
8/8/1988	12.74%	8.90%	3.84%
9/20/1988	12.90%	8.93%	3.97%
9/26/1988	12.40%	8.93%	3.47%
9/27/1988	13.65%	8.93%	4.72%
9/30/1988	13.25%	8.94%	4.31%
10/13/1988	13.10%	8.93%	4.17%
10/21/1988	12.80%	8.94%	3.86%
10/25/1988	13.25%	8.94%	4.31%
10/26/1988	13.50%	8.94%	4.56%
10/27/1988	12.95%	8.94%	4.01%
10/28/1988	13.00%	8.95%	4.05%
11/15/1988	12.00%	8.98%	3.02%
11/29/1988	12.75%	9.01%	3.74%
12/19/1988	13.00%	9.05%	3.95%
12/21/1988	12.90%	9.05%	3.85%
12/22/1988	13.50%	9.05%	4.45%
1/26/1989	12.60%	9.06%	3.54%
1/27/1989	13.00%	9.06%	3.94%
2/8/1989	13.37%	9.05%	4.32%
3/8/1989	13.00%	9.04%	3.96%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
5/4/1989	13.00%	9.04%	3.96%
6/8/1989	13.50%	8.96%	4.54%
7/19/1989	11.80%	8.84%	2.96%
7/25/1989	12.80%	8.82%	3.98%
7/31/1989	13.00%	8.81%	4.19%
8/14/1989	12.50%	8.76%	3.74%
8/22/1989	12.80%	8.73%	4.07%
8/23/1989	12.90%	8.72%	4.18%
9/21/1989	12.10%	8.62%	3.48%
10/6/1989	13.00%	8.58%	4.42%
10/17/1989	12.41%	8.54%	3.87%
10/18/1989	13.25%	8.54%	4.71%
10/20/1989	12.90%	8.53%	4.37%
10/31/1989	13.60%	8.50%	5.10%
11/3/1989	12.93%	8.48%	4.45%
11/5/1989	13.20%	8.48%	4.72%
11/9/1989	12.60%	8.45%	4.15%
11/9/1989	13.00%	8.45%	4.55%
11/28/1989	12.75%	8.37%	4.38%
12/7/1989	13.25%	8.32%	4.93%
12/15/1989	13.00%	8.28%	4.72%
12/20/1989	12.90%	8.26%	4.64%
12/21/1989	12.80%	8.25%	4.55%
12/21/1989	12.90%	8.25%	4.65%
12/27/1989	12.50%	8.23%	4.27%
1/9/1990	13.00%	8.19%	4.81%
1/18/1990	12.50%	8.16%	4.34%
1/26/1990	12.10%	8.14%	3.96%
3/21/1990	12.80%	8.15%	4.65%
3/28/1990	13.00%	8.16%	4.84%
4/5/1990	12.20%	8.17%	4.03%
4/12/1990	13.25%	8.19%	5.06%
4/30/1990	12.45%	8.24%	4.21%
5/31/1990	12.40%	8.31%	4.09%
6/15/1990	13.20%	8.33%	4.87%
6/27/1990	12.90%	8.34%	4.56%
6/29/1990	13.25%	8.35%	4.90%
7/6/1990	12.10%	8.36%	3.74%
7/19/1990	11.70%	8.38%	3.32%
8/31/1990	12.50%	8.53%	3.97%
8/31/1990	12.50%	8.53%	3.97%
9/13/1990	12.50%	8.58%	3.92%
9/18/1990	12.75%	8.60%	4.15%
9/20/1990	12.50%	8.61%	3.89%
10/2/1990	13.00%	8.65%	4.35%
10/17/1990	11.90%	8.68%	3.22%
10/31/1990	12.95%	8.70%	4.25%
11/9/1990	13.25%	8.70%	4.55%
11/19/1990	13.00%	8.70%	4.30%
11/21/1990	12.50%	8.70%	3.80%
11/21/1990	12.10%	8.70%	3.40%
11/28/1990	12.75%	8.70%	4.05%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/29/1990	12.75%	8.70%	4.05%
12/18/1990	13.10%	8.68%	4.42%
12/20/1990	12.50%	8.67%	3.83%
12/21/1990	13.60%	8.67%	4.93%
12/21/1990	13.00%	8.67%	4.33%
12/21/1990	12.50%	8.67%	3.83%
1/3/1991	13.02%	8.66%	4.36%
1/16/1991	13.25%	8.63%	4.62%
1/25/1991	11.70%	8.61%	3.09%
2/15/1991	12.70%	8.56%	4.14%
2/15/1991	12.80%	8.56%	4.24%
4/3/1991	13.00%	8.51%	4.49%
4/30/1991	12.45%	8.48%	3.97%
4/30/1991	13.00%	8.48%	4.52%
6/25/1991	11.70%	8.34%	3.36%
6/28/1991	12.50%	8.34%	4.16%
7/1/1991	11.70%	8.34%	3.36%
7/19/1991	12.10%	8.31%	3.79%
7/19/1991	12.30%	8.31%	3.99%
7/22/1991	12.90%	8.30%	4.60%
8/15/1991	12.25%	8.28%	3.97%
8/29/1991	13.30%	8.26%	5.04%
9/27/1991	12.50%	8.23%	4.27%
9/30/1991	12.40%	8.23%	4.17%
10/3/1991	11.30%	8.22%	3.08%
10/9/1991	11.70%	8.21%	3.49%
10/15/1991	13.40%	8.20%	5.20%
11/1/1991	12.90%	8.20%	4.70%
11/8/1991	12.75%	8.20%	4.55%
11/26/1991	12.00%	8.18%	3.82%
11/26/1991	11.60%	8.18%	3.42%
11/27/1991	12.70%	8.18%	4.52%
12/6/1991	12.70%	8.16%	4.54%
12/10/1991	11.75%	8.15%	3.60%
12/19/1991	12.60%	8.14%	4.46%
12/19/1991	12.80%	8.14%	4.66%
12/30/1991	12.10%	8.11%	3.99%
1/22/1992	12.84%	8.05%	4.79%
1/31/1992	12.00%	8.03%	3.97%
2/20/1992	13.00%	8.00%	5.00%
2/27/1992	11.75%	7.98%	3.77%
3/18/1992	12.50%	7.94%	4.56%
5/15/1992	12.75%	7.86%	4.89%
6/24/1992	12.20%	7.85%	4.35%
6/29/1992	11.00%	7.85%	3.15%
7/14/1992	12.00%	7.83%	4.17%
7/22/1992	11.20%	7.82%	3.38%
8/10/1992	12.10%	7.79%	4.31%
8/26/1992	12.43%	7.75%	4.68%
9/30/1992	11.60%	7.72%	3.88%
10/6/1992	12.25%	7.72%	4.53%
10/13/1992	12.75%	7.71%	5.04%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/23/1992	11.65%	7.71%	3.94%
10/28/1992	12.25%	7.71%	4.54%
10/29/1992	12.75%	7.70%	5.05%
10/30/1992	11.40%	7.70%	3.70%
11/9/1992	10.60%	7.70%	2.90%
11/25/1992	12.00%	7.68%	4.32%
11/25/1992	11.00%	7.68%	3.32%
12/3/1992	11.85%	7.66%	4.19%
12/16/1992	11.90%	7.64%	4.26%
12/22/1992	12.40%	7.62%	4.78%
12/22/1992	12.30%	7.62%	4.68%
12/30/1992	12.00%	7.61%	4.39%
12/31/1992	12.00%	7.61%	4.39%
1/12/1993	12.00%	7.59%	4.41%
1/12/1993	12.00%	7.59%	4.41%
2/2/1993	11.40%	7.53%	3.87%
2/22/1993	11.60%	7.48%	4.12%
4/23/1993	11.75%	7.27%	4.48%
5/3/1993	11.75%	7.25%	4.50%
5/3/1993	11.50%	7.25%	4.25%
6/3/1993	12.00%	7.20%	4.80%
6/7/1993	11.50%	7.20%	4.30%
6/22/1993	11.75%	7.16%	4.59%
7/21/1993	11.78%	7.06%	4.72%
7/21/1993	11.90%	7.06%	4.84%
7/23/1993	11.50%	7.05%	4.45%
7/29/1993	11.50%	7.03%	4.47%
8/12/1993	10.75%	6.97%	3.78%
8/24/1993	11.50%	6.92%	4.58%
8/31/1993	11.90%	6.88%	5.02%
9/1/1993	11.25%	6.87%	4.38%
9/1/1993	11.47%	6.87%	4.60%
9/27/1993	10.50%	6.74%	3.76%
9/29/1993	11.00%	6.72%	4.28%
9/30/1993	11.60%	6.72%	4.88%
10/8/1993	11.50%	6.67%	4.83%
10/14/1993	11.20%	6.65%	4.55%
10/15/1993	11.75%	6.64%	5.11%
10/25/1993	11.55%	6.60%	4.95%
10/28/1993	11.50%	6.58%	4.92%
10/29/1993	11.25%	6.57%	4.68%
10/29/1993	10.20%	6.57%	3.63%
10/29/1993	10.10%	6.57%	3.53%
11/2/1993	10.80%	6.56%	4.24%
11/12/1993	11.80%	6.53%	5.27%
11/23/1993	12.50%	6.51%	5.99%
11/26/1993	11.00%	6.50%	4.50%
12/1/1993	11.45%	6.49%	4.96%
12/16/1993	11.20%	6.45%	4.75%
12/16/1993	10.60%	6.45%	4.15%
12/21/1993	11.30%	6.44%	4.86%
12/22/1993	11.00%	6.44%	4.56%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/23/1993	10.10%	6.44%	3.66%
1/5/1994	11.50%	6.41%	5.09%
1/10/1994	11.00%	6.40%	4.60%
1/25/1994	12.00%	6.37%	5.63%
2/2/1994	10.40%	6.35%	4.05%
2/9/1994	10.70%	6.34%	4.36%
4/6/1994	11.24%	6.35%	4.89%
4/25/1994	11.00%	6.39%	4.61%
6/16/1994	10.50%	6.63%	3.87%
6/23/1994	10.60%	6.67%	3.93%
7/19/1994	10.70%	6.83%	3.87%
9/29/1994	11.00%	7.20%	3.80%
9/29/1994	10.90%	7.20%	3.70%
10/7/1994	11.87%	7.26%	4.61%
10/18/1994	11.50%	7.32%	4.18%
10/18/1994	11.50%	7.32%	4.18%
10/24/1994	11.00%	7.35%	3.65%
11/22/1994	12.12%	7.52%	4.60%
11/29/1994	11.30%	7.55%	3.75%
12/1/1994	11.00%	7.56%	3.44%
12/8/1994	11.70%	7.59%	4.11%
12/8/1994	11.50%	7.59%	3.91%
12/12/1994	11.82%	7.60%	4.22%
12/14/1994	11.50%	7.61%	3.89%
12/19/1994	11.50%	7.62%	3.88%
4/19/1995	11.00%	7.72%	3.28%
9/11/1995	11.30%	7.16%	4.14%
9/15/1995	10.40%	7.13%	3.27%
9/29/1995	11.50%	7.06%	4.44%
10/13/1995	10.76%	6.98%	3.78%
11/7/1995	12.50%	6.86%	5.64%
11/8/1995	11.30%	6.85%	4.45%
11/8/1995	11.10%	6.85%	4.25%
11/17/1995	10.90%	6.81%	4.09%
11/20/1995	11.40%	6.80%	4.60%
11/27/1995	13.60%	6.77%	6.83%
12/14/1995	11.30%	6.68%	4.62%
12/20/1995	11.60%	6.65%	4.95%
1/31/1996	11.30%	6.45%	4.85%
3/11/1996	11.60%	6.40%	5.20%
4/3/1996	11.13%	6.41%	4.72%
4/15/1996	10.50%	6.41%	4.09%
4/17/1996	10.77%	6.40%	4.37%
4/26/1996	10.60%	6.40%	4.20%
5/10/1996	11.00%	6.40%	4.60%
5/13/1996	11.25%	6.41%	4.84%
7/3/1996	11.25%	6.49%	4.76%
7/22/1996	11.25%	6.54%	4.71%
10/3/1996	10.00%	6.77%	3.23%
10/29/1996	11.30%	6.84%	4.46%
11/26/1996	11.30%	6.86%	4.44%
11/27/1996	11.30%	6.86%	4.44%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/29/1996	11.00%	6.86%	4.14%
12/12/1996	11.96%	6.85%	5.11%
12/17/1996	11.50%	6.85%	4.65%
1/22/1997	11.30%	6.83%	4.47%
1/27/1997	11.25%	6.83%	4.42%
1/31/1997	11.25%	6.83%	4.42%
2/13/1997	11.00%	6.82%	4.18%
2/13/1997	11.80%	6.82%	4.98%
2/20/1997	11.80%	6.81%	4.99%
3/27/1997	10.75%	6.79%	3.96%
4/29/1997	11.70%	6.81%	4.89%
7/17/1997	12.00%	6.77%	5.23%
10/29/1997	10.75%	6.70%	4.05%
10/31/1997	11.25%	6.70%	4.55%
12/24/1997	10.75%	6.53%	4.22%
4/28/1998	10.90%	6.11%	4.79%
4/30/1998	12.20%	6.10%	6.10%
6/30/1998	11.00%	5.94%	5.06%
8/26/1998	10.93%	5.82%	5.11%
9/3/1998	11.40%	5.80%	5.60%
9/15/1998	11.90%	5.77%	6.13%
10/7/1998	11.06%	5.70%	5.36%
10/30/1998	11.40%	5.63%	5.77%
12/10/1998	12.20%	5.52%	6.68%
12/17/1998	12.10%	5.49%	6.61%
2/19/1999	11.15%	5.32%	5.83%
3/1/1999	10.65%	5.31%	5.34%
3/1/1999	10.65%	5.31%	5.34%
6/8/1999	11.25%	5.35%	5.90%
11/12/1999	10.25%	5.92%	4.33%
12/14/1999	10.50%	5.99%	4.51%
1/28/2000	10.71%	6.16%	4.55%
2/17/2000	10.60%	6.20%	4.40%
5/25/2000	10.80%	6.19%	4.61%
6/19/2000	11.05%	6.18%	4.87%
6/22/2000	11.25%	6.18%	5.07%
7/17/2000	11.06%	6.15%	4.91%
7/20/2000	12.20%	6.14%	6.06%
8/11/2000	11.00%	6.11%	4.89%
9/27/2000	11.25%	6.00%	5.25%
9/29/2000	11.16%	6.00%	5.16%
10/5/2000	11.30%	5.98%	5.32%
11/28/2000	12.90%	5.87%	7.03%
11/30/2000	12.10%	5.86%	6.24%
2/5/2001	11.50%	5.75%	5.75%
3/15/2001	11.25%	5.66%	5.59%
5/8/2001	10.75%	5.61%	5.14%
10/24/2001	11.00%	5.54%	5.46%
10/24/2001	10.30%	5.54%	4.76%
1/9/2002	10.00%	5.50%	4.50%
1/30/2002	11.00%	5.47%	5.53%
1/31/2002	11.00%	5.47%	5.53%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/17/2002	11.50%	5.44%	6.06%
4/29/2002	11.00%	5.45%	5.55%
6/11/2002	11.77%	5.48%	6.29%
6/20/2002	12.30%	5.48%	6.82%
8/28/2002	11.00%	5.49%	5.51%
9/11/2002	11.20%	5.45%	5.75%
9/12/2002	12.30%	5.45%	6.85%
10/28/2002	11.30%	5.35%	5.95%
10/30/2002	10.60%	5.34%	5.26%
11/1/2002	12.60%	5.34%	7.26%
11/7/2002	11.40%	5.33%	6.07%
11/8/2002	10.75%	5.33%	5.42%
11/20/2002	10.00%	5.30%	4.70%
11/20/2002	10.50%	5.30%	5.20%
12/4/2002	10.75%	5.27%	5.48%
12/30/2002	11.20%	5.19%	6.01%
1/6/2003	11.25%	5.16%	6.09%
2/28/2003	12.30%	5.01%	7.29%
3/7/2003	9.96%	4.99%	4.97%
3/12/2003	11.40%	4.97%	6.43%
3/20/2003	12.00%	4.95%	7.05%
4/3/2003	12.00%	4.92%	7.08%
5/2/2003	11.40%	4.88%	6.52%
5/15/2003	11.05%	4.87%	6.18%
6/26/2003	11.00%	4.80%	6.20%
7/1/2003	11.00%	4.80%	6.20%
7/29/2003	11.71%	4.78%	6.93%
8/22/2003	10.20%	4.81%	5.39%
9/17/2003	9.90%	4.85%	5.05%
9/25/2003	10.25%	4.85%	5.40%
10/17/2003	10.54%	4.87%	5.67%
10/22/2003	10.46%	4.87%	5.59%
10/22/2003	10.71%	4.87%	5.84%
10/30/2003	11.00%	4.88%	6.12%
10/31/2003	10.20%	4.88%	5.32%
10/31/2003	10.75%	4.88%	5.87%
11/10/2003	10.60%	4.89%	5.71%
12/9/2003	10.50%	4.93%	5.57%
12/18/2003	10.50%	4.94%	5.56%
12/19/2003	12.00%	4.94%	7.06%
12/19/2003	12.00%	4.94%	7.06%
1/13/2004	10.25%	4.95%	5.30%
1/13/2004	12.00%	4.95%	7.05%
2/9/2004	11.25%	4.98%	6.27%
3/16/2004	10.90%	5.05%	5.85%
3/16/2004	10.90%	5.05%	5.85%
5/25/2004	10.00%	5.06%	4.94%
6/2/2004	11.22%	5.07%	6.15%
6/30/2004	10.50%	5.10%	5.40%
7/8/2004	10.00%	5.10%	4.90%
7/22/2004	10.25%	5.10%	5.15%
8/26/2004	10.50%	5.10%	5.40%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
8/26/2004	10.50%	5.10%	5.40%
9/9/2004	10.40%	5.10%	5.30%
9/21/2004	10.50%	5.09%	5.41%
9/27/2004	10.30%	5.09%	5.21%
9/27/2004	10.50%	5.09%	5.41%
10/20/2004	10.20%	5.08%	5.12%
11/30/2004	10.60%	5.08%	5.52%
12/8/2004	9.90%	5.09%	4.81%
12/21/2004	11.50%	5.09%	6.41%
12/22/2004	11.50%	5.09%	6.41%
12/28/2004	10.25%	5.09%	5.16%
2/18/2005	10.30%	4.95%	5.35%
3/29/2005	11.00%	4.86%	6.14%
4/13/2005	10.60%	4.84%	5.76%
4/28/2005	11.00%	4.80%	6.20%
5/17/2005	10.00%	4.77%	5.23%
6/8/2005	10.18%	4.71%	5.47%
6/10/2005	10.90%	4.71%	6.19%
7/6/2005	10.50%	4.65%	5.85%
7/19/2005	11.50%	4.63%	6.87%
8/11/2005	10.40%	4.60%	5.80%
9/19/2005	9.45%	4.53%	4.92%
9/30/2005	10.51%	4.52%	5.99%
10/4/2005	9.90%	4.52%	5.38%
10/4/2005	10.75%	4.52%	6.23%
10/14/2005	10.40%	4.52%	5.88%
10/31/2005	10.25%	4.53%	5.72%
11/2/2005	9.70%	4.53%	5.17%
11/30/2005	10.00%	4.53%	5.47%
12/9/2005	9.70%	4.53%	5.17%
12/12/2005	11.00%	4.53%	6.47%
12/20/2005	10.13%	4.53%	5.60%
12/21/2005	11.00%	4.52%	6.48%
12/21/2005	10.40%	4.52%	5.88%
12/22/2005	10.20%	4.52%	5.68%
12/22/2005	11.00%	4.52%	6.48%
12/28/2005	10.00%	4.52%	5.48%
1/5/2006	11.00%	4.52%	6.48%
1/25/2006	11.20%	4.52%	6.68%
1/25/2006	11.20%	4.52%	6.68%
2/3/2006	10.50%	4.52%	5.98%
2/15/2006	9.50%	4.53%	4.97%
4/26/2006	10.60%	4.65%	5.95%
7/24/2006	9.60%	4.87%	4.73%
7/24/2006	10.00%	4.87%	5.13%
9/20/2006	11.00%	4.93%	6.07%
9/26/2006	10.75%	4.93%	5.82%
10/20/2006	9.80%	4.96%	4.84%
11/2/2006	9.71%	4.97%	4.74%
11/9/2006	10.00%	4.97%	5.03%
11/21/2006	11.00%	4.98%	6.02%
12/5/2006	10.20%	4.97%	5.23%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
1/5/2007	10.40%	4.95%	5.45%
1/9/2007	11.00%	4.94%	6.06%
1/11/2007	10.90%	4.94%	5.96%
1/19/2007	10.80%	4.93%	5.87%
1/26/2007	10.00%	4.92%	5.08%
2/8/2007	10.40%	4.91%	5.49%
3/14/2007	10.10%	4.86%	5.24%
3/20/2007	10.25%	4.84%	5.41%
3/21/2007	11.35%	4.84%	6.51%
3/22/2007	10.50%	4.84%	5.66%
3/29/2007	10.00%	4.83%	5.17%
6/13/2007	10.75%	4.81%	5.94%
6/29/2007	10.10%	4.84%	5.26%
6/29/2007	9.53%	4.84%	4.69%
7/3/2007	10.25%	4.85%	5.40%
7/13/2007	9.50%	4.86%	4.64%
7/24/2007	10.40%	4.87%	5.53%
8/1/2007	10.15%	4.88%	5.27%
8/29/2007	10.50%	4.91%	5.59%
9/10/2007	9.71%	4.91%	4.80%
9/19/2007	10.00%	4.91%	5.09%
9/25/2007	9.70%	4.92%	4.78%
10/8/2007	10.48%	4.92%	5.56%
10/19/2007	10.50%	4.91%	5.59%
10/25/2007	9.65%	4.91%	4.74%
11/15/2007	10.00%	4.89%	5.11%
11/20/2007	9.90%	4.89%	5.01%
11/27/2007	10.00%	4.88%	5.12%
11/29/2007	10.90%	4.88%	6.02%
12/14/2007	10.80%	4.87%	5.93%
12/18/2007	10.40%	4.86%	5.54%
12/19/2007	9.80%	4.86%	4.94%
12/19/2007	9.80%	4.86%	4.94%
12/19/2007	10.20%	4.86%	5.34%
12/21/2007	9.10%	4.86%	4.24%
1/8/2008	10.75%	4.83%	5.92%
1/17/2008	10.75%	4.81%	5.94%
1/17/2008	10.75%	4.81%	5.94%
2/5/2008	9.99%	4.78%	5.21%
2/5/2008	10.19%	4.78%	5.41%
2/13/2008	10.20%	4.76%	5.44%
3/31/2008	10.00%	4.63%	5.37%
5/28/2008	10.50%	4.53%	5.97%
6/24/2008	10.00%	4.52%	5.48%
6/27/2008	10.00%	4.52%	5.48%
7/31/2008	10.70%	4.50%	6.20%
7/31/2008	10.82%	4.50%	6.32%
8/27/2008	10.25%	4.50%	5.75%
9/2/2008	10.25%	4.50%	5.75%
9/19/2008	10.70%	4.48%	6.22%
9/24/2008	10.68%	4.48%	6.20%
9/24/2008	10.68%	4.48%	6.20%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/24/2008	10.68%	4.48%	6.20%
9/30/2008	10.20%	4.48%	5.72%
10/3/2008	10.30%	4.48%	5.82%
10/8/2008	10.15%	4.47%	5.68%
10/20/2008	10.06%	4.47%	5.59%
10/24/2008	10.60%	4.46%	6.14%
10/24/2008	10.60%	4.46%	6.14%
11/21/2008	10.50%	4.42%	6.08%
11/21/2008	10.50%	4.42%	6.08%
11/21/2008	10.50%	4.42%	6.08%
11/24/2008	10.50%	4.41%	6.09%
12/3/2008	10.39%	4.37%	6.02%
12/24/2008	10.00%	4.26%	5.74%
12/26/2008	10.10%	4.24%	5.86%
12/29/2008	10.20%	4.23%	5.97%
1/13/2009	10.45%	4.14%	6.31%
2/2/2009	10.05%	4.04%	6.01%
3/9/2009	10.30%	3.89%	6.41%
3/25/2009	10.17%	3.84%	6.33%
4/2/2009	10.75%	3.81%	6.94%
5/5/2009	10.75%	3.71%	7.04%
5/15/2009	10.20%	3.70%	6.50%
5/29/2009	9.54%	3.70%	5.84%
6/3/2009	10.10%	3.71%	6.39%
6/22/2009	10.00%	3.73%	6.27%
6/29/2009	10.21%	3.74%	6.47%
6/30/2009	9.31%	3.74%	5.57%
7/17/2009	9.26%	3.75%	5.51%
7/17/2009	10.50%	3.75%	6.75%
10/16/2009	10.40%	4.09%	6.31%
10/26/2009	10.10%	4.11%	5.99%
10/28/2009	10.15%	4.12%	6.03%
10/28/2009	10.15%	4.12%	6.03%
10/30/2009	9.95%	4.12%	5.83%
11/20/2009	9.45%	4.18%	5.27%
12/14/2009	10.50%	4.24%	6.26%
12/16/2009	10.75%	4.25%	6.50%
12/17/2009	10.30%	4.26%	6.04%
12/18/2009	10.40%	4.26%	6.14%
12/18/2009	10.50%	4.26%	6.24%
12/18/2009	10.40%	4.26%	6.14%
12/22/2009	10.20%	4.27%	5.93%
12/22/2009	10.40%	4.27%	6.13%
12/28/2009	10.85%	4.29%	6.56%
12/29/2009	10.38%	4.30%	6.08%
1/11/2010	10.24%	4.34%	5.90%
1/21/2010	10.33%	4.37%	5.96%
1/21/2010	10.23%	4.37%	5.86%
1/26/2010	10.40%	4.37%	6.03%
2/10/2010	10.00%	4.39%	5.61%
2/23/2010	10.50%	4.40%	6.10%
3/9/2010	9.60%	4.40%	5.20%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
3/24/2010	10.13%	4.42%	5.71%
3/31/2010	10.70%	4.43%	6.27%
4/1/2010	9.50%	4.43%	5.07%
4/2/2010	10.10%	4.44%	5.66%
4/8/2010	10.35%	4.44%	5.91%
4/29/2010	9.40%	4.46%	4.94%
4/29/2010	9.19%	4.46%	4.73%
4/29/2010	9.40%	4.46%	4.94%
5/17/2010	10.55%	4.46%	6.09%
5/24/2010	10.05%	4.46%	5.59%
6/3/2010	11.00%	4.46%	6.54%
6/16/2010	10.00%	4.46%	5.54%
6/18/2010	10.30%	4.46%	5.84%
8/9/2010	12.55%	4.41%	8.14%
8/17/2010	10.10%	4.40%	5.70%
9/16/2010	10.30%	4.31%	5.99%
9/16/2010	9.60%	4.31%	5.29%
9/16/2010	10.00%	4.31%	5.69%
9/16/2010	10.00%	4.31%	5.69%
10/21/2010	10.40%	4.20%	6.20%
11/2/2010	9.75%	4.17%	5.58%
11/2/2010	9.75%	4.17%	5.58%
11/3/2010	10.75%	4.17%	6.58%
11/19/2010	10.20%	4.15%	6.05%
12/1/2010	10.00%	4.13%	5.87%
12/6/2010	9.56%	4.12%	5.44%
12/6/2010	10.09%	4.12%	5.97%
12/9/2010	10.25%	4.12%	6.13%
12/14/2010	10.33%	4.11%	6.22%
12/17/2010	10.10%	4.11%	5.99%
12/20/2010	10.10%	4.11%	5.99%
12/23/2010	9.92%	4.10%	5.82%
1/6/2011	10.35%	4.09%	6.26%
1/12/2011	10.30%	4.09%	6.21%
1/13/2011	10.30%	4.09%	6.21%
3/10/2011	10.10%	4.16%	5.94%
3/31/2011	9.45%	4.20%	5.25%
4/18/2011	10.05%	4.23%	5.82%
5/26/2011	10.50%	4.32%	6.18%
6/21/2011	10.00%	4.36%	5.64%
6/29/2011	8.83%	4.38%	4.45%
8/1/2011	9.20%	4.41%	4.79%
9/1/2011	10.10%	4.33%	5.77%
11/14/2011	9.60%	3.93%	5.67%
12/13/2011	9.50%	3.76%	5.74%
12/20/2011	10.00%	3.72%	6.28%
12/22/2011	10.40%	3.70%	6.70%
1/10/2012	9.06%	3.59%	5.47%
1/10/2012	9.45%	3.59%	5.86%
1/10/2012	9.45%	3.59%	5.86%
1/23/2012	10.20%	3.53%	6.67%
1/31/2012	10.00%	3.49%	6.51%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/24/2012	9.75%	3.16%	6.59%
4/24/2012	9.50%	3.16%	6.34%
5/7/2012	9.80%	3.13%	6.67%
5/22/2012	9.60%	3.10%	6.50%
5/24/2012	9.70%	3.09%	6.61%
6/7/2012	10.30%	3.06%	7.24%
6/15/2012	10.40%	3.05%	7.35%
6/18/2012	9.60%	3.05%	6.55%
7/2/2012	9.75%	3.04%	6.71%
10/24/2012	10.30%	2.92%	7.38%
10/26/2012	9.50%	2.92%	6.58%
10/31/2012	10.00%	2.92%	7.08%
10/31/2012	9.30%	2.92%	6.38%
10/31/2012	9.90%	2.92%	6.98%
11/1/2012	9.45%	2.91%	6.54%
11/8/2012	10.10%	2.91%	7.19%
11/9/2012	10.30%	2.90%	7.40%
11/26/2012	10.00%	2.89%	7.11%
11/28/2012	10.40%	2.88%	7.52%
11/28/2012	10.50%	2.88%	7.62%
12/4/2012	10.50%	2.87%	7.63%
12/4/2012	10.00%	2.87%	7.13%
12/20/2012	10.40%	2.84%	7.56%
12/20/2012	10.30%	2.84%	7.46%
12/20/2012	10.10%	2.84%	7.26%
12/20/2012	10.25%	2.84%	7.41%
12/20/2012	10.50%	2.84%	7.66%
12/20/2012	9.50%	2.84%	6.66%
12/26/2012	9.80%	2.83%	6.97%
2/22/2013	9.60%	2.86%	6.74%
3/14/2013	9.30%	2.89%	6.41%
3/27/2013	9.80%	2.92%	6.88%
4/23/2013	9.80%	2.96%	6.84%
5/10/2013	9.25%	2.96%	6.29%
6/13/2013	9.40%	3.01%	6.39%
6/18/2013	9.28%	3.02%	6.26%
6/18/2013	9.28%	3.02%	6.26%
6/25/2013	9.80%	3.04%	6.76%
9/23/2013	9.60%	3.33%	6.27%
11/6/2013	10.20%	3.42%	6.78%
11/13/2013	9.84%	3.44%	6.40%
11/14/2013	10.25%	3.44%	6.81%
11/22/2013	9.50%	3.47%	6.03%
12/5/2013	10.20%	3.50%	6.70%
12/13/2013	9.60%	3.52%	6.08%
12/16/2013	9.73%	3.53%	6.20%
12/17/2013	10.00%	3.53%	6.47%
12/18/2013	9.08%	3.53%	5.55%
12/23/2013	9.72%	3.55%	6.17%
12/30/2013	10.00%	3.57%	6.43%
1/21/2014	9.65%	3.66%	5.99%
1/22/2014	9.18%	3.66%	5.52%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
2/20/2014	9.30%	3.71%	5.59%
2/21/2014	9.85%	3.72%	6.13%
2/28/2014	9.55%	3.73%	5.82%
3/16/2014	9.72%	3.74%	5.98%
4/21/2014	9.50%	3.73%	5.77%
4/22/2014	9.80%	3.73%	6.07%
5/8/2014	9.59%	3.71%	5.88%
5/8/2014	9.10%	3.71%	5.39%
6/6/2014	10.40%	3.66%	6.74%
6/12/2014	10.10%	3.66%	6.44%
6/12/2014	10.10%	3.66%	6.44%
6/12/2014	10.10%	3.66%	6.44%
7/7/2014	9.30%	3.63%	5.67%
7/25/2014	9.30%	3.60%	5.70%
7/31/2014	9.90%	3.59%	6.31%
9/4/2014	9.10%	3.50%	5.60%
9/24/2014	9.35%	3.46%	5.89%
9/30/2014	9.75%	3.44%	6.31%
10/29/2014	10.80%	3.37%	7.43%
11/6/2014	10.20%	3.35%	6.85%
11/14/2014	10.20%	3.33%	6.87%
11/14/2014	10.30%	3.33%	6.97%
11/26/2014	10.20%	3.30%	6.90%
12/3/2014	10.00%	3.29%	6.71%
1/13/2015	10.30%	3.16%	7.14%
1/21/2015	9.05%	3.13%	5.92%
1/21/2015	9.05%	3.13%	5.92%
4/9/2015	9.50%	2.88%	6.62%
5/11/2015	9.80%	2.82%	6.98%
6/17/2015	9.00%	2.79%	6.21%
8/21/2015	9.75%	2.78%	6.97%
10/7/2015	9.55%	2.82%	6.73%
10/13/2015	9.75%	2.83%	6.92%
10/15/2015	9.00%	2.84%	6.16%
10/30/2015	9.80%	2.87%	6.93%
11/19/2015	10.00%	2.89%	7.11%
12/3/2015	10.00%	2.91%	7.09%
12/9/2015	9.60%	2.92%	6.68%
12/11/2015	9.90%	2.92%	6.98%
12/18/2015	9.50%	2.94%	6.56%
1/6/2016	9.50%	2.97%	6.53%
1/6/2016	9.50%	2.97%	6.53%
1/28/2016	9.40%	2.97%	6.43%
2/10/2016	9.60%	2.95%	6.65%
2/16/2016	9.50%	2.94%	6.56%
2/29/2016	9.40%	2.92%	6.48%
4/29/2016	9.80%	2.83%	6.97%
5/5/2016	9.49%	2.82%	6.67%
6/1/2016	9.55%	2.80%	6.75%
6/3/2016	9.65%	2.79%	6.86%
6/15/2016	9.00%	2.77%	6.23%
6/15/2016	9.00%	2.77%	6.23%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/2/2016	9.50%	2.56%	6.94%
9/23/2016	9.75%	2.52%	7.23%
9/27/2016	9.50%	2.51%	6.99%
9/29/2016	9.11%	2.50%	6.61%
10/13/2016	10.20%	2.48%	7.72%
10/28/2016	9.70%	2.47%	7.23%
11/9/2016	9.80%	2.47%	7.33%
11/18/2016	10.00%	2.49%	7.51%
12/9/2016	10.10%	2.51%	7.59%
12/15/2016	9.00%	2.53%	6.47%
12/15/2016	9.00%	2.53%	6.47%
12/20/2016	9.75%	2.53%	7.22%
12/22/2016	9.50%	2.54%	6.96%
1/24/2017	9.00%	2.59%	6.41%
2/21/2017	10.55%	2.63%	7.92%
3/1/2017	9.25%	2.65%	6.60%
4/11/2017	9.50%	2.77%	6.73%
4/20/2017	8.70%	2.79%	5.91%
4/28/2017	9.50%	2.81%	6.69%
5/23/2017	9.60%	2.88%	6.72%
6/6/2017	9.70%	2.91%	6.79%
6/22/2017	9.70%	2.93%	6.77%
6/30/2017	9.60%	2.94%	6.66%
7/20/2017	9.55%	2.97%	6.58%
7/31/2017	10.10%	2.98%	7.12%
9/13/2017	9.40%	2.93%	6.47%
9/19/2017	9.70%	2.92%	6.78%
9/22/2017	11.88%	2.92%	8.96%
9/27/2017	10.20%	2.92%	7.28%
10/20/2017	9.60%	2.90%	6.70%
10/26/2017	10.20%	2.90%	7.30%
10/30/2017	10.05%	2.90%	7.15%
12/5/2017	9.50%	2.86%	6.64%
12/7/2017	9.80%	2.86%	6.94%
12/13/2017	9.25%	2.85%	6.40%
12/28/2017	9.50%	2.84%	6.66%
1/31/2018	9.80%	2.83%	6.97%
2/21/2018	9.80%	2.84%	6.96%
2/21/2018	9.80%	2.84%	6.96%
2/28/2018	9.50%	2.85%	6.65%
3/15/2018	9.00%	2.87%	6.13%
3/26/2018	10.19%	2.88%	7.31%
4/26/2018	9.50%	2.91%	6.59%
4/27/2018	9.30%	2.91%	6.39%
5/2/2018	9.50%	2.91%	6.59%
5/3/2018	9.70%	2.91%	6.79%
5/29/2018	9.40%	2.95%	6.45%
6/6/2018	9.80%	2.96%	6.84%
6/14/2018	8.80%	2.97%	5.83%
7/16/2018	9.60%	2.98%	6.62%
7/20/2018	9.40%	2.99%	6.41%
8/24/2018	9.28%	3.02%	6.26%

Date of Natural Gas Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
8/28/2018	10.00%	3.03%	6.97%
9/13/2018	10.00%	3.04%	6.96%
9/14/2018	10.00%	3.05%	6.95%
9/19/2018	9.85%	3.05%	6.80%
9/20/2018	9.80%	3.05%	6.75%
9/26/2018	9.40%	3.06%	6.34%
9/26/2018	10.20%	3.06%	7.14%
9/28/2018	9.50%	3.07%	6.43%
9/28/2018	9.50%	3.07%	6.43%
10/5/2018	9.61%	3.08%	6.53%
10/15/2018	9.80%	3.09%	6.71%
10/26/2018	9.40%	3.11%	6.29%
10/29/2018	9.60%	3.11%	6.49%
11/1/2018	9.87%	3.11%	6.76%
11/8/2018	9.70%	3.12%	6.58%
11/8/2018	9.70%	3.12%	6.58%
12/4/2018	9.80%	3.14%	6.66%
12/11/2018	9.70%	3.14%	6.56%
12/12/2018	9.30%	3.14%	6.16%
12/13/2018	9.60%	3.14%	6.46%
12/19/2018	9.30%	3.14%	6.16%
12/21/2018	9.35%	3.14%	6.21%
12/24/2018	9.25%	3.14%	6.11%
12/24/2018	9.25%	3.14%	6.11%
1/4/2019	9.80%	3.14%	6.66%
Average:			4.69%
Count:			1,116

Small Size Premium

	[1] Customers (Mil)	[2] (\$Mil)
Elizabethtown Gas Equity	0.3	\$579.37
Median Market to Book for Comp Group		2.18
Elizabethtown Gas Implied Market Cap		\$1,260.64

Company Name	Ticker	[3] Customers (Mil)	[4] Market Cap (\$Mil)	[5] Market to Book Ratio
Atmos Energy Corporation	ATO	3.256	\$10,927.53	2.18
Chesapeake Utilities Corporation	CPK	0.154	\$1,381.80	2.72
New Jersey Resources Corporation	NJR	1.077	\$4,083.48	2.87
Northwest Natural Gas Company	NWN	0.738	\$1,742.03	2.37
ONE Gas, Inc.	OGS	2.166	\$4,190.27	2.08
Southwest Gas Corporation	SWX	2.015	\$4,081.01	1.96
Spire Inc.	SR	1.693	\$3,809.28	1.69
MEDIAN		1.7	\$4,081.01	2.18
MEAN		1.6	\$4,316.49	2.26

Market Capitalization (\$Mil) [6]				
Decile	Low	High	Size Premium	
2	\$ 12,067.589	\$ 25,096.258	0.56%	
3	\$ 6,557.519	\$ 11,978.971	0.87%	
4	\$ 4,097.960	\$ 6,545.548	0.90%	
5	\$ 2,763.719	\$ 4,091.971	1.38%	
6	\$ 1,815.680	\$ 2,759.939	1.60%	
7	\$ 1,175.369	\$ 1,814.568	1.58%	
8	\$ 657.705	\$ 1,170.063	1.88%	
9	\$ 299.400	\$ 656.845	2.50%	
10	\$ 2.531	\$ 299.290	5.37%	
Proxy Group Median	\$ 4,081.012		1.38%	
7th Decile Size Premium	\$ 1,260.636		1.58%	
Difference from Proxy Group Median			0.20%	

Notes:

[1] Source: Company-provided.

[2] Elizabethtown Gas rate base of \$1,103.57 MM multiplied by the proposed common equity ratio of 52.50%.

[3] Source: Bloomberg Professional Services.

[4] Source: Bloomberg Professional Services, 30-day average

[5] Source: Bloomberg Professional Services, 30-day average

[6] Source: Ibbotson Associates, 2018 Ibbotson SBBI Market Report

Two most recent open market common stock issuances per company, if available

Company	Date	Shares Issued	Offering Price	Underwriting Discount	Offering Expense	Net Proceeds Per Share	Total Flotation Costs	Gross Equity Issue Before Costs	Net Proceeds	Flotation Cost Percentage
WGL Holdings, Inc.	6/20/2001	2,058,500	\$26.73	\$0.8950	\$56,218	\$25.81	\$1,898,576	\$55,023,705	\$53,125,130	3.450%
Atmos Energy Corporation	11/28/2018	7,008,087	\$92.75	\$0.9769	\$1,000,000	\$91.63	\$7,846,200	\$650,000,069	\$642,153,869	1.207%
Atmos Energy Corporation	11/28/2017	4,558,404	\$88.56	NA	NA	NA	NA	\$403,692,258	NA	NA
Chesapeake Utilities Corporation	9/21/2016	960,488	\$62.26	\$2.3300	\$157,000	\$59.77	\$2,394,937	\$59,799,983	\$57,405,046	4.005%
Chesapeake Utilities Corporation	11/13/2006	690,345	\$30.10	\$1.1300	\$225,000	\$28.64	\$1,005,090	\$20,779,385	\$19,774,295	4.837%
Northwest Natural Gas Company	11/10/2016	1,012,000	\$54.63	\$2.0500	\$250,000	\$52.33	\$2,324,600	\$55,285,560	\$52,960,960	4.205%
Northwest Natural Gas Company	3/30/2004	1,290,000	\$31.00	\$1.0100	\$175,000	\$29.85	\$1,477,900	\$39,990,000	\$38,512,100	3.696%
Southwest Gas Corporation	11/27/2018	3,565,000	\$75.50	\$2.5481	\$600,000	\$72.78	\$9,683,977	\$269,157,500	\$259,473,524	3.598%
Spire Inc.	5/7/2018	2,300,000	\$68.75	\$2.1094	\$325,000	\$66.50	\$5,176,574	\$158,125,000	\$152,948,426	3.274%
Spire Inc.	5/11/2016	2,185,000	\$63.05	\$2.0491	\$300,000	\$60.86	\$4,777,284	\$137,764,250	\$132,986,967	3.468%
Mean							\$4,065,015	\$184,961,771		
WEIGHTED AVERAGE FLOTATION COSTS:										2.198%

Constant Growth Discounted Cash Flow Model Adjusted for Flotation Costs - 30 Day Average Stock Price													
		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield		Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Value Line Retention Growth	Average Earnings Growth	DCF k(e)	Flotation Adjusted DCF k(e)
					Current	Adjusted for Flot. Costs							
Atmos Energy Corporation	ATO	\$2.10	\$93.27	2.25%	2.34%	2.39%	6.50%	6.45%	7.50%	9.53%	7.49%	9.83%	9.88%
Chesapeake Utilities Corporation	CPK	\$1.48	\$84.37	1.75%	1.83%	1.87%	6.00%	6.00%	8.50%	12.29%	8.20%	10.02%	10.06%
New Jersey Resources Corporation	NJR	\$1.17	\$46.09	2.54%	2.63%	2.69%	7.00%	6.00%	9.50%	7.53%	7.51%	10.14%	10.20%
Northwest Natural Gas Company	NWN	\$1.90	\$60.49	3.14%	3.32%	3.40%	4.30%	4.00%	30.50%	7.32%	11.53%	14.85%	14.93%
ONE Gas, Inc.	OGS	\$2.00	\$79.77	2.51%	2.60%	2.65%	5.90%	5.50%	10.50%	6.29%	7.05%	9.64%	9.70%
Southwest Gas Corporation	SWX	\$2.08	\$77.00	2.70%	2.79%	2.86%	5.00%	6.20%	9.00%	7.25%	6.86%	9.66%	9.72%
Spire Inc.	SR	\$2.37	\$75.12	3.15%	3.23%	3.30%	4.00%	2.70%	6.50%	5.01%	4.55%	7.78%	7.85%
PROXY GROUP MEAN												10.27%	10.34%

Notes:

The proxy group DCF result is adjusted for flotation costs by dividing each company's expected dividend yield by (1 - flotation cost). The flotation cost adjustment is derived as the difference between the unadjusted DCF result and the DCF result adjusted for flotation costs.

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [10])

[5] Equals [4] / (1 - 2.198%)

[6] Source: Zacks

[7] Source: Yahoo! Finance

[8] Source: Value Line

[9] Source: Exhibit RBH-2, Value Line

[10] Equals Average([6], [7], [8], [9])

[11] Equals [4] + [10]

[12] Equals [5] + [10]

[13] Equals average [12] - average [11]

DCF Result Adjusted For Flotation Costs: 10.34%
DCF Result Unadjusted For Flotation Costs: 10.27%
Difference (Flotation Cost Adjustment): 0.06% [13]

Proxy Group Capital Structure

Company	Ticker	% Common Equity								Average
		2018Q3	2018Q2	2018Q1	2017Q4	2017Q3	2017Q2	2017Q1	2016Q4	
Atmos Energy Corporation	ATO	60.85%	60.80%	60.61%	59.80%	55.97%	55.99%	59.92%	59.06%	59.13%
Chesapeake Utilities Corporation	CPK	66.92%	66.88%	68.59%	70.16%	68.49%	68.36%	75.61%	74.95%	70.00%
New Jersey Resources Corporation	NJR	52.11%	53.49%	55.77%	53.59%	51.55%	54.23%	54.25%	51.34%	53.29%
Northwest Natural Holding Company	NWN	47.67%	50.03%	50.45%	48.78%	52.07%	54.58%	54.86%	54.17%	51.58%
ONE Gas, Inc.	SJI	62.81%	62.88%	62.87%	62.16%	61.82%	61.84%	61.98%	61.29%	62.21%
Southwest Gas Holdings, Inc.	SWX	47.43%	48.29%	48.16%	49.87%	49.36%	50.05%	51.89%	50.97%	49.50%
Spire Inc.	SR	52.08%	51.42%	49.70%	49.33%	48.73%	51.30%	49.44%	46.45%	49.81%
Mean		55.70%	56.26%	56.59%	56.24%	55.43%	56.62%	58.28%	56.89%	56.50%

Company	Ticker	% Long-Term Debt								Average
		2018Q3	2018Q2	2018Q1	2017Q4	2017Q3	2017Q2	2017Q1	2016Q4	
Atmos Energy Corporation	ATO	39.15%	39.20%	39.39%	40.20%	44.03%	44.01%	40.08%	40.94%	40.87%
Chesapeake Utilities Corporation	CPK	33.08%	33.12%	31.41%	29.84%	31.51%	31.64%	24.39%	25.05%	30.00%
New Jersey Resources Corporation	NJR	47.89%	46.51%	44.23%	46.41%	48.45%	45.77%	45.75%	48.66%	46.71%
Northwest Natural Holding Company	NWN	52.33%	49.97%	49.55%	51.22%	47.93%	45.42%	45.14%	45.83%	48.42%
ONE Gas, Inc.	SJI	37.19%	37.12%	37.13%	37.84%	38.18%	38.16%	38.02%	38.71%	37.79%
Southwest Gas Holdings, Inc.	SWX	52.57%	51.71%	51.84%	50.13%	50.64%	49.95%	48.11%	49.03%	50.50%
Spire Inc.	SR	47.92%	48.58%	50.30%	50.67%	51.27%	48.70%	50.56%	53.55%	50.19%
Mean		44.30%	43.74%	43.41%	43.76%	44.57%	43.38%	41.72%	43.11%	43.50%

Source: SNL Financial

**IN THE MATTER OF THE PETITION OF
ELIZABETHTOWN GAS COMPANY FOR APPROVAL OF
INCREASED BASE TARIFF RATES AND CHARGES
FOR GAS SERVICE, CHANGES TO DEPRECIATION
RATES AND OTHER TARIFF REVISIONS**

BPU DOCKET NO. GR19_____

DIRECT TESTIMONY

OF

TIMOTHY S. LYONS

Cash Working Capital

**On Behalf Of
Elizabethtown Gas Company**

Exhibit P-8

April 18, 2019

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**ELIZABETHTOWN GAS COMPANY
DIRECT TESTIMONY OF
TIMOTHY S. LYONS**

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Timothy S. Lyons. My business address is 1900 West Park Drive, Suite 250, Westborough, Massachusetts 01581.

Q. PLEASE DESCRIBE YOUR CURRENT POSITION.

A. I am a Partner at ScottMadden, Inc. ("ScottMadden").

Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE AND QUALIFICATIONS.

A. I have more than 30 years of experience in the energy industry. I started my career in 1985 at Boston Gas Company, eventually becoming Director of Rates and Revenue Analysis. In 1993, I moved to Providence Gas Company, eventually becoming Vice President of Marketing and Regulatory Affairs. Starting in 2001, I held a number of management consulting positions in the energy industry first at KEMA and then at Quantec, LLC. In 2005, I became Vice President of Sales and Marketing at Vermont Gas Systems, Inc. before joining Sussex Economic Advisors, LLC ("Sussex") in 2013. Sussex was acquired by ScottMadden on June 1, 2016.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. I hold a Bachelor's degree from St. Anselm College, a Master's degree in Economics from The Pennsylvania State University, and a Master's degree in Business Administration from Babson College.

Q. HAVE YOU PREVIOUSLY SPONSORED TESTIMONY BEFORE THE NEW JERSEY BOARD OF PUBLIC UTILITIES (“BPU” OR “BOARD”)?

A. Yes, I previously sponsored testimony before the Board. A summary of my testimony experience along with my professional and education experience is included in Schedule TSL-1.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to sponsor the results of the lead-lag study conducted on behalf of Elizabethtown Gas Company (“Elizabethtown” or the “Company”), a subsidiary of South Jersey Industries, Inc. The lead-lag study is being submitted by Elizabethtown as part of its base rate filing with the Board. The lead-lag study was used to determine the Company’s Cash Working Capital (“CWC”) requirement, which is included in the Company’s rate base.

Q. ARE YOU SPONSORING ANY SCHEDULES IN CONNECTION WITH YOUR TESTIMONY?

A. Yes. I am sponsoring the following schedules that were prepared by me or under my direction:

- Schedule TSL-1 – Curriculum Vitae;
- Schedule TSL-2 – Elizabethtown Gas Company – Summary of the Cash Working Capital Requirement; and
- Schedule TSL-3 – Elizabethtown Gas Company – Workpapers supporting the Lead-Lag Study.

1 **II. OVERVIEW OF TESTIMONY**

2 **Q. PLEASE DEFINE THE TERM “WORKING CAPITAL” AS A RATE BASE**
3 **COMPONENT.**

4 **A.** The term “working capital” refers to the net funds required by the Company to finance
5 goods and services used to provide service to customers from the time those goods and
6 services are paid for by the Company to the time that payment is received from customers.
7 Goods and services considered in the lead-lag study include: operations and maintenance
8 (“O&M”) expenses, including labor and non-labor expenses; federal, state, and local taxes;
9 and employment taxes.

10 **Q. HOW WAS THE COMPANY’S CASH WORKING CAPITAL REQUIREMENT**
11 **DETERMINED?**

12 **A.** The Company’s cash working capital requirement was determined by applying the results
13 of the lead-lag study to post-test year adjusted expenses. The lead-lag study compares
14 differences between the Company’s revenue lag and expense leads. The revenue lag
15 represents the number of days from the time customers receive their natural gas service to
16 the time customers pay for their natural gas service, *i.e.*, when the funds are available to
17 the Company. The longer the revenue lag, the more cash the Company needs to finance
18 its day-to-day operations. The expense lead represents the number of days from the time
19 the Company receives goods and services used to provide natural gas service to the time
20 payments are made for those goods and services, *i.e.*, when the funds are no longer
21 available to the Company. The longer the expense lead, the less cash the Company needs
22 to fund its day-to-day operations. Together, the revenue lag and expense leads are used to
23 measure the lead-lag days. The lead-lag days are then applied to the Company’s post-test

1 year adjusted expenses to derive the CWC requirement, which is included in the
2 Company's rate base.

3 **III. LEAD-LAG STUDY APPROACH**

4 **Q. PLEASE DESCRIBE THE APPROACH USED TO DEVELOP THE LEAD-LAG**
5 **STUDY.**

6 **A.** The lead-lag study compares differences between the Company's revenue lag and expense
7 leads. The revenue lag measures the number of days from the time natural gas service is
8 provided to customers to the time payment is received from customers. The expense leads
9 measure the number of days from the time goods and services used to provide natural gas
10 service are provided to the Company to the time payments are made by the Company for
11 those goods and services. The lag and leads are measured in days for individual expenses,
12 converted to "dollar-days" that reflect a weighting by expense amount, and then summed
13 across all expenses.

14 **Q. PLEASE DESCRIBE THE FINANCIAL DATA USED IN THE LEAD-LAG**
15 **STUDY.**

16 **A.** The lead-lag study was based on the financial data from January 1, 2018 through December
17 31, 2018. For the period January 1, 2018 through June 30, 2018, this data came from
18 Pivotal Utility Holdings, Inc. d/b/a Elizabethtown Gas ("Pivotal"), the previous owner of
19 Elizabethtown's assets. Beginning July 1, 2018, the data came from Elizabethtown. The
20 data included customer meter reading and billing schedules, O&M expenses, and federal,
21 state, local, and employment taxes. The financial data generally included service periods,
22 billing and payment dates, and amounts.

In certain cases, expense data for the lead-lag study were available for only July 1, 2018 through December 1, 2018. However, the approach is generally consistent with the Company's study in the prior rate case and the results are similar or explained by changes in the Company's operations or procedures.

A. Revenue Lag

Q. PLEASE DESCRIBE DEVELOPMENT OF THE REVENUE LAG.

A. The revenue lag measures the number of days from the time natural gas service is provided to customers to the time payment is received from customers. The revenue lag consists of three components: (1) the service lag; (2) the billing lag; and (3) the collection lag.

Q. WHAT IS THE SERVICE LAG?

A. The service lag measures the average number of days in the service period; *i.e.*, the time between the start and end of the billing month. Meters are read at the end of the billing month. The service lag in this lead-lag study was based on the midpoint of the service period, which reflects that natural gas is delivered evenly over the service period.

Q. WHAT IS THE BILLING LAG?

A. The billing lag measures the number of days from the time meters are read to the time bills are recorded and sent to customers. The billing lag includes time for review and validation of billed usage and dollars. The billing lag in this lead-lag study was based on the Company's meter reading schedule.

The Company has twenty-one meter reading cycles per month, and allows three days to complete the billing process. However, only one day is typically required. Thus, the first day of the billing window was used, which is a somewhat conservative assumption.

Q. WHAT IS THE COLLECTION LAG?

A. The collection lag measures the number of days from the time bills are recorded and sent to customers to the time customer payments are received (*i.e.*, funds are available to the Company). The collection lag in this lead-lag study was based on daily accounts receivable balances and billed revenue data, which were used to calculate the average time to receive customer payments.

Q. WHAT IS THE TOTAL REVENUE LAG USED IN THE LEAD-LAG STUDY?

A. The total revenue lag used in the lead-lag study is 51.03, based on the three components described above and as shown in Schedule TSL-3.

B. Expense Leads

1. Operation and Maintenance Expenses

Q. PLEASE DESCRIBE DEVELOPMENT OF LEAD DAYS FOR O&M EXPENSES.

A. Lead days for O&M expenses were measured separately for the following groups: (1) purchased gas costs; (2) salaries and wages; (3) retirement savings plan (401-K) expenses; (4) group insurance; (5) uncollectible expenses; (6) service company charges; and (7) third-party O&M expenses.

Q. HOW WERE LEAD DAYS DETERMINED FOR PURCHASED GAS EXPENSES?

A. Lead days for purchased gas costs were based on a review of the Company's payment schedules. Lead days were measured as the number of days from the midpoint of the service period to the payment date.

1 **Q. HOW WERE LEAD DAYS DETERMINED FOR REGULAR PAYROLL**
2 **EXPENSES?**

3 **A.** Lead days for regular payroll expenses were based on the Company's payroll process,
4 which pays employees on a bi-weekly or weekly basis. Lead days were measured as the
5 number of days from the midpoint of each pay period to the payment date. Bi-weekly and
6 weekly lead days were dollar-weighted by payroll expenses.

7 **Q. DID THE STUDY ADJUST FOR VARIABLE COMPENSATION EXPENSES?**

8 **A.** Yes. Lead days for the Company's variable compensation expenses were based on
9 differences between the midpoint of the performance period and the payment date. Lead
10 days were measured as the number of days from the midpoint of the January through June
11 performance period to the August 18, 2018 payment date.

12 **Q. HOW WERE LEAD DAYS DETERMINED FOR RETIREMENT SAVINGS (401-**
13 **K) PLAN EXPENSES.**

14 **A.** Lead days for retirement savings (401-K) plan expenses were based on the timing of the
15 Company's matching payments to employees' retirement contributions to their retirement
16 savings plan (401-K). Lead days were measured for the period as the number of days from
17 the midpoint of the payroll period to the contribution date.

18 **Q. HOW WERE LEAD DAYS DETERMINED FOR GROUP INSURANCE**
19 **EXPENSES?**

20 **A.** Lead days for group insurance expenses were based on a review of insurance expenses.
21 Lead days were measured as the number of days from the midpoint of the service period
22 to the payment date.

Q. HOW WERE LEAD DAYS DETERMINED FOR UNCOLLECTIBLE EXPENSES?

A. Lead days for uncollectible expenses were based on the Company's policy for charging customer account balances to uncollectible expense. Once a customer account is disconnected, the billing process stops and a final bill is issued. If the final bill is unpaid after approximately 30 days, a letter is generated requesting payment. If the final bill continues to remain unpaid approximately 30 days after the letter is sent, the customer account is written off and the amount is charged to uncollectible expense. Lead days were measured as the number of days from the midpoint of the service period to the date the customer account balance is charged to uncollectible expense.

Q. HOW WERE LEAD DAYS DETERMINED FOR SOUTH JERSEY INDUSTRIES, INC. SERVICES COMPANY (AFFILIATE) EXPENSES?

A. Lead days for the Services Company/affiliate expenses were based on the payment schedule. Services Company/affiliate payments are made in the month following the service period. Lead days for Service Company/ affiliate expenses were measured as the number of days from midpoint of the service period to the payment date.

Q. HOW WERE LEAD DAYS DETERMINED FOR NON-LABOR OTHER O&M EXPENSES?

A. Lead days for non-labor other O&M expenses were based on a sample of invoices paid by the Company during the study period. Lead days were measured for each invoice as the number of days from the midpoint of the service period to the payment date.

2. Current Income Tax Expense

Q. HOW WERE LEAD DAYS DETERMINED FOR FEDERAL INCOME TAXES?

A. Lead days for federal income taxes were based on due dates for tax payments: April 16, June 15, September 17, and December 17. Lead days for federal income taxes were measured as the number of days from the midpoint of the taxing period (*i.e.*, the calendar year) to the due dates. The study assumes the tax payments reflect equal installments.

Q. HOW WERE LEAD DAYS DETERMINED FOR STATE INCOME TAXES?

A. Lead days for state income taxes were based on due dates for tax payments: April 17, June 15, September 17, and December 17. Lead days for state income taxes were measured as the number of days from the midpoint of the taxing period (*i.e.*, the calendar year) to the due dates. The study assumes the tax payments reflect equal installments.

3. Taxes Other than Income Taxes

Q. PLEASE DESCRIBE DEVELOPMENT OF LEAD DAYS FOR TAXES OTHER THAN INCOME TAXES?

A. Lead days for Taxes Other Than Income Taxes were measured separately for the following groups: (1) payroll-related taxes (FICA, federal unemployment, and state unemployment); and (2) property taxes.

Q. HOW WERE LEAD DAYS DETERMINED FOR EACH OF THESE TAXES?

A. Lead days for FICA taxes were measured as the number of days from the midpoint of the applicable pay period to the payment date. Lead days for federal unemployment taxes were measured as the number of days from liability date at the end of each quarter to the due date. Lead days for state unemployment taxes were measured as the number of days from liability date at the end of each quarter to the due date. Lead days for property taxes were

measured as the number of days from the midpoint of the taxing period to the payment date. The Company makes property tax payments on a quarterly basis. Lead days for property taxes were measured utilizing actual payments for the period July 1, 2018 through December 31, 2018, and estimated payments for the period January 1, 2018 through June 30, 2018 based on the Company's standard payment dates of February 1 and May 1.

4. Return on Invested Capital and Interest Expenses

Q. DID YOU CALCULATE AN EXPENSE LEAD ASSOCIATED WITH RETURN ON INVESTED CAPITAL AND INTEREST PAYMENTS?

A. Yes. Consistent with the Board's practice, the return on invested capital is included in the lead-lag study.¹ A zero expense lead was assigned to the return on common equity, recognizing returns are earned and become the property of the utility's investors at the time services are rendered.

Based on available data, lead days for interest payments related to long-term borrowings, short term commercial paper borrowings, and customer deposits were measured as the number of days from the midpoint of the service period to the payment date for the period July 1, 2018 through December 31, 2018.

5. Deferred Income Taxes

Q. DID YOU INCLUDE DEFERRED INCOME TAXES IN THE LEAD-LAG STUDY?

A. No. It has been the Board's practice to exclude deferred taxes from lead-lag studies.² As such, no deferred income taxes are included in the analysis. However, the Company has

¹ See "Order Adopting Initial Decision with Modifications and Clarifications," BPU Docket No. ER12111052, March 26, 2015, at 14.

² See "Order Adopting Initial Decision with Modifications and Clarifications," BPU Docket No. ER12111052, March 26, 2015, at 13-14.

included excess deferred tax amortization with a zero expense lag because this item is deducted from rate base when the amortization amount is recognized.

6. Depreciation and Other Expense Items

Q. PLEASE DESCRIBE HOW YOU CALCULATED THE LAG ASSOCIATED WITH DEPRECIATION AND AMORTIZATION, PENSION, AND OTHER POST EMPLOYMENT BENEFITS (“OPEB”) EXPENSES.

A. Depreciation and amortization expenses, pension expenses, and OPEB expenses are included with a zero expense lag because these items are deducted from rate base when the expenses are recorded. This is consistent with the prior practice of the Board.³

C. Other Adjustments

Q. PLEASE DESCRIBE ANY ADDITIONAL ADJUSTMENTS MADE TO THE CASH WORKING CAPITAL REQUIREMENT.

A. There was an adjustment for sales and use tax balances. The Company collects these taxes from customers, outside of base rates, and pays the tax to the State. The tax is not a Company expense because the Company only transmits the payments from customers to the State. However, the Company is required to make a substantial prepayment on sales tax, so it has an average prepayment balance on its books. There is a similar adjustment for Universal Service Fund and Lifeline funds, which are also recovered outside base rates.

³ See “Order Adopting Initial Decision with Modifications and Clarifications,” BPU Docket No. ER12111052, March 26, 2015, at 13.

1 **Q. PLEASE EXPLAIN THE TREATMENT OF EMPLOYEE DEDUCTIONS IN THE**
2 **CALCULATION OF THE CASH WORKING CAPITAL REQUIREMENT.**

3 **A.** Employee deductions associated with the employee portion of payroll withholdings are a
4 source of cash working capital to the Company from the time the employee deductions are
5 withheld from employee payroll to the time employee deductions are used to pay for the
6 items for which they were withheld. Therefore, miscellaneous employee deductions are
7 deducted from the cash working capital requirement.

8 **IV. CONCLUSION**

9 **Q. WHAT WERE THE RESULTS OF THE LEAD-LAG STUDY?**

10 **A.** The results of the lead-lag study are included in Schedule TSL-2.

11 **Q. ARE THE RESULTS OF THIS LEAD-LAG STUDY REASONABLE?**

12 **A.** Yes, the study provides an accurate assessment of the Company's actual cash working
13 capital requirements. The resulting cash working capital requirement should be included
14 in the Company's rate base.

15 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

16 **A.** Yes, it does.

Summary

Tim Lyons is a partner with ScottMadden with more than 30 years of experience in the energy industry. Tim has held senior positions at several gas utilities and energy consulting firms. His experience includes rate and regulatory support, sales and marketing, customer service and strategy development. Prior to joining ScottMadden, Tim was Vice President of Sales and Marketing for Vermont Gas. He has also served as Vice President of Marketing and Regulatory Affairs for Providence Gas Company, Director of Rates at Boston Gas Company, and Project Director at Quantec, LLC, an energy consulting firm.

Tim has sponsored testimony before 17 state public utilities commissions. Tim holds a B.A. from St. Anselm College, an M.A. in Economics from The Pennsylvania State University, and an M.B.A. from Babson College.

Areas of Specialization

- Regulation and Rates
- Retail Energy
- Utilities
- Natural Gas

Capabilities

- Regulatory Strategy and Rate Case Support
- Strategic and Business Planning
- Capital Project Planning
- Process Improvements

Articles and Speeches

- "Country Strong: Vermont Gas shares its comprehensive effort to expand natural gas service into rural communities." **American Gas Association**, June 2011 (with Don Gilbert).
- "Talking Safety With Vermont Gas." **American Gas Association**, February 2009 (with Dave Attig).
- "Consumers Say 'Act Now' To Stabilize Prices." **Power & Gas Marketing**, September/ October 2001 (with Jim DeMetro and Gerry Yurkevich).
- "Rate Reclassification: Who Buys What and When." **Public Utilities Fortnightly**, October 15, 1991 (with John Martin).

Recent Assignments

- Sponsored cost of service/rate design testimony for a Mid-Atlantic gas utility. Testimony included a proposal for new residential and commercial rate classes and introduction of a block break rate design.
- Sponsored cost of service/rate design testimony for a Midwest gas utility. Testimony included a proposal for new commercial rate classes and a revenue decoupling mechanism.
- Sponsored cost of service/ rate design and lead-lag testimony for a Midwest gas utility. The testimony included proposals for Revenue Decoupling/ Weather Normalization Mechanism and Tracker Accounts for certain O&M expenses and capital costs.
- Sponsored rate design testimony for a Northeast gas utility. The testimony included: a proposal for zonal rates to promote expansion of natural gas service in the state; market analysis; and financial modeling.
- Led a study for the Massachusetts Department of Energy Resources to evaluate the benefits, costs and policies options associated with natural gas expansion by Massachusetts gas utilities. The study included: (a) research on state regulatory policies; (b) financial modeling and analysis of the economic and environmental impacts of pursuing various policy options; and (c) a survey of Massachusetts homeowners on their opinion of home heating fuels.
- Prepared a transmission and distribution (T&D) avoided cost study and report for a Midwest electric utility. The study was used to support the utility's energy efficiency programs.
- Prepared a review and evaluation of cost of service/ rate design studies for an electric utility. The assignment included review of proposed rate designs that address cost shifting concerns with serving residential distribution generation customers through introduction of higher customer charges, a demand charge and time-of-use energy charges.

- Assisted in the development of an electric portfolio of cost of service, rate design, and rate planning tools. The tools were used to evaluate the impact of future rate filings and resource portfolio decisions on individual rate classes.
- Prepared a market analysis for a utility to evaluate natural gas expansion into new areas, including: (a) survey of homes and businesses; (b) estimate of construction and operating costs; (c) analysis of alternative supply options (including pipeline, LNG and CNG); and (d) financial modeling.
- Directed a process review of natural gas expansion projects for a gas utility. The assignment included a review, evaluation and recommendations related to: (a) policies and procedures; (b) process steps and personnel; (c) financial models and analysis; (d) project decisions and schedules; and (e) post-construction review and evaluation.
- Assisted a New York electric utility in preparation of an Earnings Adjustment Mechanisms (EAM) incentive filing that supports the state's Reforming the Energy Vision (REV). Prepared research and analysis on electric utility incentive mechanisms. Assisted in review and evaluation of other electric utilities EAM incentive proposals, including cost recovery mechanisms. Assisted in development of the utility's EAM incentive proposals. Assisted in preparation of testimony and supporting analysis and workpapers for the EAM incentive proposals filed as part of a rate case.
- Sponsored lead-lag testimony for several electric and gas utilities.

Sponsor	Date	Docket No.	Subject
<i>Regulatory Commission of Alaska</i>			
ENSTAR Natural Gas Company	06/16	Docket No. U-16-066	Adopted testimony and sponsored Lead/Lag study for a general rate case proceeding.
<i>Arkansas Public Service Commission</i>			
Liberty Utilities (Pine Bluff Water)	10/18	Docket No. 18-027-U	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding.
<i>Connecticut Public Utilities Regulatory Authority</i>			
Yankee Gas Company	07/14	Docket No. 13-06-02	Sponsored report and testimony supporting the review and evaluation of gas expansion policies, procedures and analysis.
<i>Illinois Commerce Commission</i>			
Liberty Utilities (Midstates Natural Gas)	07/16	Docket No. 16-0401	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new commercial classes and a decoupling mechanism.
<i>Iowa Utilities Board</i>			
Liberty Utilities (Midstates Natural Gas)	07/16	Docket No. RPU-2016-0003	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new commercial classes.
<i>Kansas Corporation Commission</i>			
The Empire District Electric Company	12/18	Docket No. 19-EPDE-223-RTS	Sponsored testimony supporting cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding.
<i>Maine Public Utilities Commission</i>			
Northern Utilities, Inc. d/b/a Unitil Gas Limited	06/15	Case No. 2015-00146	Sponsored testimony supporting the proposed gas expansion program, including a zone area surcharge.
<i>Maryland Public Service Commission</i>			
Sandpiper Energy, a Chesapeake Utilities company	12/15	Case No. 9410	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new residential and commercial classes.
<i>Massachusetts Department of Public Utilities</i>			
Boston Gas	03/88	Docket No. DPU 88-67-II	Sponsored testimony supporting the rate reclassification of commercial and industrial customers for a rate design proceeding.
Boston Gas	03/90	DPU 90-55	Sponsored testimony supporting the weather and other cost of service adjustments, rate design and customer bill impact studies for a general rate case proceeding.
Boston Gas	10/93	DPU 92-230	Sponsored testimony describing the Company's position regarding rate treatment of vehicular natural gas investments and expenses.

Sponsor	Date	Docket No.	Subject
Liberty Utilities (New England Gas Company)	07/16	DPU 16-109	Sponsored the Long-Range Forecast and Supply Plan filing for the five-year forecast period 2016/2017 through 2020/2021.
Liberty Utilities (New England Gas Company)	07/18	DPU 18-68	Sponsored the Long-Range Forecast and Supply Plan filing for the five-year forecast period 2018/2019 through 2022/2023.
<i>Michigan Public Service Commission</i>			
Midland Cogeneration Ventures, LLC	09/18	Docket No. U-18010	Sponsored testimony evaluating Consumer Energy's cost of service and rate design proposals.
<i>Missouri Public Service Commission</i>			
Liberty Utilities (Midstates Natural Gas)	09/17	Docket No. GR-2018-0013	Sponsored testimony supporting the cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding. The testimony also included proposals for a revenue decoupling/ weather normalization mechanism as well as tracker accounts for certain O&M expenses and capital costs.
Laclede Gas Company	04/17	Docket No. GR-2017-0215	Sponsored testimony supporting the cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding. The testimony included support for a decoupling mechanism.
Missouri Gas Energy	04/17	Docket No. GR-2017-0216	Sponsored testimony supporting the cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding. The testimony included support for a decoupling mechanism.
<i>New Hampshire Public Utilities Commission</i>			
Liberty Utilities d/b/a Granite State Electric Company	04/16	Docket No. DE 16-383	Adopted testimony and sponsored Lead/Lag study for a general rate case proceeding.
Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	11/17	Docket No. DG 17-198	Sponsored testimony supporting a levelized cost analysis for approval of firm supply and transportation agreements.
<i>New Jersey Board of Public Utilities</i>			
Pivotal Utility Holdings, Inc. d/b/a Elizabethtown Gas Company	8/16	GR16090826	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
<i>Corporation Commission of Oklahoma</i>			
The Empire District Electric Company	04/17	Cause No. PUD 201600468	Adopted direct testimony and sponsored rebuttal testimony supporting the revenue requirements for a general rate case proceeding. The testimony included proposals for alternative ratemaking mechanisms.
<i>Rhode Island Public Utilities Commission</i>			
Providence Gas Company	01/96	Docket No. 2076	Sponsored testimony supporting the rate reclassification of customers into new rate classes, rate design (including introduction of demand charges), and customer bill impact studies for a rate design proceeding.

Sponsor	Date	Docket No.	Subject
Providence Gas Company	11/92	Docket No. 2025	Sponsored testimony supporting the Integrated Resource Plan filing, including a performance-based incentive mechanism.
Providence Gas Company	02/96	Docket No. 2374	Sponsored testimony supporting the rate design, customer bill impact studies and retail access tariffs for largest commercial and industrial customers for a rate design proceeding.
Providence Gas Company	04/97	Docket No. 2552	Sponsored testimony supporting the rate design, customer bill impact studies and retail access tariffs for commercial and industrial customers, including redesign of cost of gas adjustment clause, for a rate design proceeding.
Providence Gas Company	08/01 09/00 08/96	Docket No. 1673	Sponsored testimony supporting the changes in cost of gas adjustment factor related to projected under-recovery of gas costs; Filed testimony and witness for pilot hedging program to mitigate price risks to customers; Filed testimony and witness for changes in cost of gas adjustment factor related to extension of rate plan.
Providence Gas Company	06/97	Docket No. 2581	Sponsored testimony supporting a rate plan that fixed all billing rates for three-year period; included funding for critical infrastructure investments in accelerated replacement of mains and services, digitized records system, and economic development projects.
Providence Gas Company	08/00	Docket No. 2581	Sponsored testimony supporting the extension of a rate plan that began in 1997 and included certain modifications, including a weather normalization clause.
Providence Gas Company	03/00	Docket No. 3100	Sponsored testimony supporting the de-tariff and deregulation of appliance repair service, enabling the Company to have needed pricing flexibility.
<i>Railroad Commission of Texas</i>			
CenterPoint Energy – Texas Gulf Division	11/16	GUD No. 10567	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Atmos Pipeline – Texas	01/17	GUD No. 10580	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – Rio Grande Valley Service Area	6/17	GUD No. 10656	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
CenterPoint Energy – South Texas Division	11/17	GUD No. 10669	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – North Texas Service Area	6/18	GUD No. 10739	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – Borger/ Skellytown Service Area	8/18	GUD No. 10766	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
<i>Vermont Public Utilities Commission</i>			

Sponsor	Date	Docket No.	Subject
Vermont Gas Systems	02/11	Docket No. 7712	Sponsored testimony supporting the market evaluation and analysis for a system expansion and reliability regulatory fund.
Vermont Gas Systems	12/12	Docket No. 7970	Sponsored testimony describing the market served by \$90 million natural gas expansion project to Addison County, VT. Also described the terms and economic benefits of a special contract with International Paper.

Elizabethtown Gas Company
Lead-Lag Study
Working Capital Requirement

Line	Description	Post Test Year Adjusted Expenses	Average Daily Expenses	Revenue Lag	Ref.	Expense Lead	Ref.	Net (Lead)/Lag Days	Working Capital Requirement
1	Operations and Maintenance Expenses								
2	Purchased Gas Costs	\$ 137,908,737	377,832	51.03	A	(40.24)	B	10.78	\$ 4,073,835
3	Regular Payroll	26,102,370	71,513	51.03	A	(9.94)	C-1	41.09	2,938,372
4	Variable Compensation	664,312	1,820	51.03	A	(139.75)	C-2	(88.72)	(161,482)
5	Pension/ OPEB	1,509,742	4,136	51.03	A	0.00		51.03	211,054
6	Retirement Savings Plan	890,381	2,439	51.03	A	(18.69)	C-5	32.34	78,881
7	Group Insurance	3,873,375	10,612	51.03	A	(46.15)	C-6	4.87	51,682
8	Uncollectible Expense	2,267,535	6,212	51.03	A	76.66	A	127.68	793,214
9	Service Company Charges	17,653,904	48,367	51.03	A	(46.00)	C-7	5.03	243,050
10	Other Third-Party O&M Expenses	27,313,246	74,831	51.03	A	(59.85)	C-8	(8.82)	(660,105)
11	Total O&M Expenses	\$ 218,183,601							\$ 7,568,502
12	Income Taxes								
13	Excess Deferred Tax Amortization	(2,386,051)	(6,537)	51.03		0.00		51.03	(333,558)
14	Federal Income Taxes	\$ 15,382,846	42,145	51.03	A	(38.25)	D-1	12.78	\$ 538,406
15	State Income Tax	7,244,669	19,848	51.03	A	(38.50)	D-2	12.53	248,604
16	Total Federal Income Taxes	\$ 20,241,464							\$ 453,452
17	Taxes Other Than Income Taxes	\$ 4,043,309	11,078	51.03	A	(12.39)	E	38.64	\$ 427,999
18	Depreciation and Amortization Expense	\$ 43,127,176	118,157	51.03	A	0.00		51.03	\$ 6,028,960
19	Interest Expense								
20	Interest on Long-Term Debt	\$ 23,641,202	64,770	51.03	A	(81.05)	F-1	(30.02)	\$ (1,944,417)
21	Interest on Short-Term Debt	-	-	51.03	A	2.84	F-2	53.86	-
22	Interest on Customer Deposits	68,824	189	51.03	A	(236.39)	F-3	(185.36)	(34,952)
23	Total Interest Expense	\$ 23,710,026							\$ (1,979,369)
24	Return	\$ 60,254,853	165,082	51.03	A	0.00		51.03	\$ 8,423,322
25	Other Adjustments								
26	Incidental collections								\$ 1,559,855
27	Employee deductions								(149,481)
28	Total Other Adjustments								\$ 1,410,374
29	Total	\$ 369,560,429	\$ 294,316						\$ 22,333,239

Elizabethtown Gas Company
Lead-Lag Study
Revenue and Collection Lag

Revenue Lag

Line	Description	Revenue Lag	Reference
1	Service Lag	15.21	
2	Billing Lag	1.45	WP A-1
3	Collection Lag	34.37	WP A-2
4	<u>Composite Revenue Lag</u>	<u>51.03</u>	
Collection Lag			
5	Service Lag	15.21	
6	Billing Lag	1.45	WP A-1
7	Collection Lag	60.00	ETG Policy
8	<u>Composite Revenue Lag</u>	<u>76.66</u>	

Elizabethtown Gas Company
Lead-Lag Study
Purchased Gas

Line	Month	From	To	Invoice	Settlement	Expense	Midpoint	(Lead)/Lag Days	Dollar Days	Composite (Lead)/Lag Days
1	December 2017	12/01/17	12/31/17	01/15/18	01/25/18	\$ 14,508,633	(15.50)	(40.50)	\$ (587,599,631)	
2	January 2018	01/01/18	01/31/18	02/15/18	02/25/18	32,868,102	(15.50)	(40.50)	(1,331,158,148)	
3	February 2018	02/01/18	02/28/18	03/15/18	03/25/18	11,759,233	(14.00)	(39.00)	(458,610,102)	
4	March 2018	03/01/18	03/31/18	04/15/18	04/25/18	13,183,157	(15.50)	(40.50)	(533,917,849)	
5	April 2018	04/01/18	04/30/18	05/15/18	05/25/18	14,600,051	(15.00)	(40.00)	(584,002,046)	
6	May 2018	05/01/18	05/31/18	06/15/18	06/25/18	9,940,369	(15.50)	(40.50)	(402,584,934)	
7	June 2018	06/01/18	06/30/18	07/15/18	07/25/18	8,774,912	(15.00)	(40.00)	(350,996,462)	
8	July 2018	07/01/18	07/31/18	08/15/18	08/25/18	8,939,253	(15.50)	(40.50)	(362,039,765)	
9	August 2018	08/01/18	08/31/18	09/15/18	09/25/18	8,839,267	(15.50)	(40.50)	(357,990,324)	
10	September 2018	09/01/18	09/30/18	10/15/18	10/25/18	8,695,406	(15.00)	(40.00)	(347,816,246)	
11	October 2018	10/01/18	10/31/18	11/15/18	11/25/18	13,117,196	(15.50)	(40.50)	(531,246,423)	
12	November 2018	11/01/18	11/30/18	12/15/18	12/25/18	15,008,685	(15.00)	(40.00)	(600,347,395)	
13	Total		Total			\$ 160,234,264.22			\$ (6,448,309,324)	(40.24)

Elizabethtown Gas Company
Lead-Lag Study
O&M Expenses

Line	Description	(Lead)/Lag Days	Ref.
1	Operations and Maintenance Expenses		
2	Regular Payroll	(9.94)	C-1
3	Variable Compensation	(139.75)	C-1
4	Retirement Savings Plan	(18.69)	C-5
5	Group Insurance	(46.15)	C-6
6	Service Company Charges	(46.00)	C-7
7	Other Third-Party O&M Expenses	(59.85)	C-8
8	Total O&M Expenses		

Elizabethtown Gas Company
Lead-Lag Study
Income Taxes

Line	Description	(Lead)/Lag Days	Ref.
1	Income Taxes		
2	Current Federal Income Taxes	(38.25)	D-1
3	State Income Tax	(38.50)	D-2
4	Total Federal Income Taxes		

Elizabethtown Gas Company
Lead-Lag Study
Taxes Other Than Income Taxes

Line	Description	Expense	Percent	(Lead)/Lag Days	Reference	Dollar Days
1	Payroll Taxes - Regular Payroll					
2	FICA	\$ 1,717,916	88.65%	(8.30)	E-1	\$ (14,250,125)
2	Federal Unemployment	42,405	2.19%	(30.08)	E-2	(1,275,738)
3	State Unemployment	177,592	9.16%	(30.12)	E-3	(5,349,332)
4	Total Payroll Taxes - Regular Payroll	\$ 1,937,913	100.00%	(10.77)		\$ (20,875,195)
5	Payroll Tax FICA - Variable Compensation	\$ 58,032		(139.50)	E-1	\$ (8,095,528)
6	Property Taxes	\$ 678,457		(6.13)	E-4	\$ (4,161,161)
7	Taxes Other Than Income Taxes (Lead)/Lag Days	\$ 2,674,402		(12.39)		\$ (33,131,884)

Elizabethtown Gas Company
Lead-Lag Study
Interest Expense

Line	Description	(Lead)/Lag Days	Ref.
1	Interest Expense		
2	Interest on Long-Term Debt	(81.05)	F-1
3	Interest on Short-Term Debt	2.84	F-2
4	Interest on Customer Deposits	(236.39)	F-3
5	Total Taxes Other Than Income Taxes		

**IN THE MATTER OF THE PETITION OF
ELIZABETHTOWN GAS COMPANY FOR APPROVAL OF
INCREASED BASE TARIFF RATES AND CHARGES
FOR GAS SERVICE, CHANGES TO DEPRECIATION
RATES AND OTHER TARIFF REVISIONS**

BPU DOCKET NO. GR19_____

DIRECT TESTIMONY

OF

ALAN D. FELSENTHAL

PricewaterhouseCoopers LLP

**On Behalf of
Elizabethtown Gas Company**

Exhibit P-9

April 18, 2019

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**ELIZABETHTOWN GAS COMPANY
DIRECT TESTIMONY OF
ALAN D. FELSENTHAL**

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME, ADDRESS, OCCUPATION AND**
3 **EMPLOYER.**

4 **A.** My name is Alan D. Felsenthal. My business address is One North Wacker
5 Drive, Chicago, Illinois 60606. I am a Managing Director at
6 PricewaterhouseCoopers LLP (“PwC”).

7 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
8 **INDUSTRY RELATED EXPERIENCE.**

9 **A.** I graduated from the University of Illinois in 1971 and began my career at Arthur
10 Andersen & Co ("Arthur Andersen"), where I was an auditor, and focused on
11 audits of financial statements of regulated entities. In 2002, I joined PwC and
12 became a Managing Director in its Power and Utilities Group and continued
13 performing audits for regulated entities. I was hired by Huron Consulting Group
14 ("Huron") in 2008 and returned to PwC in November of 2010. At both Arthur
15 Andersen and PwC, I supervised audits of financial statements on which the firms
16 issued audit opinions that were filed with the Securities and Exchange
17 Commission, the Federal Communications Commission, the Federal Energy
18 Regulatory Commission (“FERC”) and various state commissions. At Arthur
19 Andersen, PwC and Huron, I consulted on a significant number of utility rate
20 cases and helped develop testimony for myself and others on a variety of issues,
21 including construction work in progress in rate base, projected test years, lead-lag

1 studies, cost allocation, several accounting issues (*e.g.*, pension accounting,
2 regulatory accounting, income tax accounting, cost of removal) and compliance
3 with the income tax normalization requirements.

4 **Q. PLEASE DESCRIBE YOUR DUTIES AND RESPONSIBILITIES AT PWC.**

5 **A.** I lead PwC's regulatory support practice. Throughout my career, my focus has
6 been on the regulated industry sector, primarily electric, gas, telecommunication
7 and water utilities. I have focused on utility accounting, income tax and
8 regulatory issues, primarily as a result of auditing regulated enterprises. The
9 unique accounting standards applicable to regulated entities embodied in
10 Accounting Standards Codification ("ASC") 980, Regulated Operations
11 (formerly, Statement of Financial Accounting Standards ("SFAS") 71), FAS 90,
12 FAS 92, FAS 101 and various Emerging Issues Task Force issues, all need to be
13 understood so that auditors can determine whether a company's financial
14 statements are fairly presented in accordance with generally accepted accounting
15 principles ("GAAP"). I have witnessed the issuance of these standards and have
16 consulted with utilities as to how they should be applied. At both Arthur
17 Andersen and PwC, I worked with the technical industry, accounting and auditing
18 leadership to communicate and consult on utility accounting and audit matters.
19 My curriculum vitae is attached as Schedule ADF-1.

1 **Q. HAVE YOU PREVIOUSLY TESTIFIED OR SUBMITTED TESTIMONY**
2 **BEFORE THE NEW JERSEY BOARD OF PUBLIC UTILITIES**
3 **(“BOARD”) OR ANY OTHER REGULATORY COMMISSION?**

4 **A.** Yes. I have testified before the Board as well as the Arizona Corporation
5 Commission, the Florida Public Service Commission, the Illinois Commerce
6 Commission, the Indiana Utility Regulatory Commission, the Public Utility
7 Commission of Ohio, the Public Utility Commission of Texas, the Washington
8 Utilities and Transportation Commission and FERC. See Schedule ADF-1 for
9 specific dockets in which I have testified.

10 **Q. HAVE YOU PROVIDED TRAINING ON THE APPLICATION OF GAAP**
11 **TO REGULATED ENTERPRISES?**

12 **A.** Yes. At Arthur Andersen, Huron and PwC, I developed and taught utility
13 accounting seminars focusing on the unique aspects of the regulatory process and
14 the resulting accounting consequences of the application of GAAP. I have
15 presented seminars, as well as delivered training on an in-house basis. Seminar
16 participants have included utility company and regulatory commission staff
17 accountants, utility rate departments and internal auditors, tax accountants and
18 others. I have also conducted these seminars for FERC and several state
19 commissions, and I have presented at various Edison Electric Institute and
20 American Gas Association ratemaking and accounting seminars. The income tax
21 training programs I have presented include topics such as the normalization
22 requirements for public utilities in the Internal Revenue Code (“IRC”), protected

1 and unprotected deferred taxes and the mechanics and application of the Average
2 Rate Assumption Method (“ARAM”).

3 **II. PURPOSE OF TESTIMONY**

4 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

5 **A.** My testimony addresses certain income tax amounts included in the rate case
6 filing of Elizabethtown Gas Company (“Elizabethtown” or “Company”),
7 specifically 1) the amount of the Consolidated Tax Adjustment (“CTA”); 2) the
8 amount of excess accumulated deferred income taxes (“Excess ADIT”) reversing
9 in the test period; and 3) the balance of the excess ADIT regulatory liability that
10 reduces the Company’s rate base.

11 **Q. ARE YOU SPONSORING ANY SCHEDULES AS PART OF YOUR**
12 **DIRECT TESTIMONY?**

13 **A.** Yes. I am supporting the following schedules that were prepared by me or under
14 my supervision or direction:

- 15 • Schedule ADF-1: Curriculum Vitae;
- 16 • Schedule ADF-2: Determination of CTA for the test period –
17 Confidential; and
- 18 • Schedule ADF-3: Calculation of excess ADIT test period reversal and
19 ADIT regulatory liability at end of test period.

20 **Q. WHERE DID YOU OBTAIN THE INFORMATION USED IN THE**
21 **PREPARATION OF YOUR SCHEDULES ADF-2 AND ADF-3?**

22 **A.** All amounts included in Schedules ADF-2 and ADF-3 for the Company’s rate
23 filing were obtained from the books and records of the Company or information

1 submitted by the Company in BPU Docket No. AX18010001 and Docket No.
2 GR18030232, the regulatory proceeding in which the BPU considered the impacts
3 on Elizabethtown's rates associated with the passage of the Tax Cuts and Jobs Act
4 of 2017 ("TCJA"). That proceeding was ultimately resolved by a "Decision and
5 Order Approving Stipulation" dated June 29, 2018 ("June 29 Order").

6 **Q. WHAT TEST PERIOD IS BEING USED IN ELIZABETHTOWN'S**
7 **FILING IN THIS PROCEEDING?**

8 **A.** The test year period for this proceeding is the twelve months beginning
9 September 1, 2018 and ending August 31, 2019.

10 **III. INCOME TAX ACCOUNTING AND RATEMAKING FUNDAMENTALS**

11 **Q. PLEASE DESCRIBE THE ACCOUNTING FOR INCOME TAXES**
12 **REQUIRED UNDER GAAP.**

13 **A.** Accounting for income taxes under GAAP is addressed in the accounting
14 literature in section ASC 740 (formerly SFAS No. 109, Accounting for Income
15 Taxes (SFAS 109)) of the accounting codification. There are several components
16 to the calculation: currently payable income taxes; deferred income taxes; and
17 investment tax credit. I will only focus on the first two components as the
18 investment tax credit is not an issue in this proceeding.

19 **Q. PLEASE DESCRIBE THE FIRST COMPONENT, CURRENTLY**
20 **PAYABLE INCOME TAXES.**

21 **A.** Currently payable income tax expense represents the estimated amount of current
22 year income taxes payable to the U.S. Treasury based on current year taxable
23 income, determined in accordance with the IRC. For purposes of preparing an

1 income tax return each year, the IRC contains procedures for determining if and
2 when an item is “taxable” or “deductible.” The IRC rules for determining what is
3 taxable or deductible may differ from what is reportable as “revenue” or
4 “expense” under GAAP. For instance, certain expenses recorded on the financial
5 statements under GAAP in one year may be deductible on the tax return in a
6 different period. There are also instances where the amounts shown as deductions
7 on the tax return in one year are not reflected on the financial statements until a
8 later year. As a result, at the end of each reporting period, there will likely be
9 accumulated differences on the book and income tax balance sheets of reported
10 assets and liabilities resulting from different book treatment and tax return
11 treatment of revenues, income and expenses. These differences are referred to as
12 timing or temporary differences.

13 **Q. CAN YOU FURTHER EXPLAIN WHAT IS MEANT BY A TIMING OR**
14 **TEMPORARY DIFFERENCE AND PROVIDE AN EXAMPLE?**

15 **A.** Yes. One common temporary difference relates to the concept of depreciation.
16 For book purposes, when a company acquires a fixed asset, GAAP requires that
17 the asset be depreciated over its estimated useful life in a systematic and rational
18 manner. In so doing, the cost of the fixed asset is "allocated" to the periods in
19 which the fixed asset is being used to provide service. Most utilities depreciate
20 their fixed assets for book purposes using the straight-line depreciation method,
21 wherein the same depreciation amount is recorded each year of a fixed asset's
22 estimated useful life. In contrast to the straight-line depreciation method, under
23 the approach commonly used for income tax purposes, accelerated depreciation,

1 that same fixed asset may be depreciated on the income tax return using an
2 accelerated depreciation method and/or different (generally shorter) estimated
3 useful life. When the annual depreciation charge for book purposes is compared
4 to the annual depreciation for income tax purposes, there will likely be
5 differences. In the early years of an asset's life, tax depreciation using an
6 accelerated method and/or shorter lives will exceed book depreciation. In the
7 later years, the reverse will be true because given the same capitalized asset cost,
8 over the life of the asset total depreciation will be the same. The sum of the
9 annual book-tax depreciation differences results in accumulated book-tax
10 depreciation differences when comparing the net book value and net tax value of
11 fixed assets.

12 **Q. CAN YOU PROVIDE AN EXAMPLE OF HOW THE DEPRECIATION**
13 **BOOK TAX DIFFERENCE ARISES AND REVERSES?**

14 **A.** Yes. Assume a utility acquires property, plant and equipment for \$10 million
15 cash. The entry to record the asset is to debit property, plant and equipment and
16 to credit cash. For book purposes, assume that asset has a useful life of ten years.
17 For income tax purposes, assume that same asset qualifies as a five year tax
18 depreciation asset under the Modified Accelerated Cost Recovery System
19 ("MACRS" – an allowable approach under the IRC). Under MACRS for a five
20 year asset, the depreciation deduction is 20 percent the first year, 32 percent in
21 year two, 19.2 percent in year three, 11.52 percent in years four and five and 5.76
22 percent in year six. The annual depreciation charges for book and tax would be as
23 follows:

Exhibit P-9

Year	Book Depreciation	Tax Depreciation	Difference	Cumulative Book-Tax Difference
1	1,000,000	2,000,000	1,000,000	1,000,000
2	1,000,000	3,200,000	2,200,000	3,200,000
3	1,000,000	1,920,000	920,000	4,120,000
4	1,000,000	1,152,000	152,000	4,272,000
5	1,000,000	1,152,000	152,000	4,424,000
6	1,000,000	576,000	(424,000)	4,000,000
7	1,000,000		(1,000,000)	3,000,000
8	1,000,000		(1,000,000)	2,000,000
9	1,000,000		(1,000,000)	1,000,000
10	1,000,000		(1,000,000)	0
Total	10,000,000	10,000,000	0	

At the end of year 1, the net book basis of property, plant and equipment for book purposes would be \$9 million (\$10 million gross plant, less \$1 million of accumulated book depreciation) while its tax basis would be \$8 million (\$10 million gross tax basis less \$2 million of accumulated tax depreciation). Each year's book depreciation expense would reduce the net book basis of property, plant and equipment and each year's tax depreciation would affect the tax basis of property, plant and equipment. The difference between the book basis and tax basis of property, plant and equipment represents a temporary difference under ASC 740.

However, because total depreciation expense/deductions are limited to the gross capitalized cost of the property, plant and equipment, accelerated income tax depreciation claimed in the early years (reducing income tax payments) will reverse in subsequent periods when book depreciation exceeds tax depreciation

1 (increasing income tax payments) so that when the asset is retired, the
2 depreciation temporary difference will have completely reversed.

3 **Q. WHAT IS THE ACCOUNTING FOR TEMPORARY DIFFERENCES**
4 **UNDER ASC 740?**

5 **A.** Under GAAP, because the financial statements reflect accrual, not cash basis
6 accounting, deferred income taxes are recorded on temporary differences. As a
7 result, income tax expense under GAAP includes both a currently payable
8 component (as previously described, based on the tax return) as well as a
9 “deferred” income tax component (based on timing/temporary differences). Such
10 deferred income taxes reflect the liability or asset for income taxes payable or
11 receivable in the future stemming from transactions recorded in the financial
12 statements currently. The balance sheet liability or asset for future taxes is
13 referred to as Accumulated Deferred Income Taxes ("ADIT"). In other words, to
14 the extent that accelerated tax depreciation is claimed on the income tax return in
15 an amount that exceeds book depreciation reported on the financial statements, a
16 liability for future taxes results. This future tax liability is due to the fact that,
17 greater depreciation claimed in early years will "use up" the tax basis of assets
18 resulting in higher taxes in the future.

19 Under ASC 740, a calculation of required ADIT is performed at the end of
20 each annual reporting period. The required ADIT is measured by multiplying the
21 temporary differences by the currently applicable income tax rates. The
22 difference obtained by comparing the ADIT at the current balance sheet date to
23 the ADIT at the previous balance sheet date results in “deferred income tax

1 expense." For regulated entities, such as Elizabethtown, the process of recording
2 deferred income taxes on temporary differences is referred to as "normalization,"
3 "deferred tax accounting," or "comprehensive interperiod income tax allocation."

4 **Q. PLEASE EXPLAIN HOW CURRENT AND DEFERRED INCOME TAXES**
5 **WOULD BE RECORDED ON THE FINANCIAL STATEMENTS FOR**
6 **THE DEPRECIATION DIFFERENCE EXAMPLE YOU DISCUSSED**
7 **PREVIOUSLY.**

8 **A.** In year 1 of the example, the Company would record depreciation expense on the
9 books in accordance with GAAP of \$1 million. In that same year, they would
10 reduce taxable income on the income tax return by \$2 million. Assuming a 25
11 percent income tax rate, by claiming a \$2 million depreciation deduction, **current**
12 taxes payable and **current** tax expense would be reduced by \$500,000 (25 percent
13 income tax rate times the \$2 million tax depreciation deduction).

14 However, by claiming an additional \$1 million of tax depreciation (\$2
15 million tax depreciation compared to \$1 million of book depreciation) the
16 Company will also record a **deferred** income tax liability and **deferred** tax
17 expense of \$250,000 (25 percent income tax rate times book/tax difference of \$1
18 million). The deferred tax will become payable when the book depreciation
19 exceeds tax depreciation. In other words, by claiming accelerated depreciation
20 (compared to straight line book depreciation) in years 1-5, the Company has
21 incurred a deferred tax obligation that will become payable in years 6-10.

22 Thus, a timing or temporary difference that reduces current income tax
23 expense and current taxes payable is offset by an equal increase in deferred tax

1 expense and ADIT. When the timing or temporary difference reverses, current
2 income tax expense and current taxes payable will increase and be offset by a
3 decrease in deferred income tax expense and ADIT.

4 **Q. HOW ARE DEFERRED INCOME TAXES TREATED IN THE**
5 **RATEMAKING PROCESS?**

6 **A.** In the ratemaking process, revenue requirements are unaffected by such timing or
7 temporary differences (from the expense side) as current tax expense and deferred
8 tax expense offset. Thus, customers do not pay deferred income taxes as the
9 source of such deferred income taxes is the U.S. Treasury. As a result, ADIT
10 balances are often characterized as an “interest free loan” from the U.S. Treasury.
11 This was the objective Congress intended when it enacted accelerated
12 depreciation in the IRC. Congress believed that allowing companies to increase
13 their tax depreciation deductions (and thereby reduce current income tax
14 payments), would lower the financing costs of their investment in capital assets
15 more quickly and thus they would be incented to make such expenditures. To
16 ensure that regulated utilities would enjoy the benefits intended by Congress,
17 there are separate rules applicable to book-tax method and life differences on
18 public utility property (“protected differences”) that govern how deferred income
19 taxes are to be treated in determining revenue requirements. Deferred income tax
20 expense on such book-tax differences must be permitted as a recoverable expense
21 and the related ADIT should reduce rate base. If these normalization rules are not
22 followed, the Company is prohibited from claiming accelerated depreciation. It is
23 a significant penalty.

1 Because the ADIT balance reduces rate base, the customer actually
2 benefits from this procedure as the U.S. Treasury is providing funds that, in the
3 absence of accelerated tax deductions and deferred tax accounting, would need to
4 be obtained from other sources, such as debt and equity, which have a cost
5 (interest or return).

6 **Q. IS DEFERRED INCOME TAX ACCOUNTING APPROPRIATE FOR**
7 **RATEMAKING PURPOSES?**

8 **A.** Yes. Income tax expense in a given year is the result of that year's economic
9 activity. In determining the revenue requirement, it is important for regulatory
10 commissions to consider the recovery of all appropriate costs of providing
11 service, including the associated income tax effects of the costs.

12 **Q. FROM A RATEMAKING PERSPECTIVE, IS THERE A WAY TO**
13 **DETERMINE IF THE APPROPRIATE INCOME TAXES HAVE BEEN**
14 **CONSIDERED IN DETERMINING THE REVENUE REQUIREMENT?**

15 **A.** Yes. Federal income taxes requested by the Company should be based on
16 revenues and expenses included in the cost of service calculation. There are no
17 additions to or reductions from income tax expense resulting from revenues or
18 expenses not included in the Company's request. It is neither appropriate nor
19 equitable to increase or reduce cost of service by tax costs or benefits that are not
20 related to the rendition of utility service to customers.

21 Said another way, income taxes have no independent existence of their
22 own. They are based on revenues and expenses. Once the Board decides on the

1 appropriate revenues and expenses that are necessary for the provision of service,
2 the related income taxes can be determined.

3 One way to check the ratemaking income tax calculation is to begin with
4 after-tax equity return as a starting point. Under this method, equity return, or
5 total return less synchronized interest (rate base times the weighted cost of debt),
6 is adjusted for items for which there is no tax deduction to offset amounts
7 recovered through revenues – such as book amortization of flow-through
8 differences (if any), permanent items, and the reversal of excess ADIT. The
9 resulting “adjusted equity return” is then grossed-up to a revenue requirement
10 level, multiplied by the statutory income tax rate and then adjusted for flow-
11 through and permanent differences and the reversal of excess ADIT. This
12 approach is used to determine Federal income tax expense in total, with no
13 segregation between current and deferred Federal income taxes.

14 **IV. CONSOLIDATED TAX ADJUSTMENT**

15 **Q. PLEASE EXPLAIN THE CONCEPT OF A CTA.**

16 **A.** A CTA is calculated as the “benefit realized” attributable to an affiliated group’s
17 filing of a consolidated income tax return and results when the consolidated tax
18 liability for the group is less than what the liability would have been had each
19 member of the group calculated income taxes on a stand-alone basis. For
20 example, consider a simple example of a consolidated group with two members,
21 A and B, both newly formed corporations owned by a Parent entity with no
22 taxable income of its own. If A has net taxable income of \$1,000 for the tax year
23 but B generates a net operating loss of \$1,000 for such year, the consolidated

1 group of A, B and the Parent would have no tax liability even though, on a stand-
2 alone basis and assuming a 25 percent income tax rate, A would have had a tax
3 liability of \$250 (25 percent of \$1,000) and B would have had no liability. The
4 consolidated tax savings realized by the consolidated group is \$250. However, it
5 is clear that the \$250 consolidated tax savings relates entirely to the net operating
6 loss of Member B. In this example, Member A would record a current income tax
7 expense of \$250 and remit that amount to the Parent entity as that is the amount
8 that relates to its taxable income. Depending on the tax sharing agreement, the
9 Parent may either reimburse Member B \$250 for its taxable loss or retain such
10 amount and distribute to Member B when it is able to utilize such benefit on a
11 stand-alone basis.

12 **Q. DOES THE BOARD HAVE RULES FOR CTAS?**

13 **A.** Yes. The Board has issued rules that require that for determining revenue
14 requirements, CTAs are to be calculated and applied. The methodology for the
15 CTA calculation has fluctuated over the years. Recently, however, the Board
16 adopted regulations that clarified the CTA methodology for rate case filings. The
17 Board stated that a CTA calculation shall be included in a regulatory filing if the
18 company filing the rate case is a member of a group that files a consolidated tax
19 return. Under the recently enacted rule, the CTA is to be calculated using each
20 affiliate's taxable income/loss for each of five consecutive years (including the
21 complete tax year within the utility's test year) using statutory income tax rates or
22 the alternative minimum tax, whichever was applicable. Under the recently

1 enacted Board CTA rules, the rate base may be reduced by up to 25 percent of the
2 full CTA.

3 **Q. HAS ELIZABETHTOWN COMPUTED A CTA IN THE MANNER**
4 **REQUIRED BY THE BOARD'S REGULATIONS?**

5 **A.** Yes. However, due to the acquisition of Elizabethtown by SJI, the Company has
6 only been a member of the SJI Consolidated group since 2018. As a result, there
7 is only one year (2018) of information from which to determine a CTA for the
8 Company. Schedule ADF-2 (Confidential) is the CTA calculation for
9 Elizabethtown for the period in which Elizabethtown is a member of the SJI
10 Consolidated group.

11 **Q. PLEASE DESCRIBE THE CTA CALCULATION ON SCHEDULE ADF-2.**

12 **A.** For 2018, the entities included in SJI's consolidated tax return, including
13 Elizabethtown, were identified, along with their taxable income or losses for the
14 year. Elizabethtown has a taxable loss for the year in which it is included in SJI's
15 consolidated income tax return. Accordingly, no CTA should be made to rate
16 base.

17 **Q. EVEN THOUGH THE BOARD HAS SET FORTH REQUIREMENTS FOR**
18 **A CTA TO BE APPLIED IN RATE CASES, DO YOU AGREE WITH THE**
19 **CONCEPT?**

20 **A.** No. The vast majority of regulatory jurisdictions, including FERC, have rejected
21 the concept of the CTA. Almost all regulatory jurisdictions use a "stand-alone"
22 approach. Under this methodology, federal income taxes are computed based on
23 revenues and expenses of the Company included in the utility's revenue

1 requirement as if the Company were a stand-alone taxpayer. This approach
2 appropriately allocates federal income taxes among members of the consolidated
3 group using the benefits/burdens criteria outlined by FERC in Opinion 173.¹
4 Under this method, federal income taxes calculated for the Company relate to and
5 result from the revenues and expenses associated with providing utility service to
6 customers. The benefits and burdens criterion refers to computing the tax
7 consequences of transactions based on the revenue and expense transactions
8 themselves.

9 With that said, the Company applied the CTA methodology required
10 under the Board's regulations in this proceeding and determined that no CTA
11 should be reflected in rate base.

12 **V. EXCESS ADIT AND THE TAX CUTS AND JOBS ACT OF 2017**

13 **Q. PLEASE GENERALLY DESCRIBE THE TCJA.**

14 **A.** The TCJA was enacted by the United States Congress on December 20, 2017 and
15 was signed into law by the President on December 22, 2017. *See Tax Cuts and*
16 *Jobs Act of 2017*, Pub. Law 115-97, 131 Stat. 2054 (2017). The TCJA amends
17 the IRC and is the most significant set of changes to the federal income tax laws
18 since the Tax Reform Act of 1986. The TCJA makes major changes in many
19 areas of our nation's tax laws, some of which directly affect regulated utilities like
20 Elizabethtown.

¹ *Columbia Gulf Transmission Co. et al.*, 23 FERC ¶ 61,396 (1983).

1 **Q. PLEASE DESCRIBE THE PROVISIONS OF THE TCJA THAT HAVE**
2 **THE GREATEST IMPACT ON REGULATED UTILITIES LIKE**
3 **ELIZABETHTOWN AND THEIR CUSTOMERS.**

4 **A.** The TCJA has significant, though varying, impacts on most utilities in terms of
5 reported tax expenses charged against the company's operations, cash flows and
6 the calculation of revenue requirements and cost of service.

7 The most significant provision of the TCJA for regulated utilities,
8 including Elizabethtown, is the reduction of the Federal Income Tax Rate from 35
9 percent to 21 percent, which will reduce current income tax expense and
10 originating deferred tax expense. At the previous 35 percent federal income tax
11 rate, revenue of \$1.5385 was required to provide \$1.00 of after-tax income. A
12 corporate tax rate of 21 percent requires \$1.2685 of revenue to generate \$1.00 of
13 after-tax income. This is the gross-up factor I discussed previously. A separate
14 New Jersey state income tax rate of 9 percent exists. The New Jersey state
15 income tax rate is deductible for federal income tax purposes so the "combined
16 federal and state income tax rate" has gone from 40.85 percent to 28.11 percent.
17 The combined income tax gross-up factor before and after the TCJA has gone
18 from 1.6906 to 1.3910, respectively.

19 Further, as a result of the lower 21 percent income tax rate becoming
20 effective under the TCJA, all companies, including utilities, were required under
21 ASC 740 to "remeasure," as of December 31, 2017, the amounts of ADIT in their
22 financial statements. Regulated utilities reclassified the reduction in ADIT to a

1 regulatory liability representing the excess ADIT that will be used to reduce
2 future revenue requirements.

3 **Q. WHAT IS “EXCESS” ADIT AND HOW IS IT CALCULATED?**

4 **A.** Excess ADIT is the portion of the ADIT balance existing immediately prior to the
5 reduction in the corporate tax rate less the amount that would have been in the
6 ADIT balance had that balance been determined using the revised lower corporate
7 income tax rate. Because reductions in income tax expense will reduce revenue
8 requirements and those reduced revenue requirements will affect income taxes,
9 the excess ADIT regulatory liability is “grossed-up” for income taxes at the
10 aforementioned gross-up rate, net of an ADIT offset calculated by multiplying the
11 ADIT regulatory liability times the combined statutory income tax rate.

12 **Q. CAN YOU EXPLAIN HOW THE REDUCTION IN THE FEDERAL**
13 **CORPORATE INCOME TAX RATE AFFECTED ELIZABETHTOWN’S**
14 **ADIT, INCLUDING EXCESS ADIT?**

15 **A.** As mentioned, with the reduced income tax rate, regulated utilities remeasured
16 their ADIT at December 31, 2017 using a 21 percent income tax rate instead of
17 the 35 percent tax rate that had been previously applied to most of the book-tax
18 basis differences. The resulting excess ADIT was grossed-up and reclassified as a
19 regulatory liability or regulatory asset depending on the nature of the book-tax
20 difference. The excess ADIT regulatory liability, net of an ADIT offset,
21 established prior to the acquisition of Elizabethtown by SJI carries over to reduce
22 the revenue requirements of Elizabethtown’s customers.

1 **Q. DID THE TCJA DISCUSS HOW REGULATED PUBLIC UTILITIES**
2 **WERE TO PASS BACK EXCESS ADIT?**

3 **A.** Yes. The TCJA requires that excess ADIT on protected book-tax differences
4 reduce rates over the book lives of the related property no more rapidly than under
5 ARAM or, if the necessary books and records are not available to compute the
6 reversal under ARAM, an alternative approach, the Reverse South Georgia
7 Method (“RSGM”), can be used. The RSGM is simple: Determine the excess
8 ADIT and spread the amount over the estimated remaining useful lives of the
9 assets giving rise to the excess ADIT.

10 **Q. HOW IS THE ARAM COMPUTED?**

11 **A.** The ARAM requires the development of an average rate which is determined by
12 dividing the aggregate normalized protected timing/temporary differences into the
13 ADIT that have been provided on such timing/temporary differences. The
14 average rate so calculated is applied to reversing timing differences to derive the
15 deferred taxes that are credited to income tax expense. Under this approach,
16 protected ADIT is reduced over the remaining lives of the property which gave
17 rise to the ADIT as the timing/temporary differences reverse. Public utilities must
18 take care to properly apply the ARAM to protected ADIT because a normalization
19 violation could occur if the amount of protected excess ADIT is reduced more
20 rapidly or to a greater extent than under the ARAM.

1 **Q. WHAT WOULD HAPPEN IF THE EXCESS ADIT IS REVERSED MORE**
2 **RAPIDLY THAN ARAM ON PROTECTED EXCESS ADIT?**

3 **A.** The normalization requirements would be violated resulting in an increase in
4 current income taxes payable for the amount of the more rapid reduction plus,
5 more importantly, accelerated depreciation methods could not be used for income
6 tax purposes going forward. Rather, book depreciation would have to be used for
7 income tax purposes.

8 **Q. DOES THE TCJA PRESCRIBE A METHOD FOR REVERSING EXCESS**
9 **ADIT ON “UNPROTECTED” EXCESS ADIT?**

10 **A.** No. Prior to the TCJA, the ADIT provided on all book-tax differences typically
11 reversed at the tax rate used to record the deferred tax expense when the book-tax
12 difference originated; however, the TCJA does not contain such a requirement on
13 the excess ADIT on unprotected book-tax differences. Reversal of the balance of
14 unprotected ADIT is thus up to a decision by the utility and its regulator.

15 **Q. HOW IS THE COMPANY RETURNING EXCESS ADIT TO**
16 **CUSTOMERS?**

17 **A.** The Company applied the ARAM to the identified “protected” ADIT, consisting
18 mostly of depreciation method and life differences. All other excess ADIT will
19 be reversed over five years. The Company’s methodology was approved by the
20 Board in its June 29 Order.

1 **Q. AS A RESULT OF THE ACQUISITION BY SJI, ELIZABETHTOWN’S**
2 **ASSETS HAVE A NEW INCOME TAX BASIS. IN SUCH A CASE, HOW**
3 **WAS ARAM APPLIED TO THE EXCESS ADIT CARRIED OVER TO**
4 **ELIZABETHTOWN?**

5 **A.** Prior to the acquisition, a year-by-year run-out schedule was prepared by
6 Elizabethtown’s previous owner reversing the excess ADIT using the ARAM
7 methodology. The excess ADIT calculations at December 31, 2017 were the
8 subject of a stipulation submitted to the Board and approved in the June 29 Order.
9 The excess ADIT included in the Company’s filing was approximately \$84.9
10 million for plant-related excess ADIT (reversed using ARAM), (\$1.3 million) for
11 a tax-related net operating loss (“NOL”) (reversed over five years) and \$4.2
12 million for other excess ADIT (using a five-year amortization period).

13 **Q. HOW DID YOU DETERMINE THE AMOUNT OF EXCESS ADIT**
14 **REVERSING IN THE TEST YEAR?**

15 **A.** I began with the aforementioned data included in the June 29 Order and the
16 Company’s filing and other submissions in BPU Docket Nos. AX18010001 and
17 GR18030232, which identified the excess ADIT balances and reversals through
18 2022 using ARAM (for protected differences) and applying a five-year reversal
19 period for the NOL and unprotected excess ADIT. Annual excess ADIT reversals
20 for 2018 and 2019 were identified and converted to monthly amounts. I then used
21 the last four months of 2018 reversals and the first eight months of 2019 reversals
22 to compute the test year reversals included in the rate case filing. The test year

1 reversals were then applied to the previous balances to obtain the excess ADIT
2 liability balance at the end of the test year, August 31, 2019.

3 The normalization rules require consistency between rate base components
4 (Property, Plant and Equipment, Accumulated Depreciation, ADIT, including
5 excess ADIT). Because Elizabethtown determines these other components using
6 an end of period rate base, the rate base reduction for excess ADIT at the end of
7 the test period was used.

8 **Q. WHAT WERE THE RESULTS OF YOUR ROLL-FORWARD?**

9 **A.** As shown on Schedule ADF-3, by rolling forward the reversal of excess ADIT
10 beginning with the filing described above and taking into account minor purchase
11 accounting and return to accrual adjustments, the excess ADIT balance at August
12 31, 2019 (the end of the test year) is projected to be \$84.7 million. Consistent
13 with the June 29 Order, the excess ADIT balance reducing rate base consists of
14 \$82.5 million for the property-related excess ADIT (using ARAM) offset by the
15 excess ADIT for the NOL of \$856 thousand (reversing over five years).

16 The adjusted excess ADIT amortization for the test year is \$2.182 million
17 consisting of \$1.598 million related to property-related excess ADIT subject to
18 ARAM, \$840 thousand for non-property related excess ADIT reversing over five
19 years and (\$257 thousand) of NOL reversing over five years.

20 **Q. HOW DO THESE AMOUNTS ENTER INTO THE REVENUE**
21 **REQUIREMENT CALCULATION?**

22 **A.** The property-related and NOL-calculated excess ADIT balances reduce rate base.
23 The test year amortization reduces income tax expense which will reduce revenue

1 requirements at a grossed-up amount when run through the revenue requirement
2 calculation.

3 **Q. HOW WILL THE EXCESS ADIT LIABILITY BALANCE AND RELATED**
4 **REVERSAL BE TRACKED GOING FORWARD?**

5 **A.** The Company will use the previously established run-out schedules, which were
6 submitted to the Board in the abovementioned dockets for the excess ADIT
7 related to the assets as well as the declining balance of the excess ADIT. Those
8 schedules show the reversal by year of the excess ADIT and the rate base
9 reducing excess ADIT balance using the appropriate reversal method. This is a
10 reasonable approach.

11 **Q. WERE THERE ANY OTHER EXCESS ADIT TO CONSIDER?**

12 **A.** Yes. The Company has excess ADIT related to the previous changes in income
13 tax rates associated with the 1986 and 1993 tax reform initiatives. An estimated
14 balance for prior tax reform excess ADIT of \$115,000 remains at the end of the
15 test year, reducing test year rate base. Reversal of \$90,000 of prior tax reform
16 excess ADIT reduces test year income tax expense. These amounts have been
17 included in the Company's filing in addition to the TCJA excess ADIT effects
18 discussed herein.

19 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

20 **A.** Yes.

CURRICULUM VITAE
ALAN D. FELSENTHAL

EDUCATIONAL BACKGROUND

June, 1971	B.S. in Accounting University of Illinois Champaign, Illinois
May, 1972	Certified Public Accountant

EMPLOYMENT

2010-	Managing Director, Power and Utilities PricewaterhouseCoopers LLP
2008-2010	Managing Director-Utilities Industry Huron Consulting Group
2002-2007	Managing Director—Utilities Industry PricewaterhouseCoopers LLP
1985-2002	Principal in Utilities and Telecommunications Practice, Arthur Andersen LLP, Chicago
1976-1985	Manager in Utilities and Telecommunications Practice, Arthur Andersen LLP, Chicago
1971-1976	Staff and Senior Accountant, Arthur Andersen LLP, Utilities and Telecommunications Division, Chicago

TESTIMONY EXPERIENCE

Testified before the Illinois Commerce Commission on behalf of Town Gas Company of Illinois, 1985. Accounting witness covering cost of service issues.

Testified before the Illinois Commerce Commission on behalf of Town Gas Company of Illinois, 1986. Generic hearing regarding high gas costs.

Testified before the Florida Public Service Commission on behalf of Central Telephone Company of Florida (1991). Testimony addressed projected test year,

a computer model we developed to simplify forecast procedures and propriety of including pension asset in rate base.

Submitted an expert report and testified in an appeal by Yellow Cab Company versus the City of Chicago, (2000). Topic dealt with the adequacy of taxicab lease rates. Yellow Cab was appealing the lease rates they were permitted to charge lessees. The model developed by the City of Chicago to set lease rates was based on traditional utility ratemaking principles. Was hired by the City of Chicago to review Yellow Cab's appeal compared to traditional ratemaking principles and submit a report. Yellow Cab appealed the decision and a hearing before a judge resulted.

Testified before the Arizona Corporation Commission on behalf of Tucson Electric Power Company, 2008. Rebuttal testimony addressed application of FAS 71 when a portion of the business was opened to competition and appropriate treatment of the FAS 143 cost of removal regulatory liability.

Testified before the Florida Public Service Commission on behalf of Tampa Electric Company and Peoples Gas, (2008). Direct testimony on income taxes, including the appropriate accumulated deferred income tax calculation when a projected test period is used.

Testified before the Washington Utilities and Transportation Commission on behalf of Avista Corporation, (2008).

Testified before the Illinois Commerce Commission on behalf of The Peoples Gas, Light and Coke Company/North Shore Gas Company (2009). Rebuttal and Surrebuttal testimony on the appropriate treatment of prepaid pension asset in rate base.

Testified before the Indiana Utility Regulatory Commission on behalf of Northern Indiana Public Service Company (2009). Rebuttal testimony on the appropriate treatment of cost of removal vis a vis FAS 143.

Submitted an expert report and a reply expert report to a Seattle-based arbitration panel in a dispute involving Grays Harbor Energy LLC vs. Energy Northwest, 2009. Subject involved the appropriate determination of fixed costs and cost of capital pursuant to a purchase and sale agreement.

Testified before the Public Utility Commission of Texas on behalf of Centerpoint Energy (2010). Direct and Rebuttal testimony on a number of income tax issues including consolidated income tax adjustments and FIN 48.

Testified before the Indiana Utility Regulatory Commission on behalf of Indianapolis Power & Light Company (2015). Rebuttal testimony on including prepaid pension asset in rate base.

Testified before the Public Utility Commission of Ohio on behalf of Dayton Power & Light Company (2015). Direct testimony on the results of a lead-lag study.

Submitted rebuttal testimony to the Indiana Utility Regulatory Commission on behalf of Northern Indiana Public Service Company (2016) on the appropriateness of including the prepaid pension asset in rate base.

Submitted an expert report to the Virginia State Corporation Commission regarding the allocation of Dominion Resources Inc. shared service costs to Virginia Electric Power Company (2016).

Submitted an expert report to the Oregon Public Service Commission regarding the capitalization of administrative and general overhead costs. (2017).

Testified before the Florida Public Service Commission on behalf of Tampa Electric Company and Peoples Gas on the subject of the appropriate treatment of excess Accumulated Deferred Income Taxes resulting from the Tax Cuts and Jobs Act (2018).

Testified before the Indiana Utility Regulatory Commission on behalf of Indianapolis Power & Light Company (2018). Rebuttal testimony on including a return on the Company's prepaid pension asset.

Testified before the FERC on behalf of GridLiance West (2018). Direct testimony supporting the derivation and reasonableness of the Company's Start-Up Regulatory Asset.

Submitted rebuttal testimony to the Indiana Utility Regulatory Commission on behalf of Northern Indiana Public Service Company (2019) on reasons why including a return on the Company's prepaid pension asset is appropriate.

REGULATORY CONSULTING EXPERIENCE

Synopsis—Throughout the late 1970's, the 1980's, 1990's, 2000's and 2010's assisted Andersen and PwC partners in the preparation of regulatory testimony covering a variety of accounting issues. Much of this testimony involved income tax accounting issues related to flow-through versus normalization or investment tax credit and the appropriate accounting and ratemaking treatment of excess accumulated deferred income taxes when statutory tax rates change. Also developed testimony on CWIP in rate base and working capital (lead-lag technique), appropriateness of allocation of service company costs to regulated entities, recovery of pre-operating cost regulatory assets and capital structure issues.

In 2015, assisted with the preparation of an Expert Report for EverSource Energy subsidiary Connecticut Light & Power which was submitted to the Connecticut regulator. The issue concerned reopening a rate order to address the treatment of accumulated deferred income taxes which was incorrectly decided in the rate order.

Provided assistance on rate case testimony for the following companies:

- Indianapolis Power & Light Company
- Dayton Power & Light Company
- Pacific Gas & Electric Company
- Iowa-Illinois Gas and Electric Company
- The Peoples Gas Light and Coke Company
- Northern Indiana Public Service Company
- Elizabethtown Gas Company
- New Mexico Gas Company
- GridLiance Corporation
- PPL Montana (contract dispute)
- Southern Bell Telephone Company
- Indiana Bell Telephone Company
- Iowa Power Company
- El Paso Electric Company
- Ameritech Corporation
- Central Illinois Light Company
- Central Illinois Public Service Company
- Tampa Electric Company/Peoples Gas Company
- Public Service Company of New Mexico
- Connecticut Light and Power Company
- Young Brothers, Limited
- Central Telephone Company of Florida
- Central Telephone Company of Texas
- Central Telephone Company of Nevada
- Integrys Energy Group, Inc.

Provided regulatory consulting for the Panama Canal Company. Tariffs charged to transit the Panama Canal were based on a cost of service approach. Assisted the Panama Canal Company in determining test year costs. Tariffs were established based on these costs.

2012-2019. Led several projects to evaluate a rate case filing prior to filing validating the completeness, accuracy, consistency and support of the filing. As a

result, adjustments and edits were made to the filing to increase the credibility of the utility's filing. Provided a similar role with respect to date request responses and rebuttal testimony.

FINANCIAL CONSULTING EXPERIENCE

Assisted two Chinese utility companies in registration filings to have their shares traded on the New York Stock Exchange. Huaneng Power International and Shandong Huaneng Power Company were the first two Chinese utilities to list on the NYSE. Process involved working with attorneys, company personnel and the Securities and Exchange Commission to file the equivalent of a Form S-1.

Assisted a number of companies in the preparation, review and filing of Registration Statements with the SEC to raise debt and equity capital.

Consulted with an electric transmission company on whether costs charged to generation companies based on specific costs are in accordance with the costs permitted by the Federal Energy Regulatory Commission.

Consulted with Ameritech Corporation on a number of projects involving cost allocations and compliance with the Federal Communications Commission separations rules.

Consulted with several entities in the preparation of a private letter ruling request to determine whether certain regulatory/ratemaking approaches would violate the Internal Revenue Service ("IRS") normalization rules. Provided the ratemaking aspect of the request when, combined with income tax consulting assistance formed the basis for a complete request, accepted by the IRS.

FINANCIAL AUDIT EXPERIENCE

- Allegheny Energy
- Ameritech Corporation
- Ameritech Cellular
- Ameritech New Media

- Louisville Gas and Electric Company
- Iowa-Illinois Gas and Electric Company
- Centel Corporation
- Constellation Energy
- Nicor, Inc.
- Peoples Energy
- Nisource
- Focal Communications
- Utilities, Inc.
- Chicago Skyway
- United Airlines

LECTURES AND SEMINARS

Speaker at Edison Electric Institute/American Gas Association Introductory, Intermediate and Advanced Accounting Seminar 1996-2018.

Speaker at SNL (Regulatory Research Associates) Utility Foundations Seminar 2013-2017

Speaker at Power Plan Associates annual conference (2012, 2010, 2008, 2006, 2004, 2002) on recent accounting, regulatory and SEC matters affecting utilities.

Developed and conducted Utilities Industry Basic Accounting and Ratemaking Seminar. This two-day seminar is conducted each year for Andersen, Huron and PwC personnel assigned to utility audits or projects. In addition, the seminar is periodically offered on an open-registration basis for utility company personnel as well as offered and conducted for specific utility companies at their training sites.

Developed and conducted Utility Income Taxes-Accounting and Ratemaking Issues. This two-and-a-half day seminar is conducted each year for Andersen, PwC and Huron personnel assigned to utility audits or income tax projects. In addition, the seminar is conducted annually on an open-registration basis for utility company personnel as well as offered and conducted for specific utility companies at their training sites.

Developed and conducted Rate Case Experience Seminar and Utility Income Tax Seminar. The Rate Case Experience Seminar is week-long seminar is conducted each year on an open-registration basis for utility company personnel as well as offered and conducted for specific utility companies at their training sites. The Utility Income Tax Seminar is a two-day seminar focusing on the accounting, tax return/compliance and financial statement aspects of utility income taxes taking into consideration the consequences of ratemaking/revenue requirements.

Specific examples of special training conducts for utility companies/regulators are as follows:

- Nicor
- Entergy
- Peoples Energy
- Sempra Energy
- Centerpoint
- Nisource, Inc.
- Cleco Corporation
- Consolidated Edison
- Duke Energy
- National Grid
- Dominion Resources
- Tucson Electric Power
- Portland General Electric
- Pepco Holdings, Inc.
- Ameritech Corporation
- Louisville Gas and Electric
- American Water Works
- Tampa Electric
- Natural Gas Pipeline Company of America
- Transco Pipeline
- Federal Energy Regulatory Commission
- Oklahoma Commission
- Arkansas Commission
- PPL Corporation
- Southern California Edison
- Sempra Energy
- Williams Pipeline
- Illinois Commerce Commission
- Sprint Corporation
- American Electric Power
- Consumers Power Company
- Arizona Public Service Company
- Qwest

- Northwest Pipeline
- Alaska Regulatory Commission
- Xcel Energy
- Exelon Corporation
- PG&E Corporation
- One Gas Corporation

PROFESSIONAL ASSOCIATIONS

American Institute of Certified Public Accountants

Illinois CPA Society

Elizabethtown Gas Company
Calculation of Consolidated Income Tax Adjustment

Line		(A)	(B)	(C)	(D) (B) / Total (B)	(E) Total (C) times (D)
		2018 Consolidated Taxable Income (before NOL deduction)	Income Companies	Loss Companies	Income Company Percent of Income Companies Total	Allocate Total of Loss Companies to Income Company based on Taxable Income Share
1	SJI Entity					
2	Elizabethtown Gas Company	\$ (68,554,669)	\$ -	\$ (68,554,669)	0.00%	\$ -
3						
4						
21						
22	Taxable Income					

Elizabethtown Gas Company Excess ADIT

	Depreciation-related (ARAM)	NOL 5 year	UnProtected (5 year)	Total per Stipulation	Pre TCJA
Balance at December 31, 2017 per Stipulation (not grossed-up)	\$ 84,864,488	\$ (1,283,564)	\$ 4,202,427	\$ 87,783,351	\$ 331,715
Reversal:					
2018 Reversals from January 1 through June 30, 2018 (per stipulation)	\$ (579,649)	\$ 128,356	\$ (420,243)	\$ (871,535)	\$ (44,984)
Miscellaneous Adjustments:					
Purchase Acctg Adjustment			\$ 226,101	\$ 226,101	
NJBPD Stipulations			\$ 54,643	\$ 54,643	
Adjustment for change in tax gross up (pertains to pre TCJA)					\$ (66,742)
Excess ADIT Balance at June 30, 2018, as adjusted	\$ 84,284,840	\$ (1,155,208)	\$ 4,062,928	\$ 87,192,560	\$ 219,989
Monthly reversals, July-December 31, 2018)1/2 of annual:					
Jul-18	\$ (96,608)	\$ 21,393	\$ (70,040)	\$ (145,256)	\$ (7,497)
Aug-18	\$ (96,608)	\$ 21,393	\$ (70,040)	\$ (145,256)	\$ (7,497)
Sep-18	\$ (96,608)	\$ 21,393	\$ (70,040)	\$ (145,256)	\$ (7,497)
Oct-18	\$ (96,608)	\$ 21,393	\$ (70,040)	\$ (145,256)	\$ (7,497)
Nov-18	\$ (96,608)	\$ 21,393	\$ (70,040)	\$ (145,256)	\$ (7,497)
Dec-18	\$ (96,608)	\$ 21,393	\$ (70,040)	\$ (145,256)	\$ (7,497)
July-December 2018 reversal	\$ (579,649)	\$ 128,356	\$ (420,243)	\$ (871,535)	\$ (44,984)
2018 Reversal (per stipulation)	\$ (1,159,297)	\$ 256,713	\$ (840,485)	\$ (1,743,070)	\$ (89,968)
Excess ADIT Balance at December 31, 2018	\$ 83,705,191	\$ (1,026,851)	\$ 3,642,686	\$ 86,321,025	\$ 175,005
Estimated monthly reversals, 2019 (annual per stipulation/12)					
Jan-19	\$ (151,479)	\$ 21,393	\$ (70,040)	\$ (200,127)	\$ (7,497)
Feb-19	\$ (151,479)	\$ 21,393	\$ (70,040)	\$ (200,127)	\$ (7,497)
Mar-19	\$ (151,479)	\$ 21,393	\$ (70,040)	\$ (200,127)	\$ (7,497)
Apr-19	\$ (151,479)	\$ 21,393	\$ (70,040)	\$ (200,127)	\$ (7,497)
May-19	\$ (151,479)	\$ 21,393	\$ (70,040)	\$ (200,127)	\$ (7,497)
Jun-19	\$ (151,479)	\$ 21,393	\$ (70,040)	\$ (200,127)	\$ (7,497)
Jul-19	\$ (151,479)	\$ 21,393	\$ (70,040)	\$ (200,127)	\$ (7,497)
Aug-19	\$ (151,479)	\$ 21,393	\$ (70,040)	\$ (200,127)	\$ (7,497)
Estimated reversal, January - August 2019	\$ (1,211,833)	\$ 171,142	\$ (560,324)	\$ (1,601,014)	\$ (59,979)
Sep-19	\$ (151,479)	\$ 21,393	\$ (70,040)	\$ (200,127)	\$ (7,497)
Oct-19	\$ (151,479)	\$ 21,393	\$ (70,040)	\$ (200,127)	\$ (7,497)
Nov-19	\$ (151,479)	\$ 21,393	\$ (70,040)	\$ (200,127)	\$ (7,497)
Dec-19	\$ (151,479)	\$ 21,393	\$ (70,040)	\$ (200,127)	\$ (7,497)
Estimated reversal, September-December 2019	\$ (605,916)	\$ 85,571	\$ (280,162)	\$ (800,507)	\$ (29,989)
Estimated excess ADIT reversals 2019	\$ (1,817,749)	\$ 256,713	\$ (840,485)	\$ (2,401,522)	\$ (89,968)
Excess ADIT Balance December 31, 2019	\$ 81,887,442	\$ (770,138)	\$ 2,802,200	\$ 83,919,504	\$ 85,037

Test Year reversal (September 1, 2018 to August 31, 2019)	\$ (1,598,265)	\$ 256,713	\$ (840,485)	\$ (2,182,038)	\$ (89,968)
Excess ADIT balance at August 31, 2019	\$ 82,493,358	\$ (855,709)	\$ 3,082,362	\$ 84,720,011	\$ 115,026

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF :
ELIZABETHTOWN GAS COMPANY FOR :
APPROVAL OF INCREASED BASE TARIFF :
RATES AND CHARGES FOR GAS SERVICE, : BPU DOCKET NO. _____
CHANGES TO DEPRECIATION RATES AND :
OTHER TARIFF REVISIONS :

CASE SUMMARY, PETITION, NOTICE AND EXHIBITS

Volume 3 of 4

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Attorney for Petitioner
Elizabethtown Gas Company

April 18, 2019

**IN THE MATTER OF THE PETITION OF
ELIZABETHTOWN GAS COMPANY FOR APPROVAL OF
INCREASED BASE TARIFF RATES AND CHARGES
FOR GAS SERVICE, CHANGES TO DEPRECIATION
RATES AND OTHER TARIFF REVISIONS**

BPU DOCKET NO. GR19_____

DIRECT TESTIMONY

OF

DANE A. WATSON, PE CDP

**On Behalf Of
Elizabethtown Gas Company**

Exhibit P-10

April 18, 2019

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LIST OF SCHEDULES

SCHEDULE DAW-1	Elizabethtown Gas Company Depreciation Rate Study at December 31, 2018
SCHEDULE DAW-2	Dane Watson List of Testimony Appearances

**ELIZABETHTOWN GAS COMPANY
DIRECT TESTIMONY OF
DANE A. WATSON**

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.**

3 **A.** My name is Dane A. Watson, and my business address is 101 E. Park Blvd, Plano, Texas
4 75074. I am a Partner of Alliance Consulting Group. Alliance Consulting Group provides
5 consulting and expert services to the utility industry.

6 **Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?**

7 **A.** I hold a Bachelor of Science degree in Electrical Engineering from the University of
8 Arkansas at Fayetteville and a Master's Degree in Business Administration from Amberton
9 University.

10 **Q. DO YOU HOLD ANY SPECIAL CERTIFICATION AS A DEPRECIATION**
11 **EXPERT?**

12 **A.** Yes. The Society of Depreciation Professionals ("the Society") has established national
13 standards for depreciation professionals. The Society administers an examination and has
14 certain required qualifications to become certified in this field. I met all requirements and
15 became a Certified Depreciation Professional ("CDP"). A list of depreciation studies that
16 I have prepared is provided in Schedule DAW-2.

17 **Q. PLEASE OUTLINE YOUR EXPERIENCE IN THE FIELD OF DEPRECIATION.**

18 **A.** Since graduation from college in 1985, I have worked in the area of depreciation and
19 valuation. I founded Alliance Consulting Group in 2004 and am responsible for conducting
20 depreciation, valuation and certain accounting-related studies for utilities in various
21 industries. My duties related to depreciation studies include the assembly and analysis of
22 historical and simulated data, conducting field reviews, determining service life and net

1 salvage estimates, calculating annual depreciation, presenting recommended depreciation
2 rates to utility management and supporting such rates before regulatory bodies.

3 My prior employment from 1985 to 2004 was with Texas Utilities (“TXU”).
4 During my tenure with TXU, I was responsible for, among other things, conducting
5 valuation and depreciation studies for the domestic TXU companies. During that time, I
6 served as Manager of Property Accounting Services and Records Management in addition
7 to my depreciation responsibilities.

8 I have twice been Chair of the Edison Electric Institute (“EEI”) Property
9 Accounting and Valuation Committee and have been Chairman of EEI’s Depreciation and
10 Economic Issues Subcommittee. I was the Industry Project Manager for the EEI/American
11 Gas Association (“AGA”) effort around the electric and gas industry adoption of Financial
12 Accounting Standard (“FAS”) 143 and testified before the Federal Energy Regulatory
13 Commission (“FERC”) in the hearings leading up to the release of FERC Order 631.¹ I
14 was also the Project Leader for the EEI/AGA *Introduction to Depreciation* textbook
15 update. I am a Registered Professional Engineer (“PE”) in the State of Texas and a
16 Certified Depreciation Professional. I am a Senior Member of the Institute of Electrical
17 and Electronics Engineers (“IEEE”) and have held various local, regional and world-wide
18 offices in IEEE. I am also a twice past President of the Society of Depreciation
19 Professionals and serve as a faculty member as part of their annual training program. I also
20 teach depreciation in multiple venues for EEI/AGA and other entities.

¹ FERC Order 631 was issued by FERC in 2003 to update uniform accounting and financial reporting standards for the recognition and measurement of liabilities arising from retirement and decommissioning obligations of tangible long-lived assets, and related costs.

1 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NEW JERSEY BOARD**
2 **OF PUBLIC UTILITIES?**

3 **A.** Yes. I previously provided testimony in two proceedings before the New Jersey Board of
4 Public Utilities (“Board” or “BPU”). The first proceeding was on behalf of South Jersey
5 Gas Company in its 2013 base rate case in BPU Docket No. GR13111137 and the second
6 was on behalf of Pivotal Utility Holdings, Inc. d/b/a Elizabethtown Gas, the previous owner
7 of the assets of Elizabethtown Gas Company (“Elizabethtown” or “Company”), in its 2016
8 base rate case in BPU Docket No. GR16090826. Additionally, I have testified before
9 thirty-five regulatory commissions across the United States and have performed more than
10 200 depreciation studies over the course of my career. Schedule DAW-2 contains a
11 complete listing of the various proceedings in which I have been involved.

12 **II. PURPOSE OF DIRECT TESTIMONY**

13 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS**
14 **PROCEEDING?**

15 **A.** I sponsor and support the depreciation study performed for Elizabethtown, a wholly owned
16 subsidiary of South Jersey Industries, Inc., that resulted in the depreciation rates that were
17 used to determine the depreciation expense in this proceeding. My testimony explains the
18 analysis I undertook to determine reasonable and necessary depreciation rates based on the
19 Company’s total capital investment, and it provides detailed calculations and comparisons
20 of my proposed rates to existing depreciation rates, which were approved in 2016.

21 Specifically, my testimony

- 22 • addresses recommended changes in the service lives and net salvage costs for
- 23 certain accounts;
- addresses the depreciation reserve; and
- 24 • addresses the depreciation rate system (method, procedure, and technique).

1 **Q. DO YOU SPONSOR ANY SCHEDULES AS PART OF YOUR DIRECT**
2 **TESTIMONY?**

3 **A.** Yes. Schedule DAW-1 is the depreciation study performed for Elizabethtown that resulted
4 in depreciation rates that were used to determine the depreciation expense in this
5 proceeding. Schedule DAW-2 contains a complete listing of various proceedings in which
6 I have been involved.

7 **Q. WHAT DEPRECIATION RATES ARE YOU PROPOSING, AND HOW DO THEY**
8 **COMPARE WITH THE CURRENT RATES?**

9 **A.** My depreciation rate recommendations as compared to current depreciation rates can be
10 found in Appendix B of Schedule DAW-1. Detailed calculations of the proposed rates are
11 found in Appendix A of Schedule DAW-1.

12 **Q. WHAT DEPRECIATION EXPENSE ARE YOU RECOMMENDING IN THIS**
13 **PROCEEDING?**

14 **A.** Based on the depreciation study, which analyzed the Company's depreciable plant in
15 service at December 31, 2018, I recommend an annualized depreciation expense for
16 Elizabethtown of approximately \$33.0 million. This represents an increase of
17 approximately \$7.1 million over the annualized depreciation expense calculated on year-
18 end 2018 investment using the Company's current depreciation rates, which were approved
19 in 2016. This amount was determined by comparing the depreciation expense difference
20 between the current rates and the proposed rates as shown in Schedule DAW-1, Appendix
21 B at December 31, 2018.

1 **Q. WHAT ARE THE PRIMARY FACTORS THAT HAVE INFLUENCED THE**
2 **CHANGE IN THE COMPANY'S DEPRECIATION RATES?**

3 **A.** Elizabethtown is experiencing different service lives for some of its assets than the service
4 lives reflected in its current depreciation rates. As a result, I am recommending a change
5 in the service life for a number of accounts in the Manufactured Gas, Other Storage,
6 Transmission, Distribution, and General Plant functional groups to more accurately reflect
7 the Company's more recent and specific retirement experience for assets. Second, both the
8 Company's statistical data and field experience indicate that the accounts in Distribution
9 plant continue to demonstrate a change in gross salvage and removal costs, resulting in
10 updated net salvage. Lastly, the Company seeks to continue the use of Vintage Group
11 Amortization for its General Amortized Plant Assets in FERC Accounts 391-398
12 (excluding Accounts 390, 392 and 396). The depreciation rates I recommend for adoption
13 in this case reflect this reality as well as any reserve excess or deficit that exists within the
14 amortized account classification.

15 **Q. DOES THE DEPRECIATION STUDY YOU SPONSOR IN THIS CASE REFLECT**
16 **THE MOST CURRENT DATA AVAILABLE FOR ELIZABETHTOWN'S**
17 **ASSETS?**

18 **A.** Yes. The data used reflects the most recent experience and future expectations for life and
19 net salvage characteristics for Elizabethtown.

20 **III. ELIZABETHTOWN GAS DEPRECIATION STUDY**

21 **Q. WHAT DOES THE DEPRECIATION STUDY ANALYZE?**

22 **A.** The depreciation study analyzes the life and net salvage for the Elizabethtown property
23 groups associated with Manufactured Gas, Other Storage, Transmission, Distribution and
24 General plant assets at December 31, 2018.

1 **Q. PLEASE DESCRIBE THE ASSETS OF ELIZABETHTOWN.**

2 **A.** There are five general classes, or functional groups, of depreciable property: Manufactured
3 Gas, Other Storage, Transmission, Distribution and General. The Manufactured Gas Plant
4 functional group primarily consists of land rights, vaporizer valves, and other equipment
5 used in the manufacture of gas from petroleum products. The Other Storage Plant
6 functional group primarily consists of natural and liquefied natural gas storage facilities
7 and related processing equipment. The Transmission Plant functional group consists of
8 land rights, mains and regulating equipment to move the gas to the Company's distribution
9 system. The Distribution Plant functional group primarily consists of lines and associated
10 facilities used to distribute gas to the customers served by Elizabethtown. General Plant
11 property is not location-specific, but is used to support the overall distribution of gas to its
12 customers.

13 **Q. WHAT DEFINITION OF DEPRECIATION HAVE YOU USED FOR THE**
14 **PURPOSE OF CONDUCTING THE DEPRECIATION STUDY AND PREPARING**
15 **YOUR TESTIMONY?**

16 **A.** The term "depreciation," as used herein, is considered in the accounting sense; that is, it is
17 a system of accounting that distributes the cost of assets, less net salvage (if any), over the
18 estimated useful life of the assets in a systematic and rational manner. Depreciation is a
19 process of allocation, not valuation. Depreciation expense is systematically allocated to
20 accounting periods over the life of the properties. The amount allocated to any one
21 accounting period does not necessarily represent the loss or decrease in value that will
22 occur during that particular period. Thus, depreciation is considered an expense or a cost,
23 rather than a loss or a decrease in value. The Company accrues depreciation based on the
24 original cost of all property included in each depreciable plant account. On retirement, the

1 full cost of depreciable property, less the net salvage amount, if any, is charged to the
2 depreciation reserve.

3 **Q. PLEASE DESCRIBE YOUR DEPRECIATION STUDY APPROACH.**

4 **A.** I conducted the depreciation studies in four phases as shown in my Schedule DAW-1. The
5 four phases are: Data Collection, Analysis, Evaluation, and Calculation. During the initial
6 phase of the study, I collected historical data to be used in the analysis. After the data was
7 assembled, I performed analyses to determine the life and net salvage percentage for the
8 different property groups being studied. As part of this process, I conferred with field
9 personnel, engineers, and managers responsible for the installation, operation, and removal
10 of the assets to gain their input into the operation, maintenance, and salvage of the assets.
11 The information obtained from field personnel, engineers, and managerial personnel,
12 combined with the study results, was then evaluated to determine how the results of the
13 historical asset activity analysis, in conjunction with the Company's expected future plans,
14 should be applied to develop depreciation rates that will allow the recovery of the plant
15 investment. I used all of these resources to calculate the depreciation rate for each account
16 and function.

17 **Q. WHAT DEPRECIATION METHODOLOGY DID YOU USE?**

18 **A.** The straight-line, average life group, remaining-life depreciation system was employed to
19 calculate annual and accrued depreciation in this study. This is the same methodology used
20 to develop the Company's current depreciation rates, which were approved, through a
21 stipulated agreement, by the BPU in the Company's last base rate case in Docket No.
22 GR16090826.

1 **Q. HOW WERE THE DEPRECIATION RATES DETERMINED USING THE**
2 **AVERAGE LIFE GROUP PROCEDURE?**

3 **A.** In this system, the annual depreciation expense for each group was computed by dividing
4 the original cost of the asset, less allocated depreciation reserve, less estimated net salvage,
5 by its respective average life group remaining life. The resulting annual accrual amounts
6 of all depreciable property within an account were accumulated and divided by the original
7 cost of all depreciable property in the account to determine the depreciation rate. The
8 calculated remaining lives and annual depreciation accrual rates were based on attained
9 ages of plant in service and the estimated service life and salvage characteristics of each
10 depreciable group. The computations of the annual depreciation rates are shown in
11 Appendix A of Schedule DAW-1. The remaining life calculations are discussed below and
12 are also shown in Appendix A of Schedule DAW-1.

13 **Q. WHAT TIME PERIOD DID YOU USE TO DEVELOP THE PROPOSED**
14 **DEPRECIATION RATES?**

15 **A.** The account level depreciation rates were developed based on the depreciable property
16 recorded on the Company's books at December 31, 2018.

1 **Q. IN DEVELOPING THE PROPOSED DEPRECIATION RATES, DID YOU**
2 **CONSIDER THE COMPANY'S CURRENT ASSET ACCOUNTING PRACTICES?**

3 **A.** Yes. In developing the proposed depreciation rates, the depreciation study analysis focused
4 not only on historical data, but also on the field experience noted by the Company's
5 operations personnel.

6 **Q. PLEASE SUMMARIZE THE DEPRECIATION STUDY RESULTS WITH**
7 **RESPECT TO THE DEPRECIATION RATES.**

8 **A.** Overall, depreciation expense is increasing and is primarily influenced by the continued
9 focus of Elizabethtown on addressing its aging infrastructure and the increased cost of
10 performing this work. Regulatory and environmental requirements all have increased and
11 added additional cost when adding and retiring assets. As shown in Schedule DAW-1,
12 Appendix B, overall depreciation expense is increasing by approximately \$7.1 million
13 annually. This increase is computed by applying the existing account rates to the current
14 investment balances to determine the annual depreciation expense accrual and comparing
15 that accrual to the application of the proposed depreciation rates to the same investment
16 balances to determine the proposed annual depreciation expense accrual amounts, which
17 are shown on Appendix B of Schedule DAW-1. Table 1 below summarizes the change in
18 annual depreciation expense.

TABLE 1

Description	Plant Balance 12/31/2018	Existing		Proposed		Change in Depreciation Expense
		Annual Accrual Rate	Annual Accrual Amount	Annual Accrual Rate	Annual Accrual Amount	
Manufactured Gas	972,377	7.51%	73,022	2.91%	28,296	(44,726)
Other Storage	30,772,921	2.48%	762,345	2.34%	721,403	(40,942)
Transmission	20,251,995	2.21%	448,413	1.91%	386,467	(61,945)
Distribution	1,238,195,950	1.67%	20,671,636	2.21%	27,347,991	6,676,355
General Depreciated	42,304,301	5.04%	2,132,832	5.62%	2,376,282	243,450
General Amortized	17,553,884	9.91%	1,737,568	11.69%	2,051,298	313,730
Total	\$1,349,062,811	1.91%	\$25,825,816	2.44%	\$32,911,738	\$7,085,922

1 **Q. WHAT FACTORS INFLUENCE THE DEPRECIATION RATES FOR AN**
2 **ACCOUNT?**

3 **A.** The primary factors that influence the depreciation rate for an account are (1) the remaining
4 investment to be recovered in the account, (2) the depreciable life of the assets in the
5 account, and (3) the net salvage of the assets in the account.

6 **Q. HAS THE REMAINING INVESTMENT TO BE RECOVERED INCREASED?**

7 **A.** Yes. Elizabethtown has been engaged in replacing its aging infrastructure and with BPU
8 approval of its pending Infrastructure Investment Program (“IIP”) proceeding in BPU
9 Docket No. GR18101197, the Company proposes to continue addressing various aspects
10 of its system over the next 5 years on an accelerated basis.

11 **Q. DID YOU USE PER BOOK DATA FOR THE DEPRECIATION STUDY?**

12 **A.** Yes. As previously stated, the Study reflects Company data as of December 31, 2018.

1 **A. Service Lives**

2 **Q. WHAT IS THE SIGNIFICANCE OF AN ASSET'S USEFUL LIFE IN YOUR**
3 **DEPRECIATION STUDY?**

4 **A.** An asset's useful life was used to determine the remaining life over which the remaining
5 cost (original cost, plus or minus net salvage, minus accumulated depreciation) can be
6 allocated to normalize the asset's cost and spread it ratably over future periods.

7 **Q. HOW DID YOU DETERMINE THE AVERAGE SERVICE LIVES FOR EACH**
8 **ACCOUNT?**

9 **A.** All accounts were analyzed using the well-accepted actuarial analysis method (retirement
10 rate method) to estimate the life of property. In much the same manner as human mortality
11 is analyzed by actuaries, depreciation analysts use models of property mortality
12 characteristics that have been validated in research and empirical applications. Further
13 detail is found in the life analysis section of Schedule DAW-1.

14 **Q. IN ADDITION TO STATISTICAL MODELING, DID YOU ALSO CONSIDER**
15 **COMPANY-SPECIFIC EXPECTATIONS IN DEVELOPING YOUR SERVICE**
16 **LIFE RECOMMENDATIONS?**

17 **A.** Yes. Both statistical modeling of historical data and Company-specific expectations are
18 critical to any depreciation analysis. In order to achieve a reasonable balance between
19 these critical components of the life analysis, I evaluated the statistical historical data and
20 then applied informed judgment to make the most appropriate service life selections. The
21 objective in any depreciation study is to project the remaining cost (installation, material
22 and removal cost) to be recovered and the remaining periods in which to recover the costs.
23 This requires that the service life selections reflect both the Company's historical
24 experience and its current expectations of asset lives. In order to understand the

1 Company's expectations regarding asset lives, I interviewed Company engineers working
2 in both operations and maintenance to confirm the historical activity and indications,
3 current and future plans, expectations and the applicability to the future surviving assets.
4 The interview process provides important information regarding changes in materials,
5 operation and maintenance, as well as the Company's current expectation regarding the
6 service life of the assets currently in use. This information is then considered along with
7 the historical statistical data to develop the most reasonable and representative expected
8 service lives for the Company's assets. The result of all of this analysis is reflected in the
9 service life recommendations set forth in my depreciation study and accompanying
10 workpapers.

11 **Q. HAVE YOU PREPARED A SUMMARY OF THE LIFE CHANGES BY**
12 **ACCOUNT?**

13 **A.** Yes. In my depreciation study, the remaining life for each account is shown in Appendix
14 B of Schedule DAW-1. Graphs and tables supporting the actuarial analysis and the chosen
15 Iowa Curves used to determine the average service lives for analyzed accounts are found
16 in the Life Analysis section of Schedule DAW-1. A comparison of the depreciable life for
17 each account is shown in Schedule DAW-1, Appendix C.

18 **Q. WHAT ARE THE KEY FACTORS DRIVING THE NEED TO REVISE THE**
19 **AVERAGE SERVICE LIVES FOR THE VARIOUS ACCOUNTS?**

20 **A.** The key factor driving the need to change the average service lives was the incorporation
21 of updated information about the Company's assets since the last depreciation study,
22 including an additional three years of Company-specific retirement information and input
23 from operations personnel. In addition, the Company's pending IIP filing includes the
24 acceleration of infrastructure replacements for a 5-year period. If approved, the program

1 is expected to extend the life of the assets by replacing equipment with a lower expected
2 remaining life with longer-lasting equipment resulting in an overall longer remaining life.
3 The detailed analysis of each account is described fully in Schedule DAW-1. Overall, 12
4 accounts had an increase in life, 13 accounts had a decrease in life, 25 accounts remained
5 the same.

6 **Q. ARE YOU RECOMMENDING THE CONTINUATION OF FIXED LIFE**
7 **AMORTIZATION FOR CERTAIN ACCOUNTS?**

8 **A.** Yes. The BPU approved the use of fixed-life amortization for certain Elizabethtown
9 accounts in the depreciation rates approved in the Company's 2009 and 2016 base rate
10 cases. Specifically, the Company has amortized Accounts 391X, 393, 394, 395, 397 and
11 398. I recommend this practice be continued. The fixed life amortization calculations are
12 shown in detail in Schedule DAW-1, Appendix B.

13 **B. Net Salvage**

14 **Q. WHAT IS NET SALVAGE?**

15 **A.** Net salvage is the difference between the gross salvage (what the asset was sold for upon
16 removal) and the removal cost (cost to remove and dispose of the asset). Salvage and
17 removal cost percentages are calculated by dividing the current cost of salvage or removal
18 by the original installed cost of the asset. When salvage exceeds removal (positive net
19 salvage), the net salvage reduces the amount to be depreciated over time. When removal
20 exceeds salvage (negative net salvage), the negative net salvage increases the amount to be
21 depreciated. Plant assets can experience significant negative removal cost percentages.

22 **Q. CAN YOU PROVIDE AN EXAMPLE OF THE NET SALVAGE CALCULATION?**

23 **A.** The correct calculation of a net salvage percentage is to divide the difference between the
24 gross salvage and the removal cost by the retirement dollars. Salvage and removal cost

1 represent the current cost of salvage or removal whereas the retirement amount is the
2 original installed cost of the asset as of the date of its installation. For example, a
3 Distribution asset in FERC Account 376 with a current installed cost of \$500 in 2018
4 dollars would have a cost of \$12.86² to install in 1947 when taking into account inflation.
5 If it costs \$50 to remove that asset in 2018 dollars, the correct removal cost calculation
6 would show a negative 389 percent removal cost for that asset (\$50/\$12.86). An incorrect
7 representation would be to calculate removal cost using the current replacement cost, which
8 would show a net salvage rate of negative 10% (\$50/\$500), thus ignoring the significant
9 inflation that occurred between installation and removal.

10 Some plant assets can experience significant negative removal cost percentages due
11 to the timing of the addition versus the retirement. In the example above, a -389% removal
12 cost rate accurately reflects the cost necessary to remove the asset 71 years after it was
13 originally installed. A rate of -10% clearly would not. Inflation from the time of
14 installation of the asset until the time of its removal must be taken into account in the
15 calculation of the removal cost percentage because the depreciation rate, which includes
16 the removal cost percentage, will be applied to the original installed cost of assets.
17 However, it is my understanding that regulators in New Jersey have chosen an alternative
18 net salvage calculation methodology, which has typically consisted of determining the net
19 salvage amount based on recent actual expenditures.³

² Using the Handy-Whitman Bulletin No. 188, G-1, line 44, $\$12.86 = \$500 \times 24/933$.

³ See, e.g., *In the Matter of the Petition of South Jersey Gas Co. for Approval of Increased Base Tariff Rates and Charges for Gas Service and Other Tariff Revisions*, BPU Docket No. GR13111137, Decision and Order Approving Stipulations (September 30, 2014), and see *In the Matter of Jersey Central Power and Light Co. for Review and Approval of Increases in and Other Adjustments to its Rates and Charges for Electric Service, and for Approval of Other Proposed Tariff Revisions in Connection Therewith; and for Approval of an Accelerated Reliability Enhancement Program ("2012 Base Rate Filing")*, Order Adopting Initial Decision with Modifications and Clarifications (March 18, 2015).

1 **Q. WHAT ARE THE MAIN FACTORS IMPACTING THE NET SALVAGE THE**
2 **COMPANY IS EXPERIENCING?**

3 **A.** The activities related to retirement costs (generally including cutting, capping, and purging
4 of gas for the abandonment of pipe) affect the costs that the Company incurs. The
5 Company has recently experienced higher removal costs for many of its assets.

6 **Q. HOW DID YOU DETERMINE THE NET SALVAGE FOR EACH ASSET GROUP?**

7 **A.** The historical retirement, salvage and cost of removal for each account have been
8 maintained and analyzed from 1999 to 2018. In that analysis, 2- through 10-year averages
9 were calculated and evaluated. A 3-year average amount was calculated for salvage and
10 cost of removal and included in the annual accrual amount to determine the total
11 depreciation rate for accounts where net salvage is present. The use of an average amount
12 is the same approach approved by the BPU in the prior depreciation study. These amounts
13 are shown in Schedule DAW-1, Appendix B. The net salvage analysis and the three year
14 average calculations are shown in Schedule DAW-1, Appendix D.

15 **Q. IS THIS A PREFERRED METHOD IN THE INDUSTRY FOR DETERMINING**
16 **NET SALVAGE RATES?**

17 **A.** No. In fact, New Jersey is one of only a handful of jurisdictions that adopted an alternative
18 methodology for determining net salvage rates. This method is considered to be non-
19 traditional. However, it does include amounts for recovery based on recent experience
20 until depreciation rates are revised by the BPU. This method is not the methodology that
21 is utilized by the majority of the industry and it is not the method recommended in

authoritative texts such as *Depreciation Systems*, by Drs. Fitch and Wolf⁴ and the National Association of Regulatory Utility Commissioners' *Public Utility Depreciation Practices*.⁵

Q. WHAT IS THE IMPACT TO THE COMPANY AND THE CUSTOMER USING THIS ALTERNATIVE METHODOLOGY?

A. It hurts both over the long run. As an example, if you look at Account 380 Services, which is one of the accounts that routinely has higher levels of cost of removal with little or no salvage, you can see that in the last case the amount of net salvage approved was a negative \$1,503,853 and in this case it has grown to a negative \$4,556,636. The Company will always be behind in the recovery of removal cost as total expenditures are increasing and in times where there is a focus on infrastructure, such as is the case today, the disparity between what the Company is incurring and what it is authorized to collect will grow. This is a cash basis approach, the Company's recovery is always lagging and not accruing for future removal activities, and the significantly lower removal cost accrual (which increases rate base over time as compared to the traditional approach) will increase the overall cost to customers.

Q. WHEN WERE THE COMPANY'S CURRENT NET SALVAGE RATES ESTABLISHED?

A. Net salvage rates for the Company were most recently established in its last base rate case in 2016 in BPU Docket No. GR16090826. However, it is important to note that the rates were established pursuant to a settlement agreement.

⁴ F.K. Wolf and W.C. Fitch, *Depreciation Systems*, pp. 260-267 (1994).

⁵ NARUC, *Public Utility Depreciation Practices*, pp. 157-164 (1996).

1 **Q. HAVE ANY PLANT ACCOUNTS EXPERIENCED A CHANGE IN NET**
2 **SALVAGE?**

3 **A.** Yes. Several of the accounts reflect significant increases in removal costs. Eight accounts
4 in particular show large amounts of negative net salvage: Mains (Transmission 367 and
5 Distribution 376), Measuring and Regulating Stations (Transmission 369, Distribution 378
6 and 379) and Services (380). These accounts constitute most of the Company's plant from
7 a dollar perspective, and the efforts associated with removing underground assets from
8 service make up the majority of the Company's removal cost expense. These accounts are
9 a primary focus in the Company's ongoing infrastructure replacement efforts.

10 **Q. HOW IS REMOVAL COST CHARGED TO ACCUMULATE DEPRECIATION?**

11 **A.** Removal cost is tracked and recorded through the Company's work order system. The
12 work order costs (retirement, salvage and cost of removal) are recorded to accumulated
13 depreciation on a project level through the accounting system.

14 **Q. BASED ON YOUR ANALYSIS, WHAT ARE YOUR NET SALVAGE**
15 **RECOMMENDATIONS FOR MAINS AND SERVICES?**

16 **A.** Based on a 3-year average, for Transmission Mains, I recommend including \$21,729 in the
17 annual accrual amount; for Distribution Mains, I recommend including \$1,948,242 in the
18 annual accrual amount; and for Distribution Services, I recommend including \$4,556,636
19 in the annual accrual amount. These amounts are based on the most recent 3-year average
20 of net salvage costs and are most reflective of Elizabethtown's expected costs in the future.
21 These are the accounts where the most significant cost of removal has been and is expected
22 to be recorded in the future. The detailed amounts for all accounts are shown in Schedule
23 DAW-1, Appendix A, and were derived from the net salvage analysis in Schedule DAW-
24 1, Appendix D.

1 **Q. PLEASE SUMMARIZE YOUR NET SALVAGE RECOMMENDATIONS.**

2 **A.** The total amount of negative net salvage (salvage less cost of removal) included in the
3 depreciation rate accrual in Transmission and Distribution functions is \$6,651,049.
4 General Plant Transportation and Power Operated Equipment Accounts reflect positive net
5 salvage of \$285,571. The total amount of net salvage (salvage less cost of removal)
6 included in the depreciation rate accrual is a negative \$6,365,478. Both positive and
7 negative net salvage amounts have been included in the depreciation accrual calculations
8 and are shown on Schedule DAW-1, Appendix A.

9 **IV. CONCLUSION**

10 **Q. PLEASE SUMMARIZE THE CONCLUSIONS YOU HAVE REACHED AS A**
11 **RESULT OF YOUR ANALYSIS.**

12 **A.** The depreciation study and analysis performed under my supervision fully support setting
13 depreciation rates at the levels I have proposed herein. The depreciation study describes
14 the extensive analysis performed and the resulting rates that are now appropriate for
15 Company property. The Company's depreciation rates should be set at my recommended
16 amounts to permit recovery of the Company's total investment in property over the
17 estimated remaining life of the assets

18 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

19 **A.** Yes, it does.

ELIZABETHTOWN GAS COMPANY

A SOUTH JERSEY INDUSTRIES WHOLLY OWNED SUBSIDIARY

GAS UTILITY PLANT DEPRECIATION RATE STUDY AT DECEMBER 31, 2018



<http://www.utilityalliance.com>

**ELIZABETHTOWN GAS COMPANY
GAS UTILITY PLANT
DEPRECIATION RATE STUDY
EXECUTIVE SUMMARY**

Elizabethtown Gas Company (“Elizabethtown” or “Company”), a wholly owned subsidiary of South Jersey Industries, engaged Alliance Consulting Group to conduct a depreciation study of the Company’s Gas utility plant depreciable assets using actual plant asset balances and depreciation reserve balances as of December 31, 2018 (“Study”). To determine depreciation rates, the following process occurred: 1) historic data through December 31, 2018 and judgment are used to estimate life and net salvage parameters; 2) discussions with Company operations and accounting personnel are used to validate the life and net salvage parameters shown in the historical data; and 3) the vintage balances and reserves at December 31, 2018 are used to compute the proposed depreciation accrual. The total proposed increase in annual depreciation expense that results from this Study is \$7.1 million based on plant balances as of December 31, 2018.

This Study uses the straight-line, broad (average life) group, remaining life depreciation system. In addition, this Study performs a reallocation of the accumulated reserve for depreciation for gas plant. The net salvage analysis in this Study parallels the approach previously used in developing the depreciation rates adopted by the New Jersey Board of Public Utilities (“BPU”) in the Stipulation in Elizabethtown’s last gas rate case in Docket No. GR16090826. In accounts where net salvage is expected to occur, a three year average amount of net salvage has been included for the calculation of depreciation rates.

For Manufactured Gas, Other Storage, Transmission, Distribution, and General accounts, the lives of the accounts and net salvage parameters are reviewed in this Study. This Study recommends changes in depreciation for each function based on account balances as of December 31, 2018 as follows: a

decrease of \$45 thousand for Manufactured Gas, a decrease of \$41 thousand for Other Storage, a decrease of \$62 thousand for Transmission, an increase of \$6.7 million for Distribution, and an increase of \$557 thousand for General. The total proposed change in depreciation expense is an increase of \$7.1 million.

For Manufactured Gas, Storage, Transmission, Distribution, and General accounts (excluding Intangibles), there are 12 accounts that have increasing lives and 13 accounts that have decreasing lives, while all others remain unchanged or permit no comparison. Based on the BPU precedent for using a historical average amount for net salvage calculations, eight accounts experienced negative net salvage (removal cost) charges, for a total of \$6,651,049. This experience is included in the total accrual amount used to calculate annual depreciation accrual rates. The negative net salvage amounts (COR) added to the accrual can be found in Appendix A. For Transportation and Power Operated Equipment accounts, the positive net salvage (Gross Salvage) amounts are subtracted from the accrual, which can also be found in Appendix A.

**ELIZABETHTOWN GAS COMPANY
GAS UTILITY PLANT
DEPRECIATION RATE STUDY
AT DECEMBER 31, 2018
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PURPOSE OF THE STUDY

The purpose of this Study is to develop depreciation rates for the depreciable property of Elizabethtown based on plant and reserve balances at December 31, 2018. Historical data at December 31, 2018 and judgment are used to estimate life and net salvage. The account-based depreciation rates are designed to recover the total remaining undepreciated investment, adjusted for net salvage, over the remaining life of Elizabethtown's property on a straight-line basis. This Study includes the Company's depreciable gas plant assets. Non-depreciable property and property that is amortized, such as intangible software, are excluded from the analysis of this Study but are reported in the total plant and reserve data for a complete report of plant assets at the Study date.

Elizabethtown is now a wholly owned subsidiary of South Jersey Industries and is dedicated to delivering safe and reliable natural gas in New Jersey. Regulated by the New Jersey Board of Public Utilities, Elizabethtown is principally engaged in the storage, transmission, and distribution of gas. Elizabethtown provides the essential service of efficiently delivering abundant and affordable natural gas to more than 292,000 end-use customers across seven counties through its transmission and distribution systems.

I. STUDY RESULTS

Overall depreciation rates for all Elizabethtown depreciable property are shown in Appendix B. As shown in Appendix B, these rates translate into an annual depreciation expense of \$32.9 million based on Elizabethtown's depreciable investment for the plant balances as of December 31, 2018. This reflects an increase of \$7.1 million as compared to the equivalent annual depreciation expense of \$25.8 million calculated using the currently approved rates. The proposed depreciation rates for Manufactured Gas translate into an annual depreciation accrual of \$28 thousand. Other Storage translates into an annual depreciation accrual of \$721 thousand. The proposed depreciation rates for Transmission translate into an annual depreciation expense of \$386 thousand. The proposed depreciation rates for Distribution translate into an annual depreciation expense of \$27.3 million. The proposed depreciation rates for General Plant translate into an annual depreciation expense of \$4.4 million. The changes in proposed depreciation are primarily due to the increase in cost of removal in the Distribution Plant function and the reserve position.

Appendix A shows the development of the annual depreciation rates and accruals. Appendix B presents a comparison of approved rates versus proposed rates by account. Appendix C presents a summary of average service lives and net salvage estimates by account. Appendix D presents the net salvage analysis for all accounts.

II. GENERAL DISCUSSION OF THE DEPRECIATION RATE STUDY PROCESS

A. Definition of Depreciation

The term "depreciation" as used in this Study is considered in the accounting sense; that is, depreciation is a system of accounting that distributes the cost of assets, less net salvage (if any), over the estimated useful life of the assets in a systematic and rational manner. It is a process of allocation, not valuation. This expense is systematically allocated to accounting periods over the life of the properties. The amount allocated to any one accounting period does not necessarily represent the loss or decrease in value that will occur during that particular period. The Company accrues depreciation on the basis of the original cost of all depreciable property included in each functional property group. On retirement, the full cost of depreciable property, less the net salvage value, is charged to the depreciation reserve.

B. Basis of Depreciation Estimates

1. Overview of the Depreciation Method, Procedure and Technique

The Straight-Line, Broad (Average) Life Group, Remaining Life depreciation system is employed to calculate annual and accrued depreciation in this Study. In this system, the annual depreciation accrual for each plant account or sub-account is computed by dividing the original cost of the asset, less allocated depreciation reserve less estimated net salvage, by its respective average life group remaining life. The resulting annual accrual amounts of all depreciable property within a functional group¹ are accumulated, and that total is divided by the original cost of all functional depreciable property to determine the depreciation rate. The calculated remaining lives and annual depreciation accrual rates are based on attained ages of plant in service and the estimated

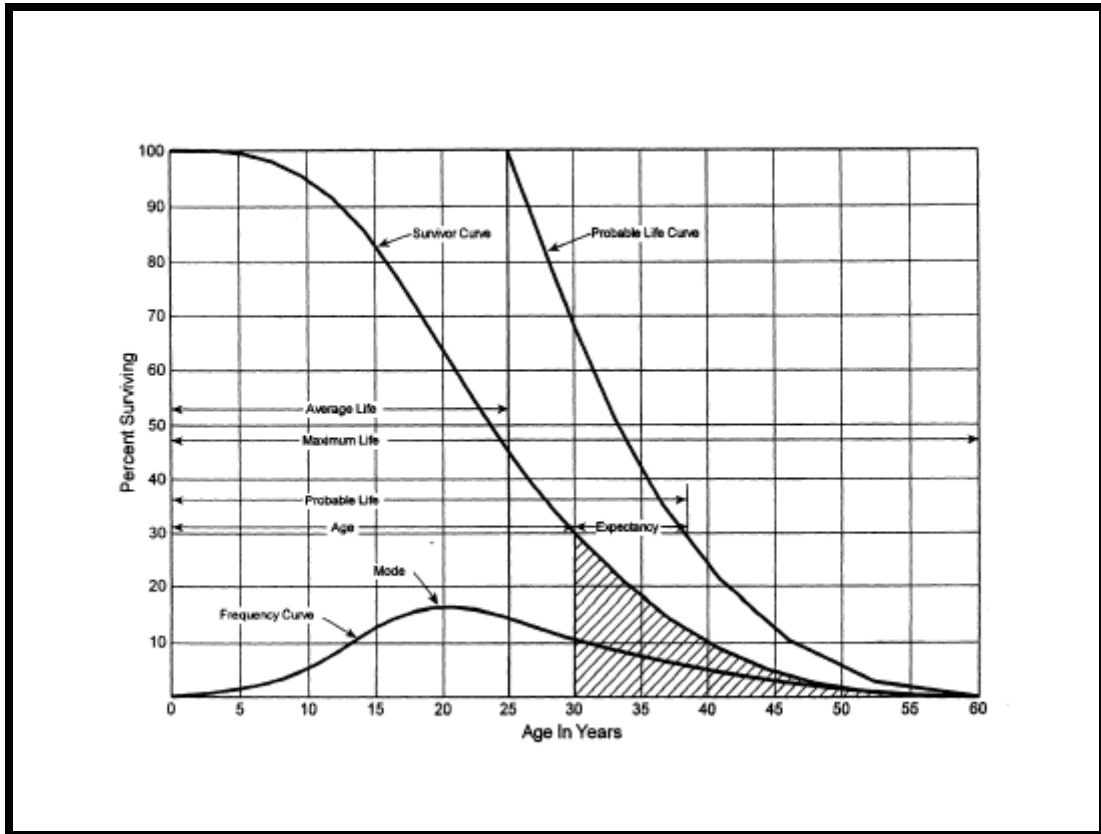
¹ Function or function group refers to different categories of plant. Specifically, the functions analyzed in this study are: Manufactured Gas Production, Other Storage, Transmission, Distribution, and General.

service life and salvage characteristics of each depreciable group. The computations of the annual depreciation rates are shown in Appendix B.

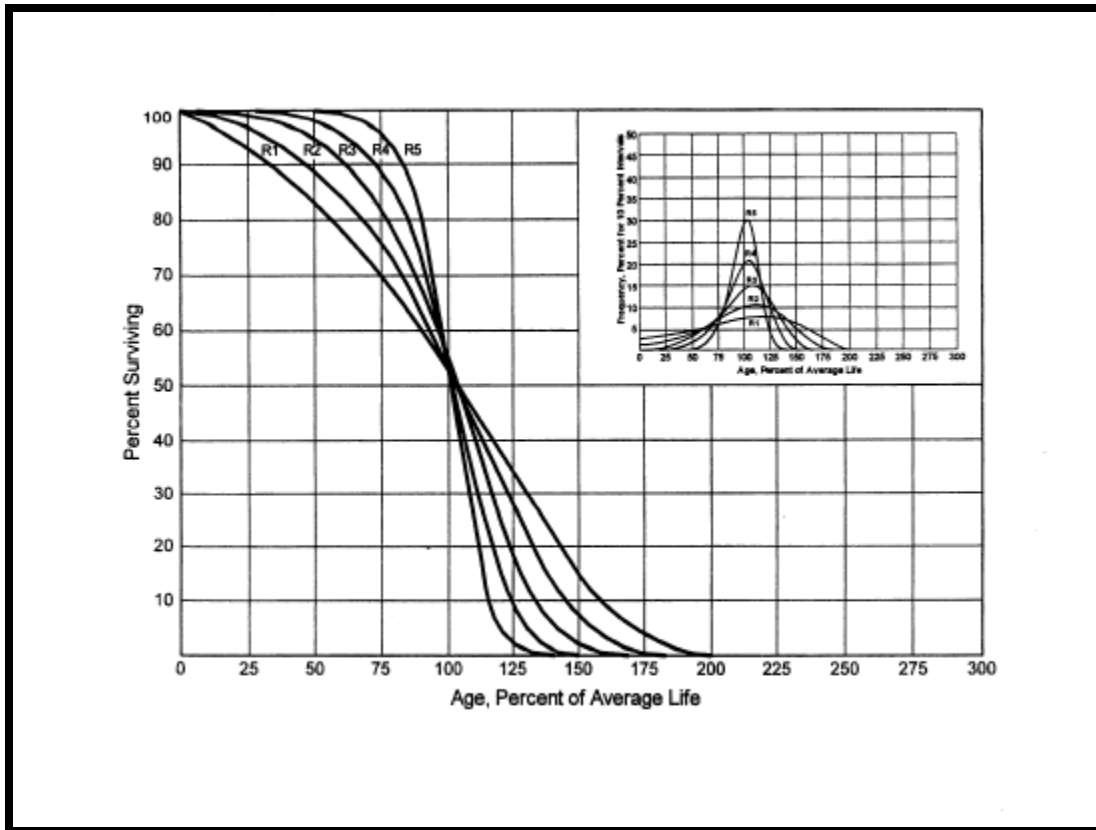
The actuarial analysis is used for each account within a functional group where sufficient data is available. Judgment is used to some degree on all accounts.

2. Survivor Curves

To fully understand depreciation projections in a regulated utility setting, there must be a basic understanding of survivor curves. Individual property units within a group do not normally have identical lives or investment amounts. The average life of a group can be determined by first constructing a survivor curve, which is plotted as a percentage of the units surviving at each age. A survivor curve represents the percentage of property remaining in service at various age intervals. The Iowa Curves are the result of an extensive investigation of life characteristics of physical property made at Iowa State College Engineering Experiment Station in the first half of the prior century. Through common usage, revalidation and regulatory acceptance, the Iowa Curves have become a descriptive standard for the life characteristics of industrial property. An example of an Iowa Curve is shown below.



There are four families in the Iowa Curves that are distinguished by the relation of the age at the retirement mode (largest annual retirement frequency) and the average life. For distributions with the mode age greater than the average life, an “R” designation (*i.e.*, Right modal) is used. The family of “R” moded curves is shown below.



Similarly, an “S” designation (*i.e.*, Symmetric modal) is used for the family of curves whose mode age is symmetric about the average life. An “L” designation (*i.e.*, Left modal) is used for the family of curves whose mode age is less than the average life. A special case of left modal dispersion is the “O” or origin modal curve family. Within each curve family, numerical designations are used to describe the relative magnitude of the retirement frequencies at the mode. A “6” indicates that the retirements are not greatly dispersed from the mode (*i.e.*, high mode frequency), while a “1” indicates a large dispersion about the mode (*i.e.*, low mode frequency). For example, a curve with an average life of 30 years and an “L3” dispersion is a moderately dispersed, left modal curve that can be designated as a 30 L3 Curve. An SQ, or square, survivor curve occurs where no dispersion is present (*i.e.*, units of common age retire simultaneously).

Most property groups can be closely fitted to one Iowa Curve with a unique average service life. The blending of judgment concerning current conditions and future trends along with the matching of historical data permits the depreciation analyst to make an informed selection of an account's average life and retirement dispersion pattern.

3. Actuarial Analysis

For all functions, the actuarial analysis ("Retirement Rate") method is used in evaluating historical asset retirement experience where vintage data are available and sufficient retirement activity is present. In actuarial analysis, interval exposures (total property subject to retirement at the beginning of the age interval, regardless of vintage) and age interval retirements are calculated. The complement of the ratio of interval retirements to interval exposures establishes a survivor ratio. The survivor ratio is the fraction of property surviving to the end of the selected age interval, given that it has survived to the beginning of that age interval. Survivor ratios for all of the available age intervals are computed by successive multiplications to establish a series of survivor factors, collectively known as an observed life table. The observed life table shows the experienced mortality characteristic of the account and may be compared to standard mortality curves, such as the Iowa Curves. Where data is available, accounts are analyzed using this method. Placement bands are used to illustrate the composite history over a specific era, and experience bands are used to focus on retirement history for all vintages during a set period. The results from the analyses for the accounts having data sufficient to be analyzed using this method are shown in the Life Analysis section of this Study.

4. Judgment

Any depreciation study requires informed judgment by the analyst conducting the study. A knowledge of the property being studied, company policies and procedures, general trends in technology and industry practice, and

a sound basis of understanding in depreciation theory are needed to apply this informed judgment. Judgment is used in areas such as survivor curve modeling and selection, depreciation method selection, simulated plant record method analysis, and actuarial analysis.

Judgment is not used in cases where there are specific, significant pieces of information that influence the choice of a life or curve. Those cases would simply be a reflection of applying specific facts to the relevant analysis. Where there are multiple factors, activities, actions, property characteristics, statistical inconsistencies, implications of applying certain curves, property mix in accounts or a multitude of other considerations that impact the analysis (potentially in various directions), judgment is used to take all of these factors and synthesize them into a general direction or understanding of the characteristics of the property. Individually, no one factor in these cases may have a substantial impact on the analysis, but overall, may shed light on the utilization and characteristics of assets. Judgment also may include deduction, inference, wisdom, common sense, or the ability to make sensible decisions. Statistical analysis is a tool in life estimation; and all facets of selecting a life estimate require judgment. At the very least, as an example, any analysis requires choosing upon which bands to place more emphasis.

The establishment of appropriate average service lives and retirement dispersions for the Transmission, Distribution, and General Plant accounts requires judgment to incorporate the understanding of the operation of the system with the available accounting information analyzed using the Retirement Rate actuarial methods. The appropriateness of lives and curves depends not only on statistical analyses, but also on how well future retirement patterns will match past retirements.

Current applications and trends in use of the equipment also need to be factored into life and survivor curve choices in order for appropriate mortality characteristics to be chosen.

5. Broad (Average Life) Group Depreciation Procedure

Elizabethtown's current depreciation rates, as stipulated to and authorized by the BPU in Docket No. GR16090826, were developed using the Average Life Group ("ALG") depreciation procedure. After discussion with Elizabethtown, the ALG procedure has been retained in this Study. After an average service life and dispersion are selected for each account, those parameters are used to estimate what portion of the surviving investment of each vintage is expected to retire. The depreciation of the group continues until all investment in the vintage group is retired. ALG is defined by each group's respective account dispersion, life, and salvage estimates. A straight-line rate for each ALG is calculated by computing a composite remaining life for each group across all vintages within the group, dividing the remaining investment to be recovered by the remaining life to find the annual depreciation expense and then dividing the annual depreciation expense by the surviving investment. The resulting rate for each account using the ALG procedure is designed to recover all retirements less net salvage when the last unit retires. The ALG procedure recovers net estimated book cost over the life of each account by averaging many components. The ALG procedure is a standard methodology and is used by other South Jersey Industries regulated utility companies.

6. Theoretical Depreciation Reserve

The book depreciation reserve was derived from Company records where the provision for depreciation is maintained on an account level. As a point of comparison, a theoretical depreciation reserve model was computed for each account. This study used a reserve model that relied on a prospective concept relating future retirement and accrual patterns for property, given current life and salvage estimates. The theoretical reserve of a group is developed from the estimated remaining life, total life of the property group, and estimated net salvage. The theoretical reserve represents the portion of the group cost that would have been accrued if current forecasts were used throughout the life of the

group for future depreciation accruals. The computation involves multiplying the vintage balances within the group by the theoretical reserve ratio for each vintage. The average life group method requires an estimate of dispersion and service life to establish how much of each vintage is expected to be retired in each year until all property within the group is retired. Estimated average service lives and dispersion determine the amount within each average life group. The straight-line remaining-life theoretical reserve ratio at any given age (RR) is calculated as:

$$RR = 1 - \frac{(\text{Average Remaining Life})}{(\text{Average Service Life})} * (1 - \text{Net Salvage Ratio})$$

In the workpapers, a theoretical reserve is computed for each account as of December 31, 2018, using the proposed life.

III. THE DETAILS OF THIS DEPRECIATION RATE STUDY

A. The Four Phases of the Depreciation Study Process

This Study encompasses four distinct phases. The first phase involves data collection and field interviews. The second phase is where the initial data analysis occurs. The third phase is where the information and analysis is evaluated. Once the first three stages are complete, the fourth phase begins. This fourth phase involves the calculation of depreciation rates and documentation of the corresponding recommendations.

During the Phase I data collection process, historical data is compiled from property records and general ledger systems. Data is validated for accuracy by extracting and comparing to multiple financial system sources. Audit of this data is validated against historical data from prior periods, historical general ledger sources, and field personnel discussions. This data is reviewed extensively to put it in the proper format for the Study. Further discussion on data review and adjustment is found in the Salvage Considerations section of this Study. Also as part of the Phase I data collection process, numerous discussions are conducted with engineers and field operations personnel to obtain information that will assist in formulating life and salvage recommendations in this Study. One of the most important elements of performing a proper depreciation study is to understand how the Company utilizes assets and the environment of those assets. Interviews with engineering and operations personnel are important ways to allow the analyst to obtain information that is beneficial when evaluating the output from the life and net salvage programs in relation to the Company's actual asset utilization and environment. Information regarding these discussions is found in the life analysis and salvage analysis discussions below in this Section IV of the Study and also in workpapers.

Phase 2 is where the actuarial analysis is performed. Phase 2 and 3 overlap to a significant degree. The detailed property records information is used in Phase 2 to develop observed life tables for life analysis. These tables are

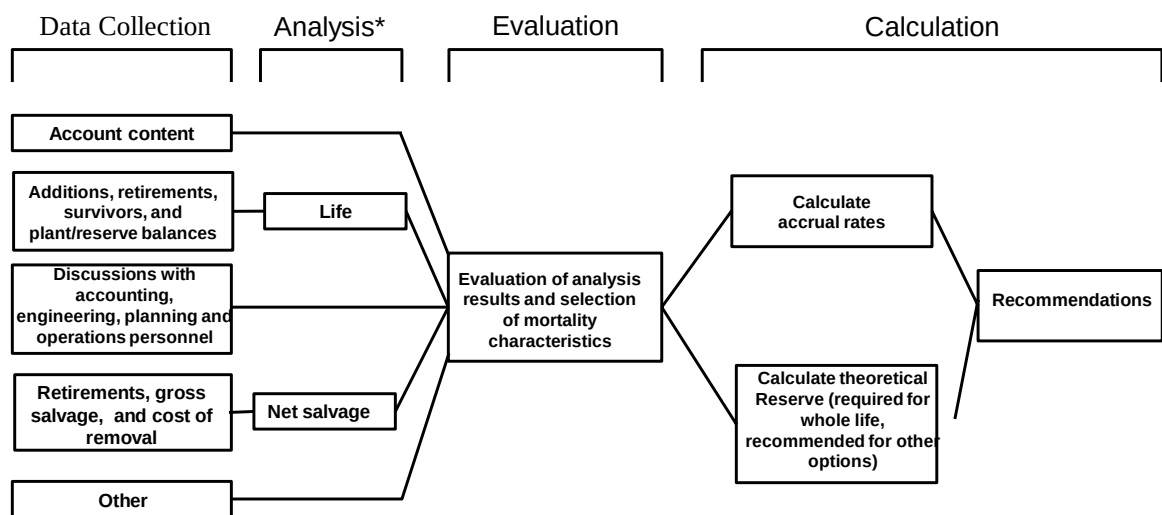
visually compared to industry standard tables to determine historical life characteristics. It is possible that the analyst will cycle back to this Phase 2 based on the evaluation process performed in Phase 3. Net salvage analysis consists of compiling historical salvage and removal data by functional group to determine values and trends in gross salvage and removal cost. This information is then carried forward into Phase 3 for the evaluation process.

Phase 3 is the evaluation process, which synthesizes analyses, interviews, and operational characteristics into a final selection of asset lives and net salvage parameters. The historical analysis from Phase 2 is further enhanced by the incorporation of recent or future changes in the characteristics or operations of assets that were revealed in Phase 1. Phases 2 and 3 allow the depreciation analyst to validate the asset characteristics as seen in the accounting transactions with actual Company operational experience.

Finally, Phase 4 involves the calculation of accrual rates, making recommendations and documenting the conclusions in the Study. The calculation of accrual rates is found in Appendix A. Recommendations for the various accounts are contained within this Section IV of this Study. The depreciation study flow diagram shown as Figure 1² below also documents the steps used in conducting this Study. DEPRECIATION SYSTEMS³, at page 289, documents the same basic processes in performing a depreciation study which are: statistical analysis, evaluation of statistical analysis, discussions with management, forecast assumptions, and document recommendations.

²INTRODUCTION TO DEPRECIATION FOR PUBLIC UTILITIES & OTHER INDUSTRIES, AGA EEI (2013).

³W. C. Fitch and F.K.Wolf, DEPRECIATION SYSTEMS, Iowa State Press, at page 289 (1994).



Source: Introduction to Depreciation for Public Utilities and Other Industries, AGA EEI , 2013.

*Although not specifically noted, the mathematical analysis may need some level of input from other sources (for example, to determine analysis bands for life and adjustments to data used in all analysis).

Figure 1

ELIZABETHTOWN DEPRECIATION STUDY PROCESS

B. Depreciation Rate Calculation

1. Overview of Calculation

Annual depreciation expense amounts for all accounts are calculated by the Broad (Average Life) Group, Straight-Line, Remaining Life system.

In a whole-life representation, the annual accrual rate is computed by the following equation:

$$\text{Annual Accrual Rate} = \frac{(100\% - \text{Net Salvage Percent})}{\text{Average Service Life}}$$

Use of the remaining life depreciation system adds a self-correcting mechanism, which accounts for any differences between theoretical and book depreciation reserve over the remaining life of the group. With the straight-line, remaining life, system using Iowa Curves, composite remaining lives are calculated according to standard broad group expectancy techniques, noted in the formula below:

$$\text{Composite Remaining Life} = \frac{\sum \text{Original Cost} - \text{Theoretical Reserve}}{\sum \text{Whole Life Annual Accrual}}$$

For each FERC plant account, the difference between the surviving investment, adjusted for estimated net salvage, and the allocated book depreciation reserve as of December 31, 2018, is divided by the composite remaining life to yield the annual depreciation expense as noted in this equation. In the equation, the Net Salvage % represents future net salvage.

$$\text{Annual Depreciation Expense} = \frac{\text{Original Cost} - \text{Book Reserve} - (\text{Original Cost} * \text{Net Salvage \%})}{\text{Remaining Life}}$$

Within a group, the sum of the group annual depreciation expense amounts, as a percentage of the depreciable original cost investment summed, gives the annual depreciation rate as shown below:

$$\text{Annual Depreciation Rate} = \frac{\sum \text{Annual Depreciation Expense}}{\sum \text{Original Cost}}$$

These calculations are shown in Appendix A. The calculations of the theoretical depreciation reserve values and the corresponding remaining life calculations are shown in workpapers. The book depreciation reserve as of December 31, 2018 is from individual accounts and the theoretical reserve computation is used to compute a composite remaining life for each account. The calculation of the accrual rates is shown in Appendix A.

2. Remaining Life Calculation

The establishment of appropriate average service lives and retirement dispersions for each account within a functional group is based on engineering judgment that incorporates available accounting information analyzed using the Retirement Rate actuarial methods. After establishment of appropriate average service lives and retirement dispersion, remaining life is computed for each account. The theoretical depreciation reserve is calculated using theoretical reserve ratios as defined in the theoretical reserve portion of Section III of this Study. The difference between plant balance and theoretical reserve is then spread over the ALG depreciation accruals for each plant account. Remaining life computations are found for each account in workpapers.

3. Life Analysis

The Retirement Rate actuarial analysis method is applied to all accounts for Elizabethtown. For each account, an actuarial retirement rate analysis is made with placement and experience bands of varying width. The historical observed

life table is plotted and compared with various Iowa Curves to obtain the most appropriate match. A selected Iowa Curve for each account is shown in Section IV (Determination of the Lives) below. The observed life tables for all analyzed placement and experience bands are provided in workpapers.

For each account on the overall band (*i.e.*, placement from earliest vintage year available for each account through 2018), the survivor curves underlying the depreciation rates stipulated and approved in Docket No. GR16090826 were used as a starting point. Using the same average life, various dispersion curves are then plotted. Frequently, visual matching confirms one specific dispersion pattern (*e.g.*, L, S, or R) as an obviously better match than others. The next step is to determine the most appropriate life using that dispersion pattern. After looking at the overall experience band, different experience bands are then plotted and analyzed as follows: in increments from the overall band to a middle-range band, then the most recent bands. Next, placement bands of varying width are plotted within each experience band discussed above. Repeating the process across the various bands usually points to a focus on one dispersion family and small range of service lives. The goal of visual matching is to minimize the differential between the observed life table and Iowa Curve in the top- and mid-range of the plots. These results are used in conjunction with all other factors that may influence asset lives.

IV. DETERMINATION OF THE LIVES

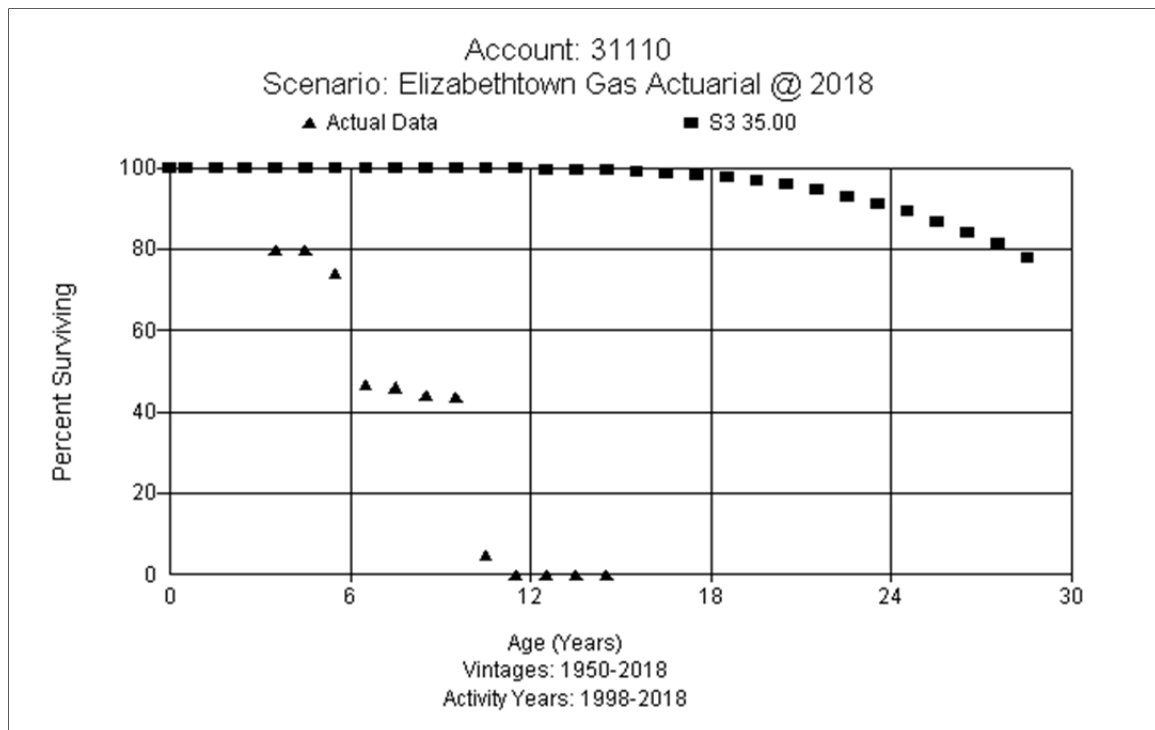
A. Manufactured Gas Plant

FERC Account 304.20 Land Rights 65 SQ

This account includes the cost of land rights associated with manufactured gas production plant. At December 31, 2018, there was approximately \$61 thousand in this account. The current approved life is 65 SQ. There is not enough retirement activity for a meaningful analysis. Based on the type of assets and judgment, this Study recommends retention of the existing service life. No graph is provided.

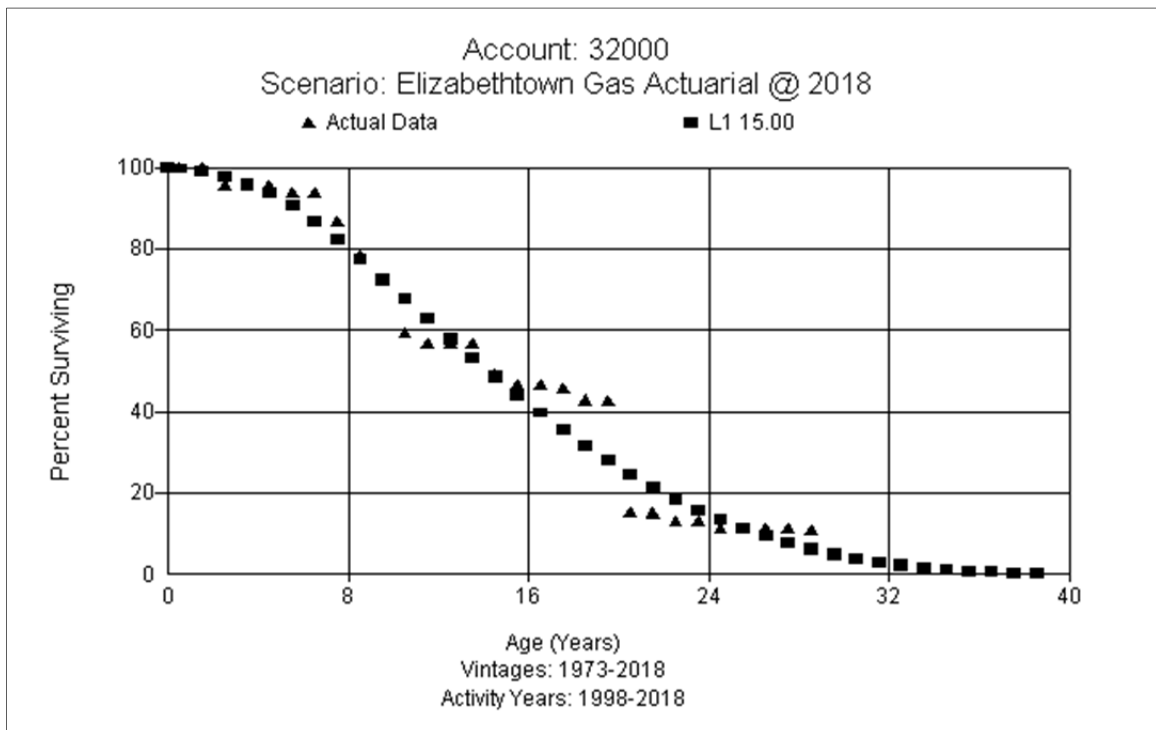
FERC Account 311.00 Liquefied Petroleum Gas Equipment 35 S3

This account contains vaporizer valves but would generally have other types of equipment used in the production of gas from petroleum derivatives. At December 31, 2018, there was approximately \$737 thousand in this account. The existing parameter is 35 S3. Discussions with Company personnel indicated they operate a small propane tank system. The vaporizer valves were recorded in 2015. The analysis suggests a much shorter life than expected for these types of assets. Based on discussions with operations personnel, judgment, and the type of assets in this account, this Study recommends retention of the 35 S3 dispersion. A graph of the observed life table versus the proposed 15 L1 is shown below.



FERC Account 320.00 Other Equipment 15 L1

This account contains gas detection, fire detection, and other miscellaneous equipment associated with manufactured gas production plant. At December 31, 2018, there was approximately \$174 thousand in this account. The current approved life is 7 years with the L4 dispersion. Based on the full band analysis, judgment, and the type of assets in this account, this Study recommends moving to a 15-year life and the L1 dispersion. A graph of the observed life table versus the proposed 15 L1 is shown below.

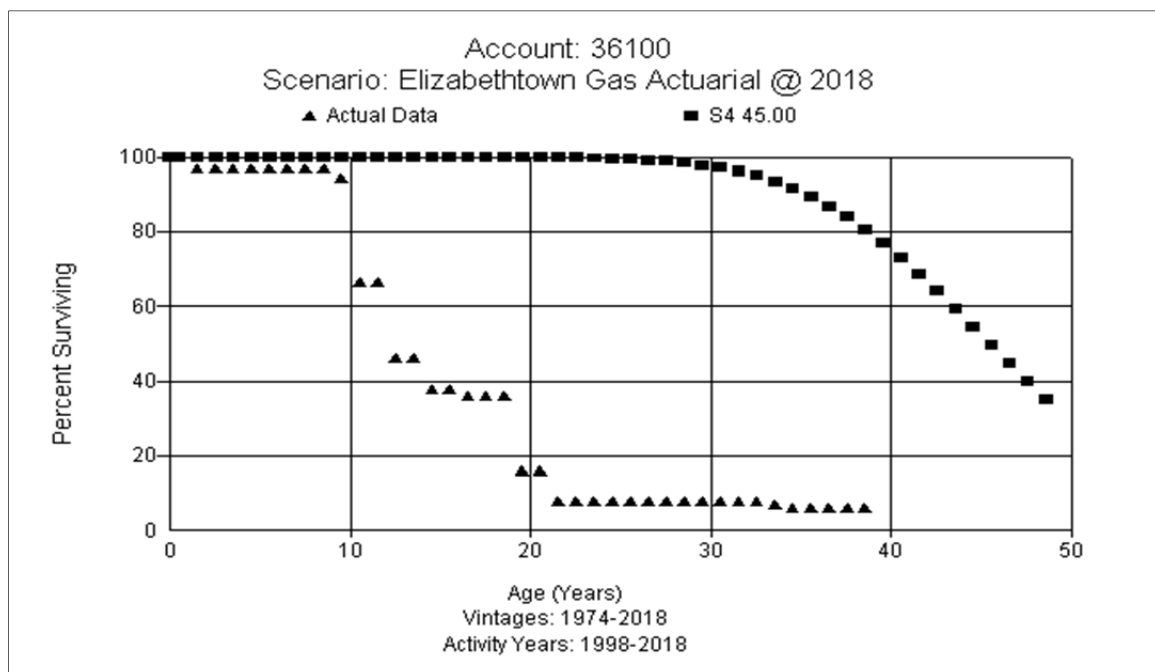


B. Other Storage Plant

Storage Accounts, FERC Accounts 361.00–363.40

FERC Account 361.00 Structures and Improvements 45 S4

This account includes the cost of structures and improvements in connection with building station control, security systems, yard improvements, protective fencing, and other structures for other storage plant. At December 31, 2018, there was approximately \$3.5 million in this account. The current approved life for this account is 45 years with the S4 dispersion. Discussions with Company personnel indicated the buildings are concrete, metal, and steel, and the existing life remains appropriate for the assets. However, the life analysis suggests a life much shorter than the existing life parameters. Best fits in the analysis are around 14-15 years with a flatter dispersion than existing. Based on the analysis, discussions with Company personnel, the type of assets in the account, and judgment, this Study recommends retention of the existing 45 S4 at this time. A graph of the observed life table versus the proposed curve is shown below.

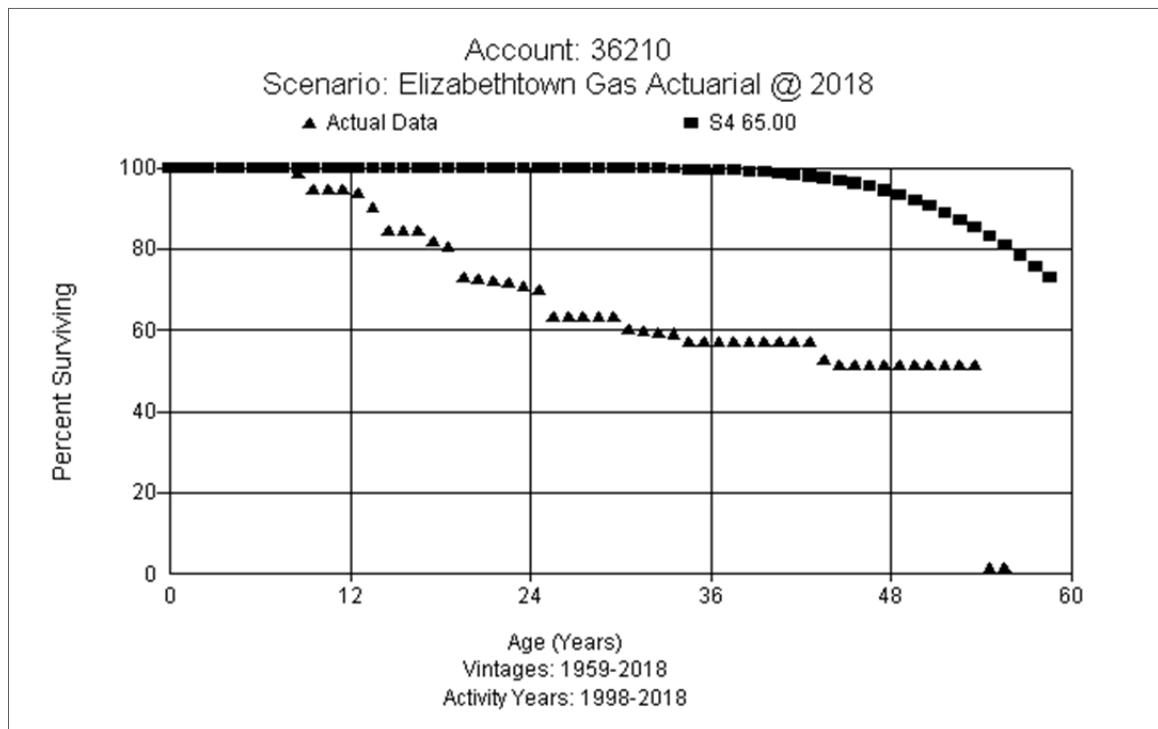


FERC Account 362.00 Gas Holders – Natural Gas 65 S4

This account includes the cost of natural gas holders (tanks) used in the storage function. At December 31, 2018, there is no balance in this account. The current approved life for this account is 65 years with the S4 dispersion and is retained. If future investment is added, the existing rate of 1.54% should be applied.

FERC Account 362.10 Gas Holders – LNG 65 S4

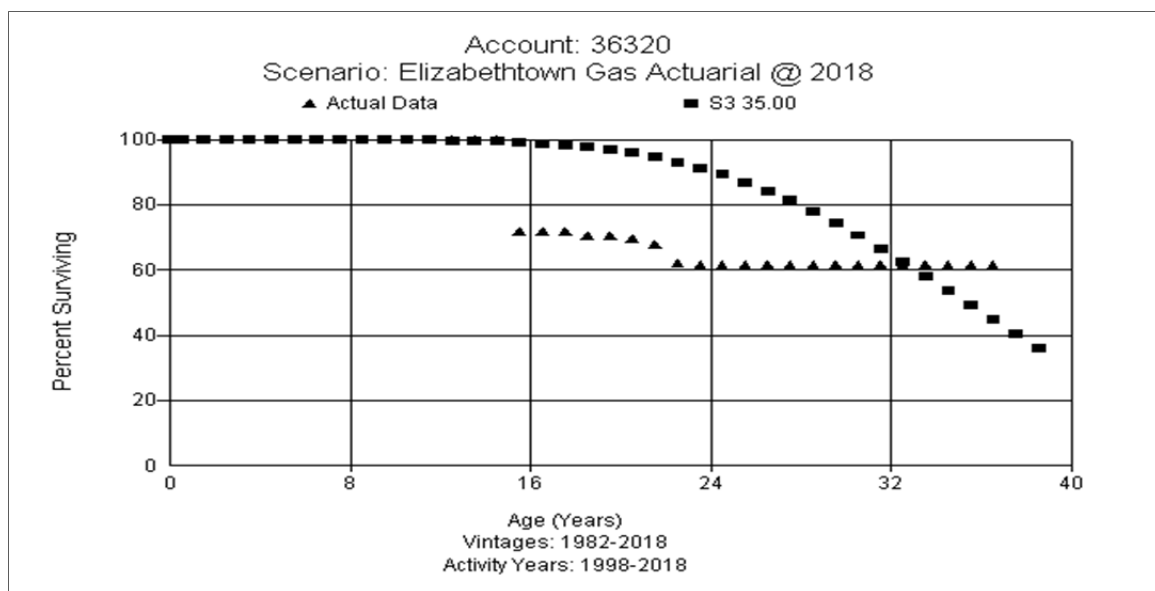
This account includes the cost of LNG holders (tanks), piping, valves, and other miscellaneous equipment used in the storage function. At December 31, 2018, there was approximately \$3.2 million in this account. The current approved life for this account is 65 years with the S4 dispersion. Discussions with Company personnel indicate the tank is original equipment, which was installed in 1972. It has a carbon steel outer, which is painted. The inside is a nickel steel alloy. The tank sits off the ground. The facility is well maintained and is in good shape. Actuarial analysis indicates a much shorter life with a steeper dispersion. Discussions with Company personnel indicated both the natural gas and LNG holders should last for numerous more years. Based on the analysis, type and mix of assets, input from Company, and judgment, this Study recommends retention of a 65 S4. A graph of the observed life table versus the proposed curve is shown below.



FERC Account 363.20 Vaporizing Equipment 35 S3

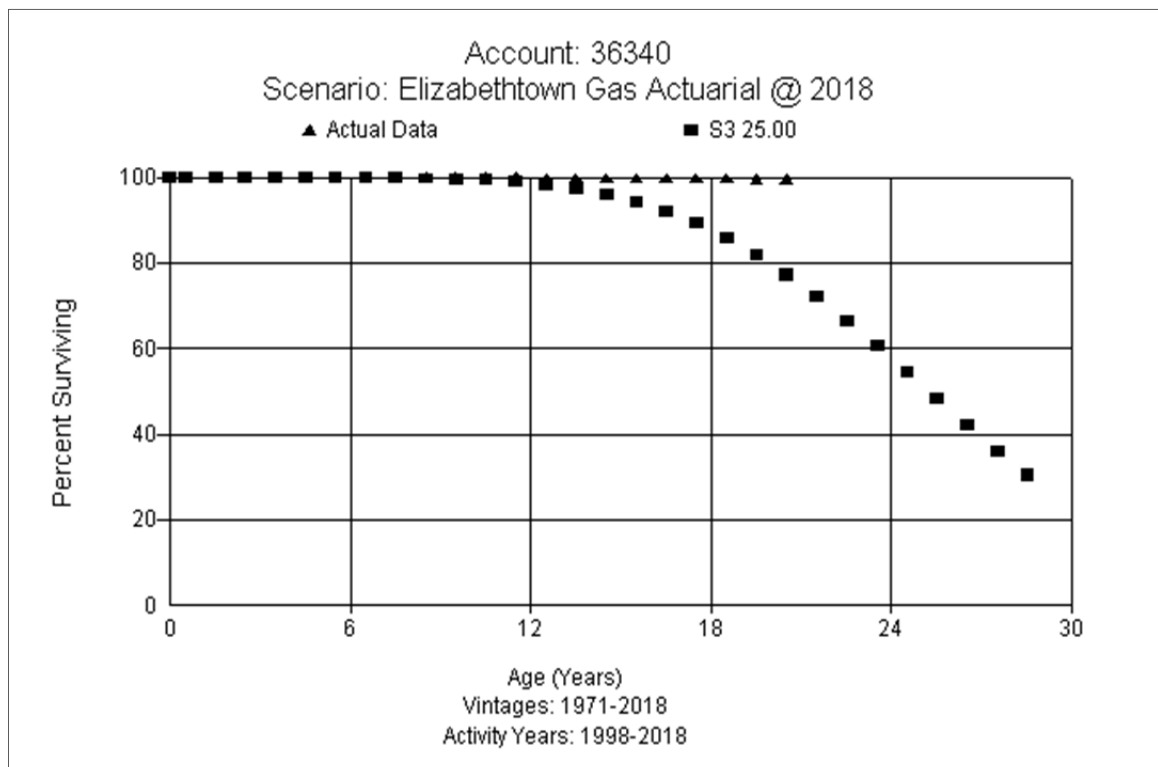
This account consists of vaporizers, liquefaction equipment, boiler, piping, and pump equipment associated with the LNG plant. There is approximately \$21.0 million in this account. The approved life for this account is 35 years with the S3 dispersion. Equipment at Erie Street was replaced with stainless equipment and new controls in 1992. Controls were again changed in 2005.

Discussions with Company personnel indicated that in 2015 the Company started building liquefaction assets for two units at Erie Street. The equipment in this account (other than the liquefaction equipment) is now outdated and replacement parts are getting harder to find. Company personnel expect to have to replace much of the equipment within the next 10 years. Current average age of retirements is about 28 years and the average age of survivors is 2.32 years. The life analysis shows a life indication of around 35 years, and Company personnel indicated that a 35 year life is still reasonable. Based on the recent retirement activity, type of assets, discussion with Company personnel, and expectations, the Study recommends retention of the 35 S3 dispersion pattern. The observed life table versus the proposed is graphed for this account below.



FERC Account 363.40 Measuring & Regulating Equipment 25 S3

This account consists of measuring and regulating station equipment used for LNG storage operations. There is approximately \$2.9 million in this account. The approved life for this account is 35 years with the S3 dispersion. The average age of retirements is 29.08 years and the average age of surviving assets is 3.01 years. Discussions with Company personnel indicated most of the current investment is related to the control system for liquefier/vaporizer/plant safety installed in 2017. The controls are expected to last, even without obsolescence, for only 20 years. Some of the control system assets, like the computers, monitors, and network equipment, will only last 5 years. Mixed with the other assets, the overall life for the account would be more appropriately set to 25 years. Based on more recent activity, type of assets, and discussions with Company, the Study recommends moving to a 25 S3 dispersion pattern. The observed life table versus the proposed is graphed for this account below.



C. Transmission Plant**Transmission Accounts, FERC Accounts 365.20–371.0****FERC Account 365.20 Rights of Way 80 R2**

This account includes the cost of rights of way, legal fees, and recording costs associated with transmission assets and operations. There is approximately \$367 thousand in this account. The approved life for this account is 75 years with the R2 dispersion. There have been no retirements recorded and few are expected in the intermediate future. These land rights are generally used in conjunction with the installation of mains so a reasonable expectation is the life would at least equal or exceed the life of mains. Based on the 71 year life recommendation for Account 367, Mains in this Study, the Study recommends increasing the existing life from 75 years to 80 years while retaining the R2 curve. Due to lack of historical retirement activity, no analysis was performed and no graph is provided.

FERC Account 367.00 Mains - All 71 R2

This account includes mains of all sizes, rectifiers and ground beds used for cathodic protection, valves and leak clamps associated with pipe. There is approximately \$11.8 million in this account. The approved life for this account is a 65 R3. There is only 17 miles of transmission pipe on the system. The oldest transmission mains, which were installed in the 1970's, consist of five miles of 10" diameter pipe. There is also nine miles of 12" diameter pipe from the 1980's.

Discussions with Company personnel indicated they expect transmission mains to last at least as long as distribution mains. Assessments of the transmission mains in recent years make the Company comfortable with moving the life for transmission mains a little longer. Recently, a third main was down rated to distribution operationally.

The current average age of survivors, almost 9 years, is relatively young for type of asset. Based on type of assets and recent activity to retire and

replace pipe, this Study proposes increasing the life to 71 years and changing to a slightly flatter R2 dispersion pattern. No retirement activity has yet been recorded, so no analysis was performed and no graph is provided.

FERC Account 369.00 M&R Station Equipment 45 S2

This account includes measuring equipment, gauges, piping, and valves associated with the transmission system. There is approximately \$8 million in this account. The approved life for this account is a 35 S2. No analysis was performed since no retirements have been recorded. Only \$8 thousand of the \$2.5 million in assets has a vintage before 2008. Discussions with Company personnel indicated transmission pipe replacement does not drive metering and regulating station retirements. There are two transmission stations, which connect the 3rd party take points to the Company's transmission system: Warren Glen and New Village. The equipment has been in service since the 1990s. The Company has just started to replace SCADA equipment and electronics. There has not been a lot of retirement activity. These stations have basically the same equipment as 379 City Gates and should therefore have approximately the same life. Based on discussion with Company operations personnel, the regulators are replaced around 25 years. Control and communication equipment are expected to last between 5 and 15 years depending on the asset. Based on type of assets, the life of 379 City Gates and Company expectations, this study proposes increasing the life to 45 years while retaining the S2 curve. No retirement activity has been recorded, so no graph is provided.

FERC Account 371.00 Other Equipment 20 R2

This account includes miscellaneous equipment associated with the transmission system. There is approximately \$4 thousand in this account. There was no parameter provided in the last study. Current surviving assets were recorded in the account in 2011. No analysis was performed since no retirements have been recorded. Based on judgment, the Study recommends a

life of 20 years with the R2 dispersion. No graph is provided.

D. Distribution Plant

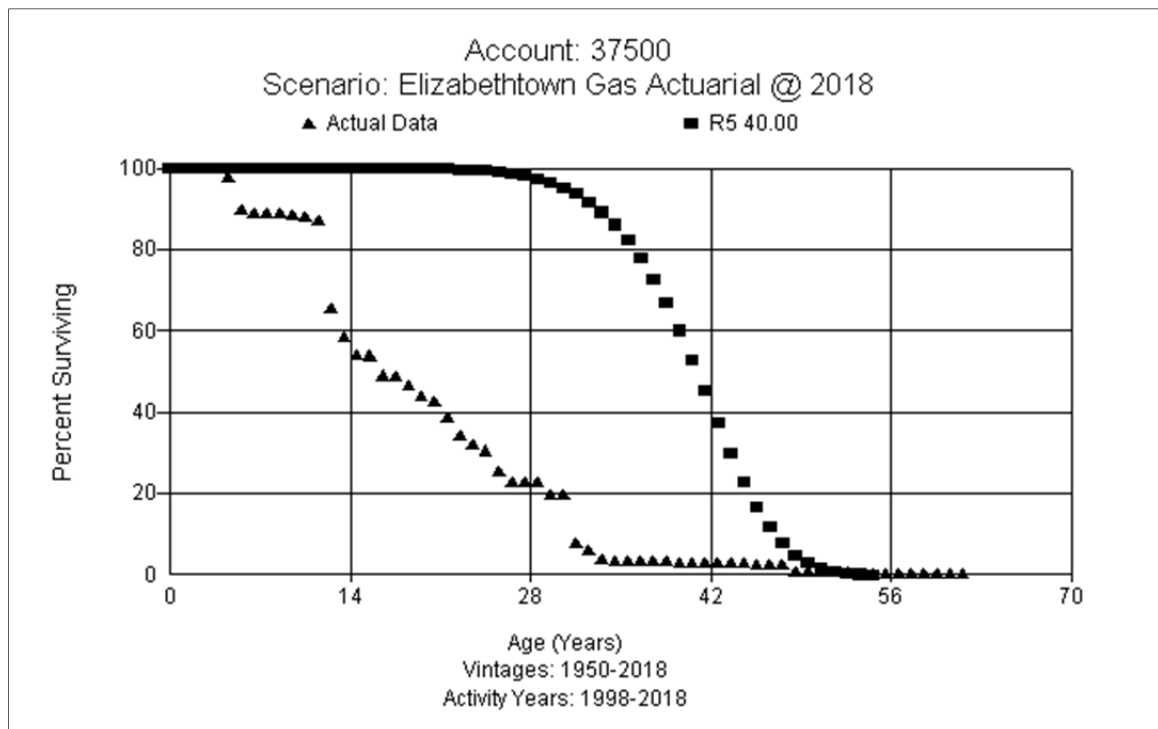
Distribution Plant Accounts, FERC Accounts 374.10–387.00

FERC Account 374.00/374.20/374.30 Land Rights and Right of Way 80 R2

This account includes the cost of land rights used in connection with distribution operations. There is approximately \$2.9 million in this account. The approved life for this account is 75 R2. There have been very limited retirements recorded and few are expected in the intermediate future. These land rights are generally used in conjunction with the installation of mains and other distribution property so a reasonable expectation is that the life would equal or exceed the life of mains. Based on the proposed life for Account 376, Mains, this Study recommends increasing the life to 80 years and using the R2 dispersion. No graph is provided.

FERC Account 375.00 Structures and Improvements 40 R5

This account includes Erie Street structures, Green Lane training center along with two portable steel buildings and other miscellaneous structures and improvements associated with the gas distribution system. There is approximately \$5.7 million in this account. The approved life for this account is 20 years with the L2 dispersion. Currently there are no assets with a vintage older than 2001 and \$5.2 million of the \$5.7 million balance is from 2017 or newer. The life analysis indicates a much lower life than is expected for the type of assets. Based on the type of assets, recent activity, and discussions with Company personnel, this study proposes increasing the life to 40 years and changing to an R5 dispersion pattern. The observed life table versus the proposed is graphed for this account below.



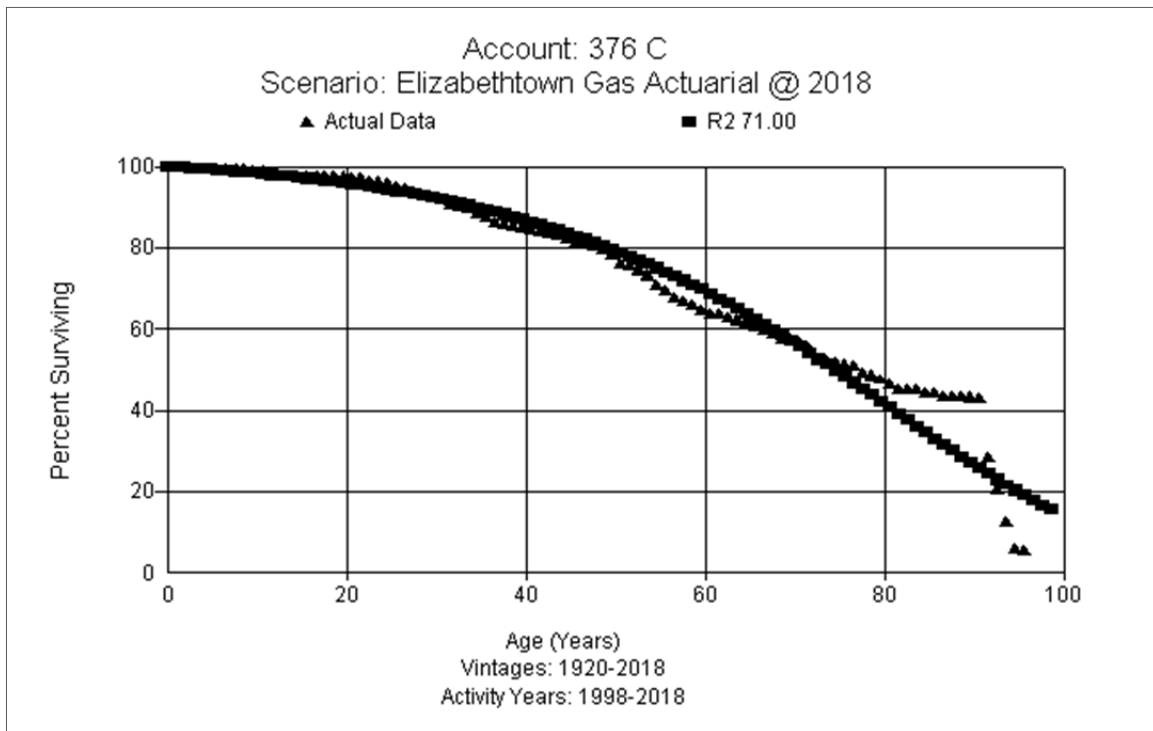
FERC Account 376.00 Mains – All 71 R2

This account consists of all distribution mains, which comprise cast iron, steel, and plastic. There is approximately \$660 million of investment in this account. An adjustment of \$192 thousand (reduction for CIAC) was reflected in the study data. The approved curve for this account is the 71 R2. The Company has been replacing cast iron over the years. Of the 3,200 miles of main, a third is steel and nearly all are cathodically protected. The Company mostly uses anodes, which are capitalized with original installation.

Discussions with Company personnel indicated a lot of the historical retirement experience would be related to the cast iron mains and some DOT relocations. There is not a lot of vintage plastic (defined as plastic installed prior to approximately 1983). In the 1990s, they increased their pipeline replacement initiatives targeting vintage pipe replacements (e.g., cast iron). Since 2005, they have had various vintage pipe replacement programs in place during various time periods. There is a proposed program pending consideration by the Board of Public Utilities called IIP (Infrastructure Investment Program), which will replace 50-75 miles of pipe per year for 5 years. The proposed replacements are consistent with replacement over the last 3 years and the plan contemplates a continuation of the replacements at that level. The vast majority of new pipe installed is plastic. The IIP program will also target replacing low-pressure pipe with medium pressure systems. The Company believes the current 71 year life is reasonable.

In the life analysis, the full band has a good fit with a 71 R2 and drops to nearly zero percent, providing a full curve. Other fuller bands dropped to around 60 percent surviving and the most recent bands were up around 76 percent surviving.

Based on the analysis, along with the Company's plans to finish replacing cast iron pipe, the Study recommends retention of the 71 R2 dispersion pattern. The observed life table versus the proposed is graphed for this account below.



FERC Account 378.00 Measuring & Regulating Equipment 35 S2

This account consists primarily of valves, regulators, and heaters. There is approximately \$18.9 million of investment in this account. The approved curve for this account is the 35 S2. Average age of retirements is 32 years and the average age of survivors is about 25 years. There are around 286 district regulator stations (“DRS”) that change higher pressure distribution to lower pressure distribution. The boxes are galvanized steel and may have to be replaced in 20 years, as 99% of the DRS are below grade. Salt is an issue creating corrosion on the pipe and regulators. There are approximately 180 low pressure DRS, which will be retired in the next 7 years or so. The regulator life is expected to be around 30 years or more.

There has only been about \$5 thousand of retirements recorded to date, so the life analysis was not meaningful with the percent surviving at 98 percent in the full band.

Giving consideration to the analysis, Company plans, and expectations, as well as to judgment, this study recommends retention of the existing 35 S2 at this time. No graph is provided.

FERC Account 379.00 M&R - City Gate Equipment 45 S2

This account consists primarily of valves, regulators, and heaters used at receipt points on the distribution system. There is approximately \$21 million of investment in this account. The approved curve for this account is the 40 S2. No retirements have been recorded. The average age of the surviving balance is 25 years. City gate stations connect 3rd party suppliers to the distribution system.

Discussions with Company personnel indicated the city gates are above ground and are inspected much more often. They are also less exposed to salt. They would expect city gates to have a longer life than DRS. Capacity is a driver of retirement/replacement. Many components are expected to last up to 50 years. Heaters would have a shorter life in many cases. SCADA systems would also have a shorter life (10-15 years on electronics). Orifice plate would have a life of that of pipe. With turbine meters, the modules are changed out every two years under O&M but otherwise would have a life of pipe too. The Company believes moving to 45 years is reasonable.

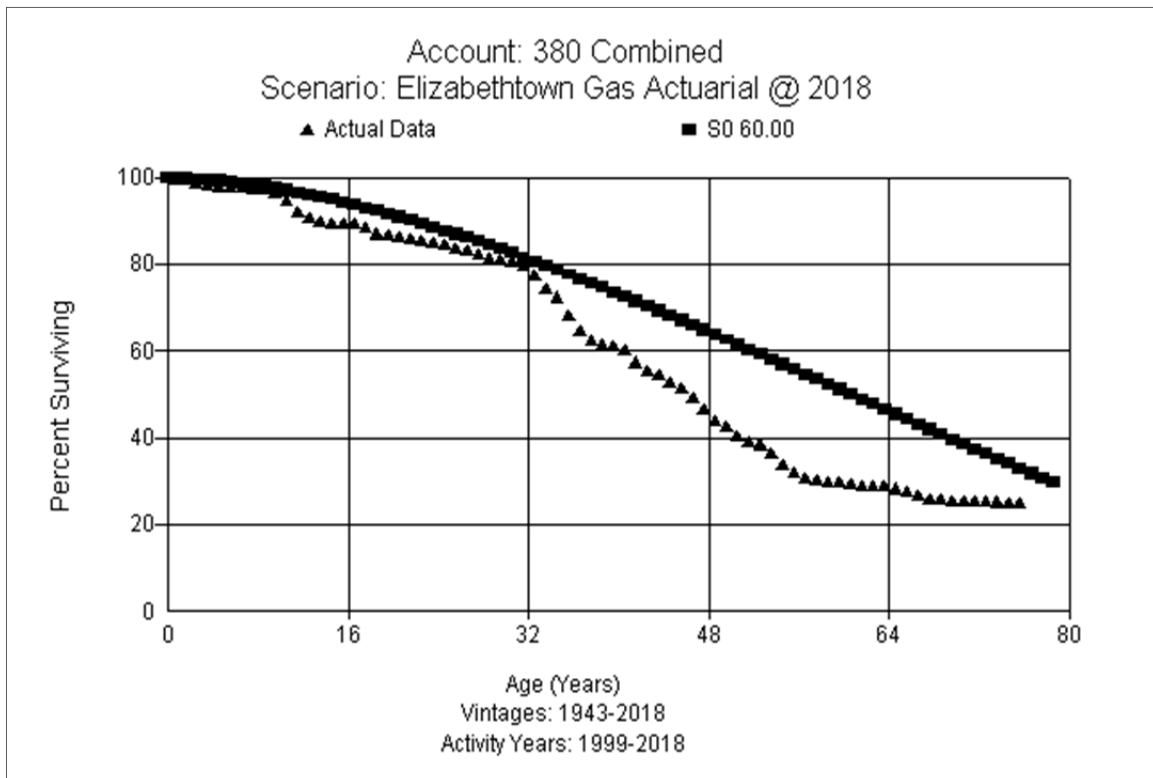
There were no retirements recorded to this account. Based on type of assets, similarity in form and operation with other M&R accounts, and Company input, this Study recommends increasing the life to 45 years while retaining the S2 dispersion consistent with the other M&R accounts. No graph of the observed life table is provided.

FERC Account 380.00 Services - All 60 S0

This account consists of steel, plastic, and copper services. There is approximately \$366 million of investment in this account. The approved curve for this account is the 60 S0. As mentioned above for Mains, the Company has been engaged in replacing aging infrastructure. Current average age of surviving assets is approximately 13 years.

Discussions with Company personnel indicated there are approximately 227 thousand services, with around 44 thousand services targeted in the proposed IIP. They expect services historically to have a shorter life than mains. If a service is leaking or undersized, it could be replaced without other components replaced, but this is rare. The Company will nearly always replace the service when replacing the main. It will also replace the meter set and regulator at that time, especially as related to the IIP program. There is a meter move out component to the program which was also being performed before the program started. When replacing a main, the Company will replace a service, meter loop, and regulator at that time, so they are all expected to have the same life.

The analysis indicates a shorter life than existing. This is due to the IIP. Factoring in the impact of the IIP, the type of assets and the analysis, this Study proposes retention of the 60 S0 dispersion pattern. The observed life table versus the proposed is graphed for this account below.



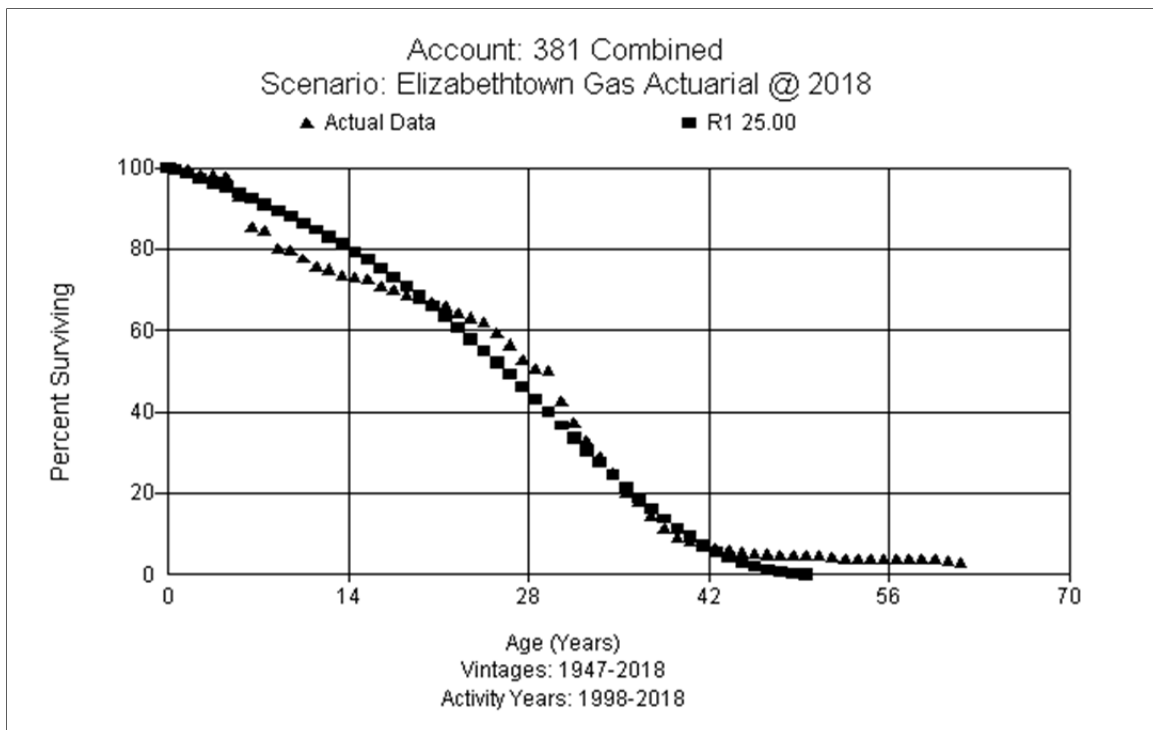
FERC Account 381.00 Meters – All 25 R1

This account includes the cost of meters and related equipment used in measuring gas to customers. The current investment is approximately \$107 million. The approved curve for this account is the 33 S0.5. The Company currently uses Itron ERTs (40G and 100G).

Discussions with Company personnel indicated that the Company will replace the ERT when replacing the meter and they will replace the meter if the ERT fails for residential customers. For industrial customer, the Company might only replace the ERT. When a residential meter comes into the shop for sampling, it will be retired after testing on a prover. The Company no longer will repair or refurbish meters. They expect a 15 year life on the ERTs but are only really seeing around 10 years. There has been no material change in the sampling technique over time. The Company capitalizes meters on purchase. If

an industrial meter is 30 years old or older and fails, it will be retired. In the field, the Company will only replace an existing residential meter if the existing meter is 10 years old or older, 30 years for large industrial, 6 years on rotary, and 2 years on turbine.

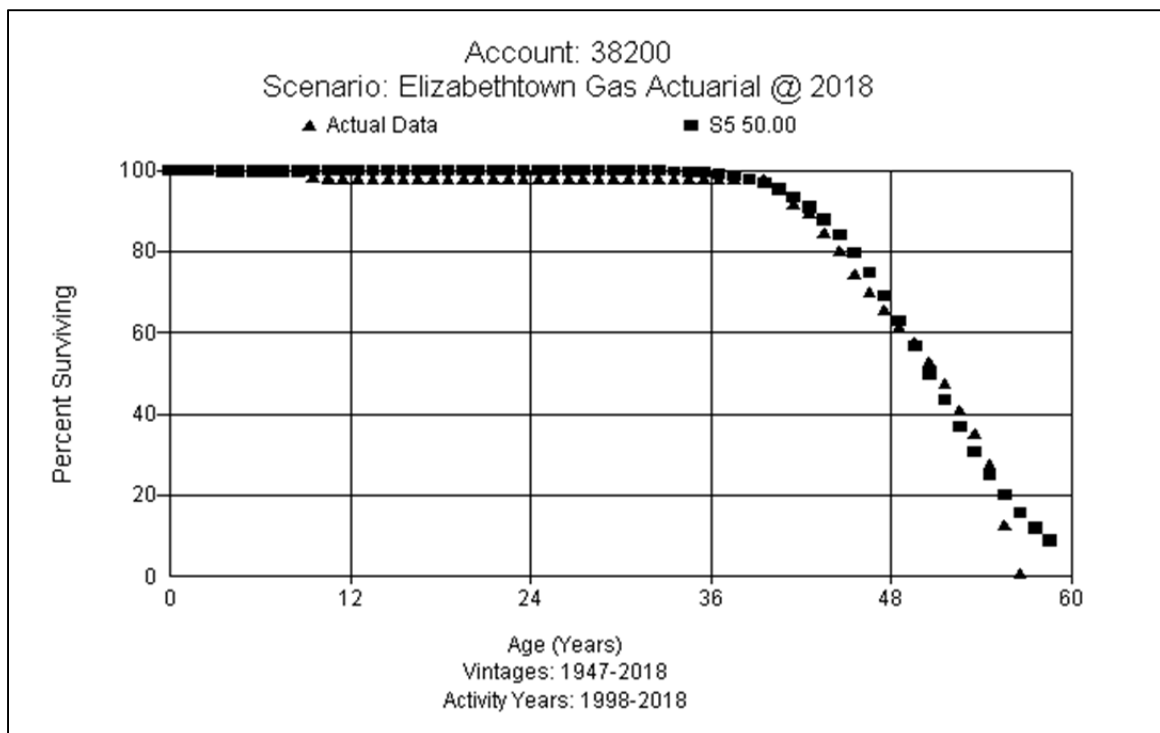
The life analysis suggests the life is decreasing, which is not surprising with the move to more technological assets. In the full band analysis, it shows some early retirements and then levels out. Indications support a decrease from the existing and a slightly different dispersion. For now, this Study recommends a decrease the life to match the fuller bands to 25 years and moves to the R1 curve. The observed life table versus the proposed is graphed for this account below.



FERC Account 382.00 Meter Installations 50 S5

This account includes the cost of installation of meters. There is approximately \$29 million of investment in this account. The approved life is 37 years with the S5 dispersion.

Discussions with Company personnel indicated that meter sets may last up to 45-50 years. They are moving to a majority of premanufactured meter sets as the inside meters are moved outside. The meter can be changed out without replacing the meter set (outside the IIP program). In many cases, the regulator would be replaced without replacing the meter set. Based on the analysis and Company input, this Study recommends moving to a 50 year life and the S5 dispersion. The observed life table versus the proposed is graphed for this account below.

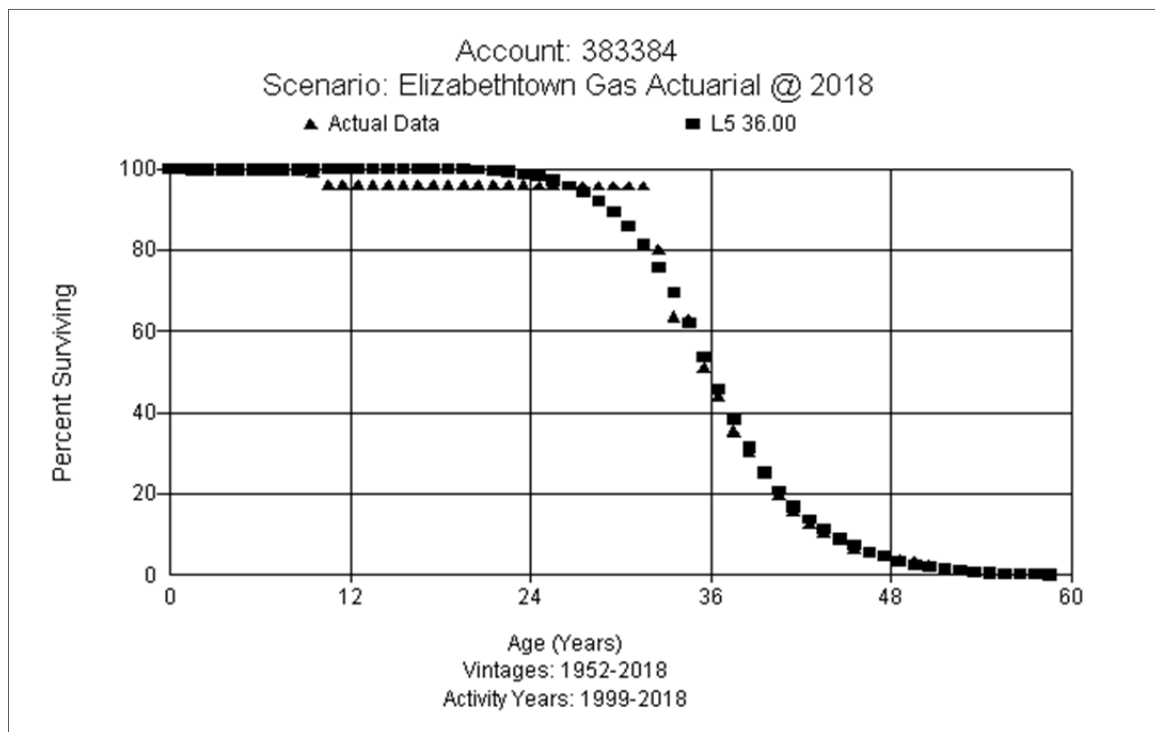


FERC Account 383.00 House Regulators 36 L5

This account includes the cost of house regulators. There is approximately \$6.1 million of investment in this account. The approved life is 37 years with the S5 dispersion. Consistent with the prior study, a combined life analysis of Accounts 383 and 384 was performed.

Discussions with Company personnel indicated that in many cases, the regulator would be replaced without replacing the meter set. This is exhibited in the shorter life seen for regulators and regulator installations as compared to meter installations.

The analysis is consistently fitting a 35-36 year life with a steep dispersion pattern. Based on the analysis and Company input, this Study recommends moving the life slightly to 36 years and changing to the L5 dispersion based on the full band. The observed life table versus the proposed is graphed for this account below.

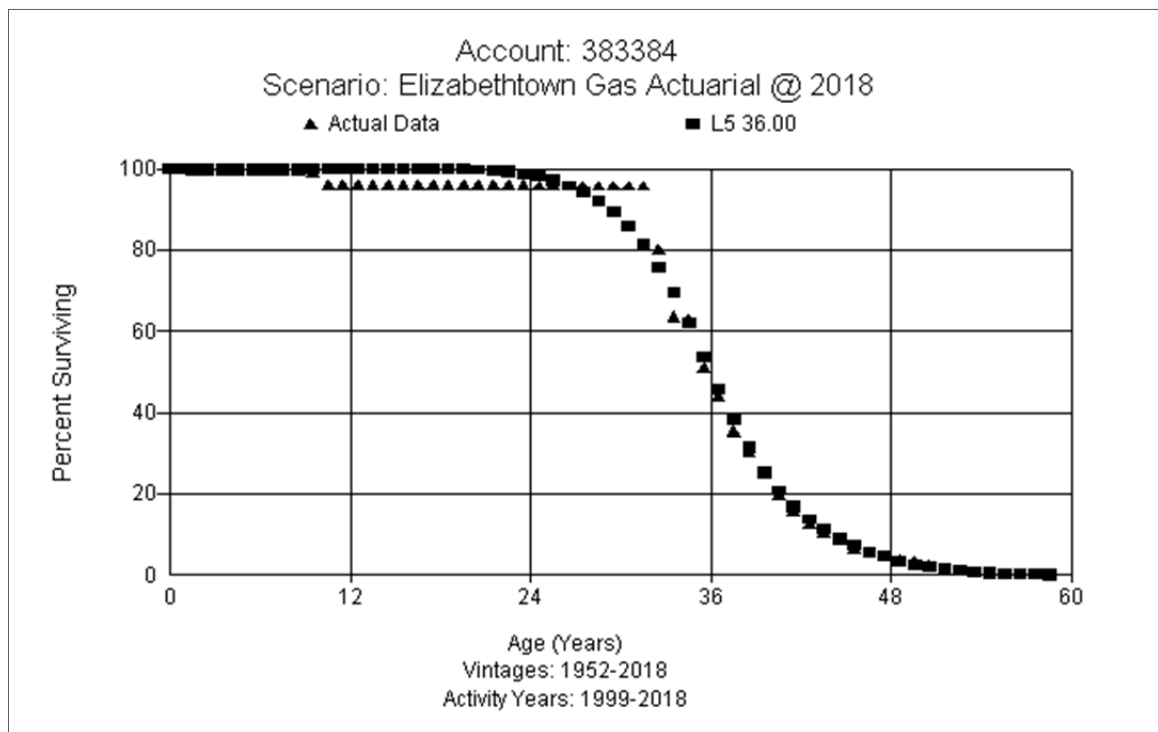


FERC Account 384.00 House Regulator Installations (36 L5)

This account includes the cost of installing house regulating equipment. The current balance is \$1.5 million. The approved life is a 37 S5. Consistent with the prior study, a combined life analysis of Accounts 383 and 384 was performed.

Discussions with Company personnel indicated that in many cases the regulator would be replaced without replacing the meter set. This is exhibited in the shorter life seen for regulators and regulator installations as compared to meter installations.

The analysis is consistently fitting a 35-36 year life with a steep dispersion pattern. Based on the analysis and Company input, this Study recommends moving the life slightly to 36 years and changing to the L5 dispersion based on the full band. The observed life table versus the proposed is graphed for this account below.

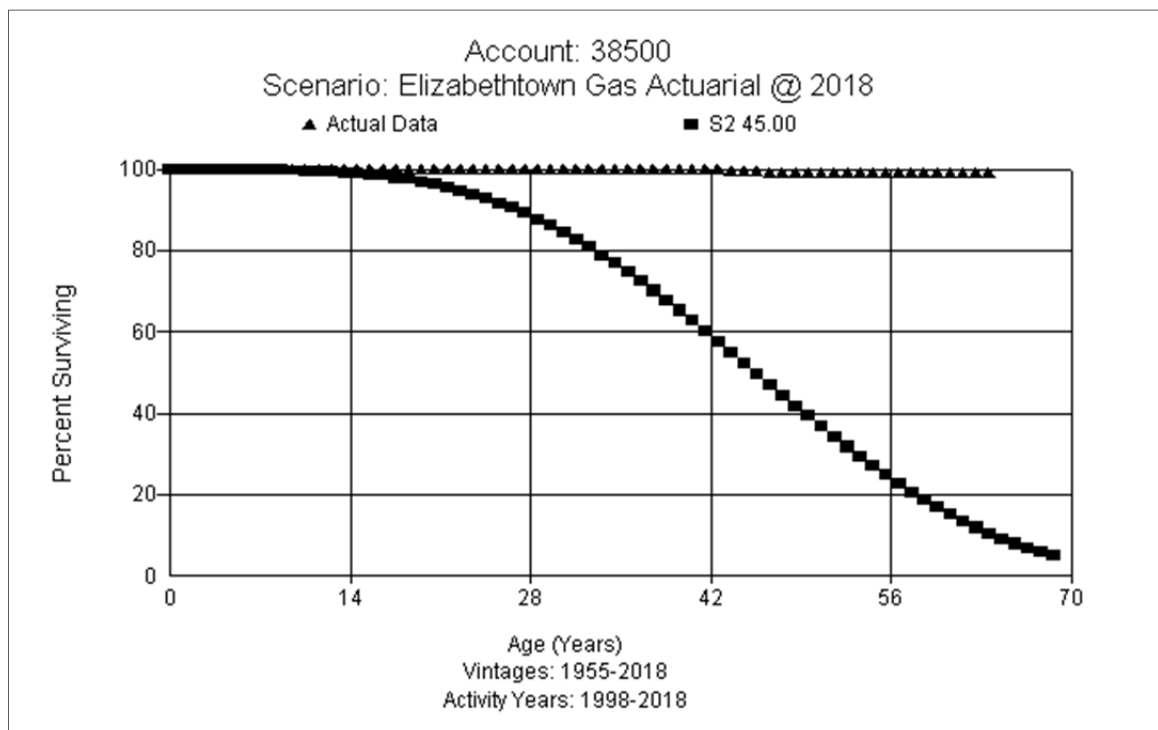


FERC Account 385.00 Industrial Meter & Regulator Equipment (45 S2)

This account includes the cost of measuring and regulating equipment used in industrial stations. The current balance is \$15.8 million. The approved life is 40 years with the S2 dispersion. The analysis shows only \$4 thousand has been retired at an average age of 34 years. The current average age of survivors is 24 years.

Discussions with Company personnel indicated that the equipment in this account is similar to equipment in city gates. The Company would expect to see the life of the equipment in this account similar to the life of city gates. .

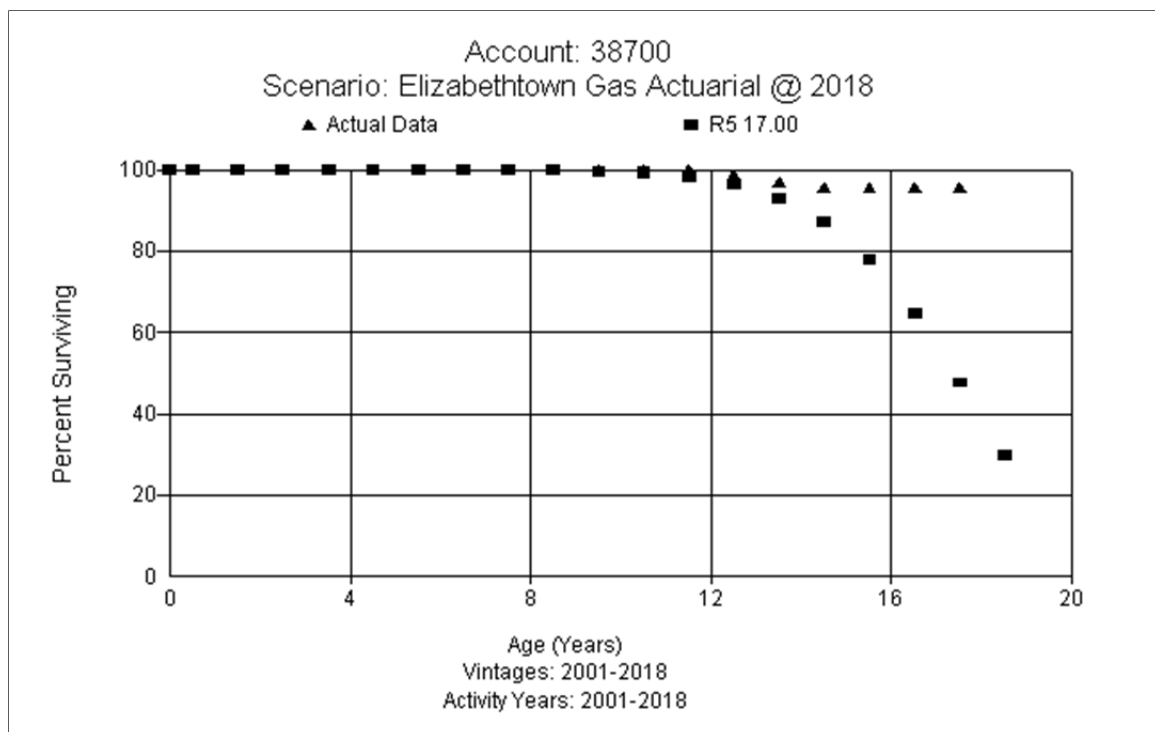
There have not been many retirements, so the percent surviving is still close to 100%. Based on the type of assets, similarity to the city gate equipment, this Study proposes increasing the life to 45 years with the S2 curve. The observed life table versus the proposed is graphed for this account below.



FERC Account 387.00 Other Equipment (17 R5)

This account includes the cost of equipment used in conjunction with providing distribution service. The current balance is \$2.7 million. The approved life is a 17 R5.

The current analysis indicates a much longer life than the existing and much longer than would typically be expected for these assets. Current average age of surviving investment is around 19 years. The average age of retirements is around 20 years. Based on the type of assets and giving consideration to the currently approved, this Study proposes retention of the 17 years with the R5 curve. The observed life table versus the proposed is graphed for this account below.



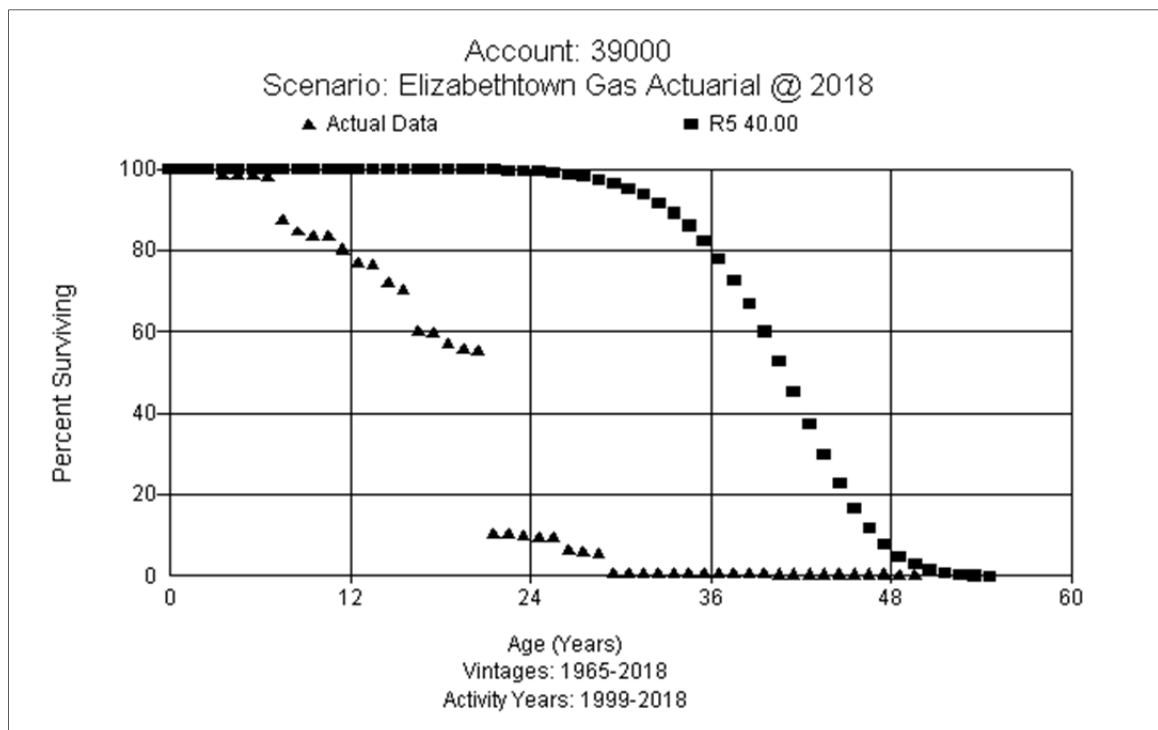
E. General Plant

General Plant Accounts, FERC Accounts 390.00–398.00

GENERAL PLANT DEPRECIATED

FERC Account 390.00 Structures & Improvements (40 R5)

This account generally includes the cost of structures and improvements used for utility service. Currently, there is about \$25.0 million in this account. The approved life for this account is a 40 R5. The headquarters building is quite old (from 1945 and renovated a number of times) but was gutted and rebuilt in 2014. Company personnel indicated most of these retirements were related to the Liberty Hall Building, which was leased and has now been vacated. This is not likely to occur again. Company believes continuing with a 40 year life is reasonable. However, the life analysis indicates a lot of assets are being retired at an earlier age. Based on the type of surviving assets, the analysis, and future expectations, this Study proposes retaining the 40 R5. The observed life table versus the proposed is graphed for this account below.

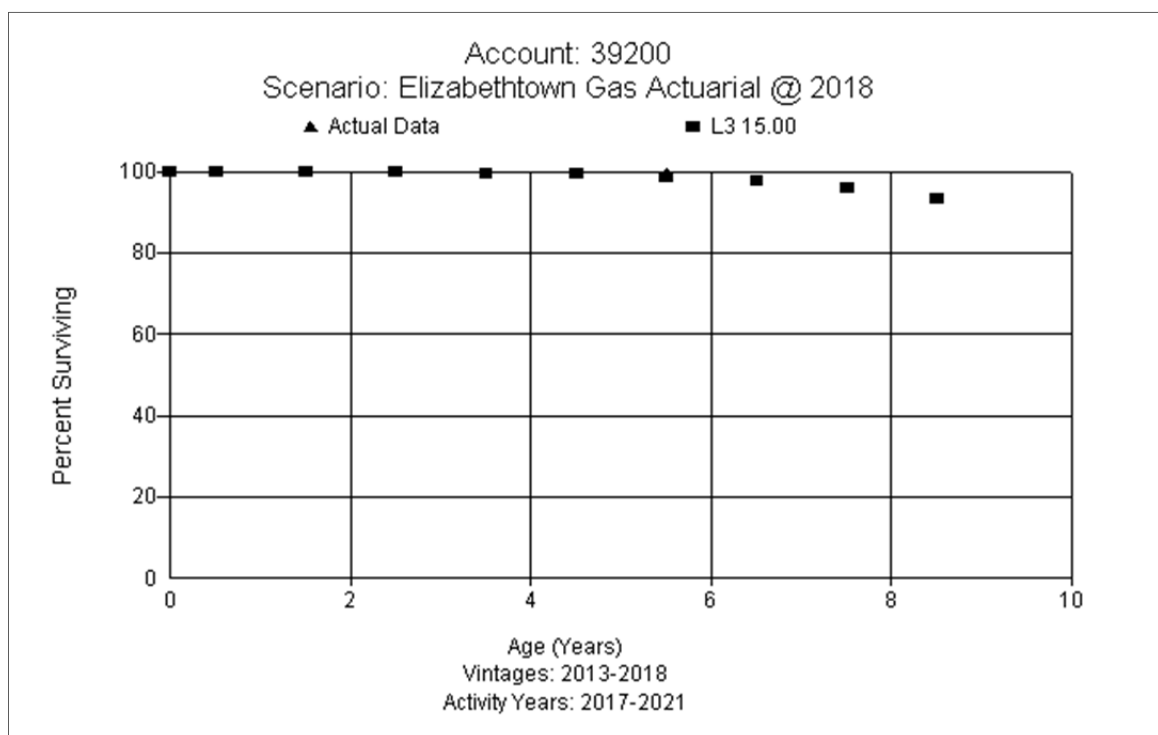


FERC Account 392.00 Transportation Equipment 15 L3

This account consists of heavy trucks, trailers, and related equipment used in performing various distribution and general company operations. Based on the existing rate, the life parameter is 15 L3. There is approximately \$2.5 million in this account. There have been no retirements and all assets have been added since 2013.

Discussions with Company personnel indicated they would expect a life around 10 years but maybe a life of 11 years would be reasonable.

Giving consideration to the type of assets, Company expectations, and judgment, the Study recommends retaining the 15 L3. The observed life table versus the proposed is graphed below for this account.

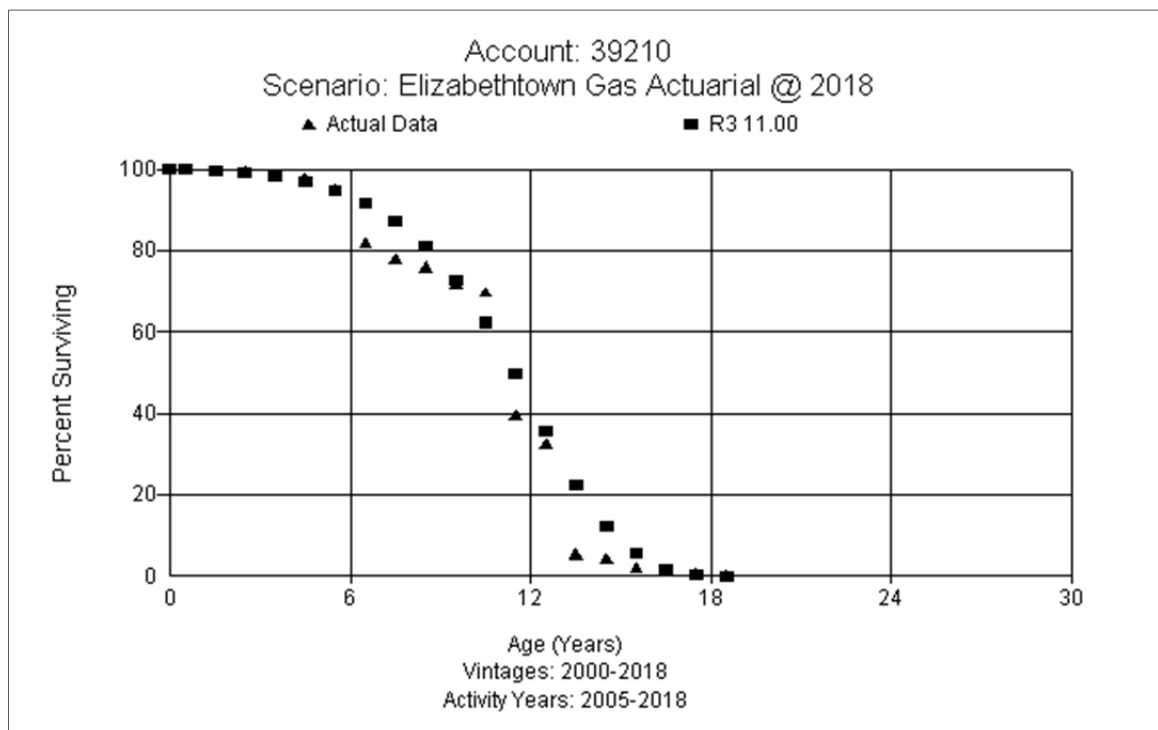


FERC Account 392.10 Autos & Light Trucks 11 R3

This account consists of autos and light duty trucks, and other related equipment used in performing various distribution and general company operations. The approved curve for this account is the 12 R3. There is approximately \$4.5 million in this account.

Discussions with Company personnel indicated a life between 8-9 years for autos and light trucks. It has been known to experience delays in replacement so it would not be unreasonable if a slightly longer life was indicated.

However, the analysis indicates a longer life than what Company expectations are for this type of vehicles. The best fit is the 11 R3. The study recommends decreasing the life slightly to 11 years with the R3 curve. The observed life table versus the proposed is graphed for this account below.

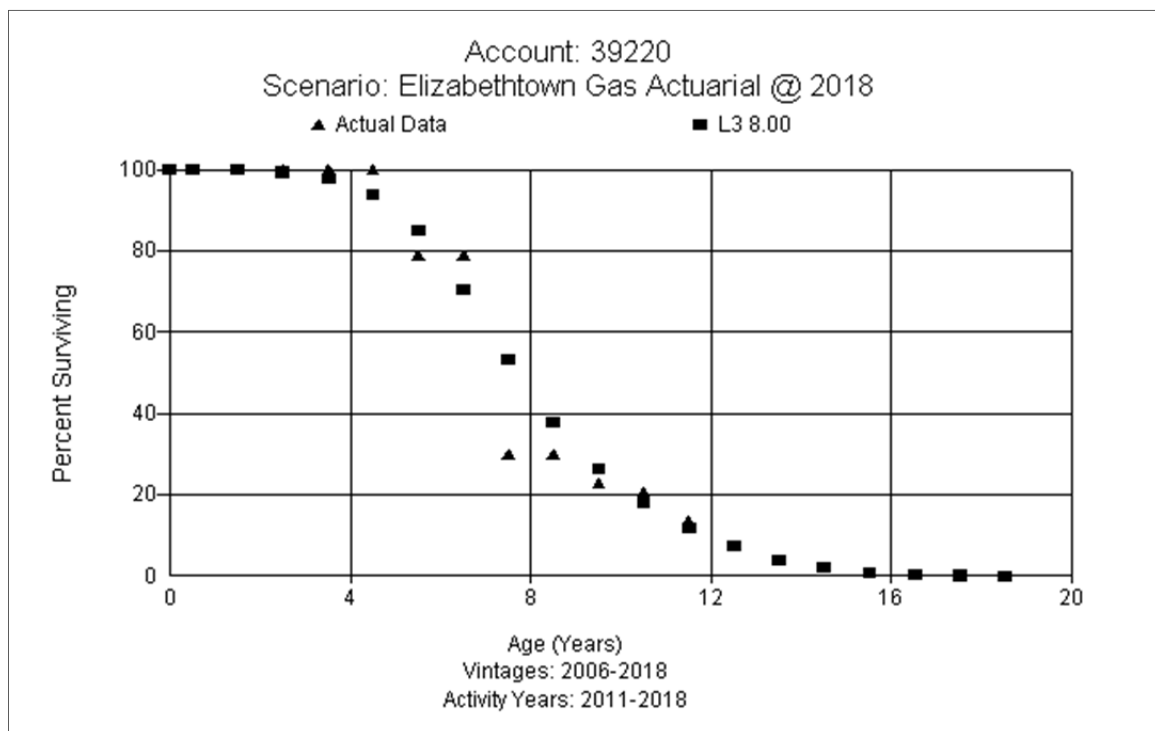


FERC Account 392.20 Transportation Equipment – Service Trucks 8 L3

This account consists of service trucks and related equipment used in performing operations and maintenance on the distribution system. The approved curve for this account is the 9 L3. There is approximately \$2.5 million in this account.

Discussions with Company personnel indicated they would expect to see a life around 7 years for service trucks. Some delay can occur, so a slightly longer life could be seen.

The analysis showed very consistent life and dispersion indications. The Study recommendation is to decrease the existing 9 year life to 8 years while keeping the L3 dispersion pattern. The observed life table versus the proposed is graphed for this account below.

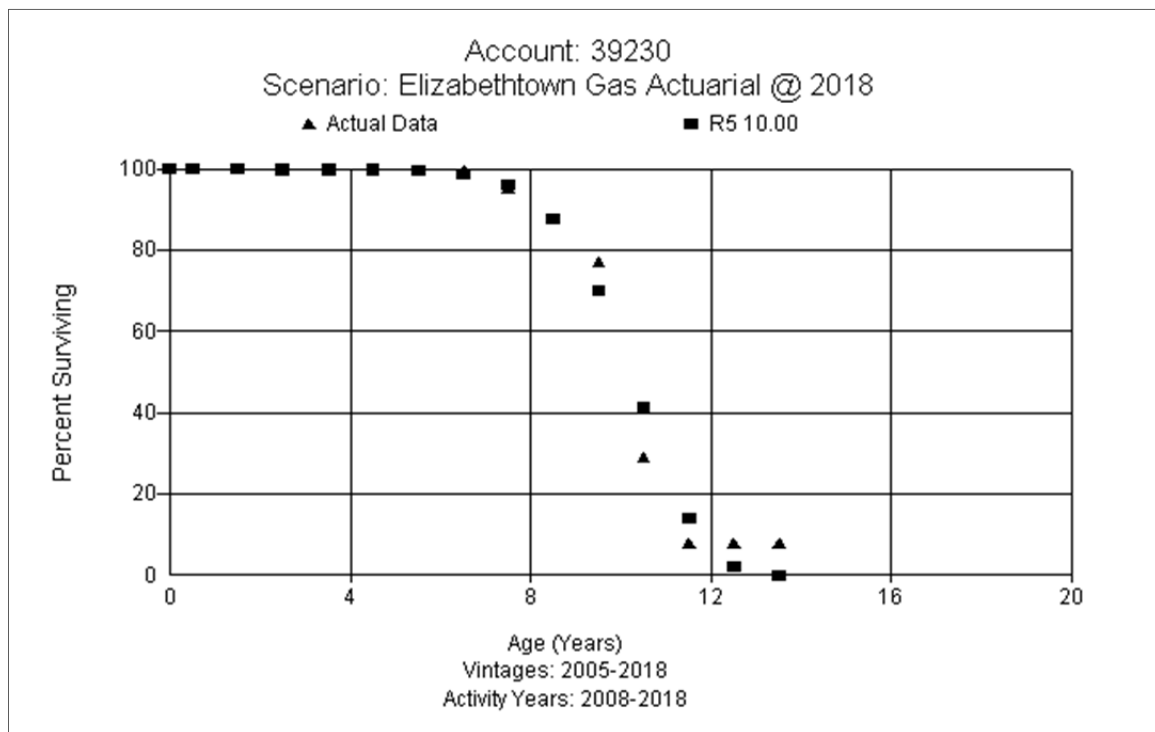


FERC Account 392.30 Heavy Trucks 10 R5

This account consists of heavy duty trucks and related equipment used by service center crews performing operations and maintenance on the transmission and distribution system. The approved curve for this account is the 13 R2.5. There is approximately \$4.1 million in this account.

The average age of retirements is around 10 years. The current average age of surviving assets is 4 years. Discussions with Company personnel indicated its target replacement for heavy truck is around 10 years.

The life analysis indications show a good fit with a 10 year R5 dispersion pattern. This supports the Company's life cycle replacement on this type of vehicle. Based on the type of assets, expected use, the analysis, and judgment, the study recommendation is to decrease the life from 13 to 10 years, but change from R2.5 to R5. The observed life table versus the proposed is graphed for this account below.



FERC Account 394.10 Natural Gas Vehicle Stations 20 S4

This account consists of natural gas vehicle stations used by service center crews performing operations and maintenance on the transmission and distribution system. The approved curve for this account is the 20 S4. There is approximately \$2.7 million in this account.

Discussions with Company personnel indicated that readers and dispersers would have a shorter life than the existing 20 years. The tanks would have a longer life and compressors are expected to live to around 20 years too.

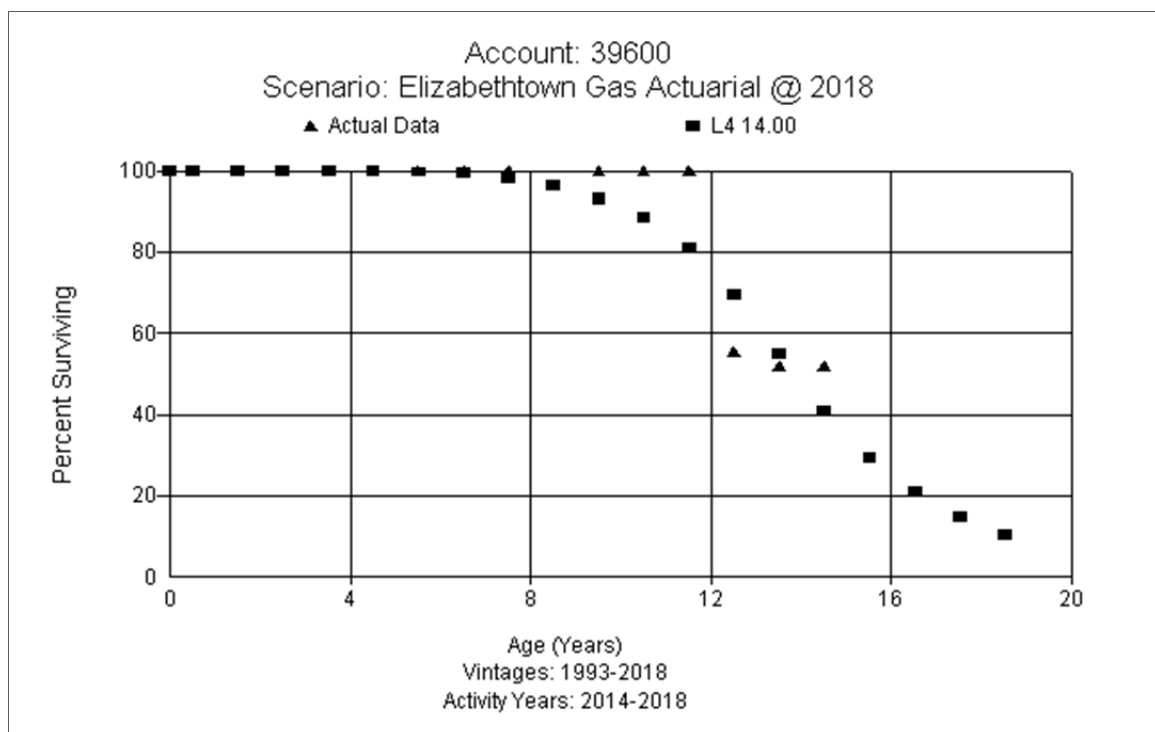
There have been no retirements so no analysis was performed. Giving consideration to the existing, types of assets, input from Company personnel, and judgment, this study recommends retention of the 20 S4 curve. There is no graph to provide.

FERC Account 396.00 Power Operated Equipment 14 L4

This account consists primarily of forklifts and other miscellaneous equipment. Based on the existing rate, the life parameter is 15 L2. There is approximately \$1.2 million in this account.

Discussions with Company personnel indicated a life between 10-12 years for a backhoe and around 12-14 years for generators.

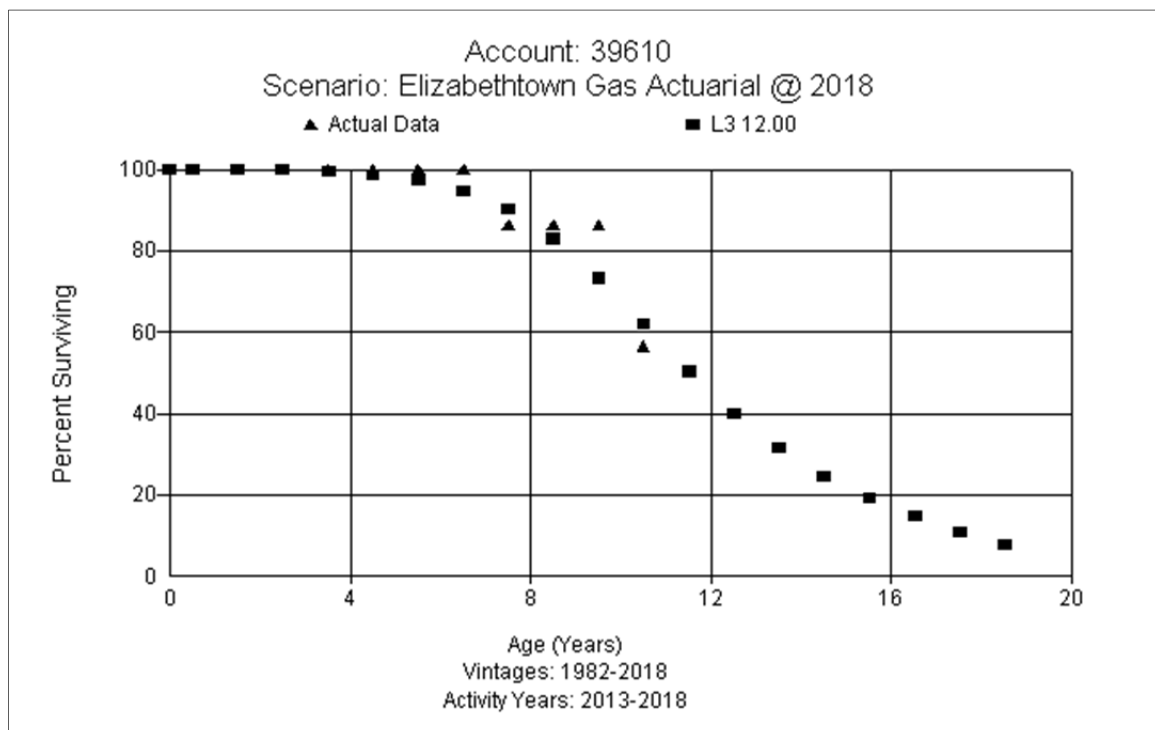
The life analysis indicates a steep pattern with a 14 year life. Based on type of assets, the analysis indications, and Company expectations, this study recommends a 14 year life with the L4 dispersion pattern. The observed life table versus the proposed is graphed for this account below.



FERC Account 396.10 Power Operated – Tractors 12 L3

This account consists of tractors and other related power operated equipment that cannot be licensed on roadways. The approved curve for this account is the 25 L2. There is approximately \$165 thousand in this account.

The life analysis indicates a life of 12 years with the L3 dispersion pattern. Based on type of assets and analysis indications, this Study recommends decreasing the life to 12 years and a change in the dispersion to the L3. The observed life table versus the proposed is graphed for this account below.



GENERAL PLANT AMORTIZED (391X, 393-395, 397-398)

Assets in these accounts have a fixed life amortization. The dispersion pattern used is the SQ. The lives of each account were confirmed and some changes were noted, but most of the accounts retained the existing life parameter.

FERC Account 391.00 Office Furniture and Equipment 20 SQ

This account consists of office furniture and equipment used for general utility service. There is approximately \$563 thousand in this account. The approved curve for this account is the 20 SQ and is retained.

FERC Account 391.10 Computer Equipment and Software 3 SQ

This account consists of personal computer ("PC") equipment, printers, peripherals, and PC software used for general utility service. There is approximately \$970 thousand in this account. The approved curve for this account is the 5 SQ. This account is an amortized account and reflects an SQ dispersion. Discussions with Company personnel indicated the Company refresh cycle is now set at 3 years. This Study recommends moving to 3 years to match the Company's current policy but retains the SQ dispersion.

FERC Account 391.11 Computer Software 7 SQ

This account consists of personal computer software used for general utility service. There is approximately \$257 thousand in this account. Based on the existing rate, the existing parameter is 7 SQ. Based on judgment, this Study recommends using a 7 year life with the SQ dispersion reflective of amortization accounting.

FERC Account 391.12 Computer Hardware 7 SQ

This account consists of servers, copier, and other computer related hardware used for general utility service. There is approximately \$5.1 million in this account. Based on the existing rate, the existing parameter is 7 SQ. Based on judgment, this Study recommends using a 7 year life with the SQ dispersion reflective of amortization accounting.

FERC Account 391.20 Enterprises Systems 15 SQ

This account consists of enterprise (large software applications) system software and hardware. There is approximately \$3.8 million in this account. The approved curve for this account is the 10 SQ. Discussions with Company personnel indicated these large applications are expected to have a longer life than the current 10 years. Based on Company plans and expectations, this Study recommends moving the life to 15 years while retaining the SQ dispersion.

FERC Account 391.50 Individual Equipment 3 SQ

This account consists primarily of laptops. There is approximately \$192 thousand in this account. The approved curve for this account is the 5 SQ. Discussions with Company personnel indicated the life cycle of laptops is the same as PC equipment. This Study recommends moving to 3 years to match the Company's current policy but retains the SQ dispersion.

FERC Account 393.00 Stores Equipment 25 SQ

This account contains forklifts, shelves, and bins used for general utility service. There is approximately \$60 thousand in this account. The approved life and curve for this account is the 25 SQ and is retained.

FERC Account 394.00 Tools, Shop & Garage Equipment 18 SQ

This account consists of vacuum excavation machine, tapping machines, electro fusion unit, pipe horn & pipe horn valve locators, mustang squeezer, roots

transfer prover, air tools, various pipe squeezers, and other miscellaneous tools and equipment used in shop and garages. There is approximately \$3.9 million in this account. The approved life and curve for this account is the 20 SQ and this study recommends moving to 18 SQ for this account.

FERC Account 395.00 Laboratory Equipment 20 SQ

This account generally consists of balances, scales, gauges, glassware, piping, and various other tools and equipment used in a general laboratory department. There currently is no investment in this account. Based on the approved 5.00% rate and amortization accounting, the approved life is 20 SQ and is retained.

FERC Account 397.00 Communication Equipment 18 SQ

This account consists of mobile radios, dispatch equipment and other miscellaneous communication equipment used in general utility service. There is approximately \$1.7 million in this account. The approved life and curve is a 20 SQ and this study recommends moving to 18 SQ.

FERC Account 398.00 Miscellaneous Equipment 20 SQ

This account consists of exercise equipment, camera, and other miscellaneous equipment used in general utility service. There is approximately \$1.1 million in this account. This account currently has a 20 SQ and is retained.

V. DETERMINATION OF NET SALVAGE

When a capital asset is retired, physically removed from service, and finally disposed of, terminal retirement is said to have occurred. The residual value of a terminal retirement is called gross salvage. Net salvage is the difference between the gross salvage (what the asset was sold for) and the removal cost (cost to remove and dispose of the asset).

Gross salvage and cost of removal related to retirements are recorded to the general ledger in the accumulated provision for depreciation at the time retirements occur within the system.

Removal cost percentages are calculated by dividing the current cost of removal by the original installed cost of the asset. Some plant assets can experience significant negative removal cost percentages due to the timing of the addition versus the retirement. For example, a distribution asset in FERC Account 376 with a current installed cost of \$500 (2018) would have had an installed cost of \$12.86 in 1947⁴ (which is the proposed average life of the account). A removal cost of \$50 for the asset calculated (incorrectly) on current installed cost would only have a negative 10 percent removal cost (\$50/\$500). However, a correct removal cost calculation would show a negative 389 percent removal cost for that asset (\$50/\$12.86). Inflation from the time of installation of the asset until the time of its removal must be taken into account in the calculation of the removal cost percentage because the depreciation rate, which includes the removal cost percentage, will be applied to the original installed cost of assets.

A. Discussion

For most accounts, the data for retirements, gross salvage, and cost of removal for each account ranges from 1999-2018. Moving averages, which remove timing differences between retirement and salvage and removal cost, were analyzed over periods varying from one to 10 years. These calculations

⁴ Using the Handy-Whitman Bulletin No. 188, G-1, line 44, \$12.86 = \$500 x 24/933.

are found in Appendix D. The BPU, in the recent past, has indicated a desire to use a recent historical average amount. The Stipulation in Elizabethtown's last BPU Docket No. GR 16090826 was a five year average. While Alliance continues to believe the traditional approach to net salvage is the most appropriate, the Company has requested our study recommendation to reflect a three year average removal cost amount. While the general approach is consistent with the existing rates, the Study recommendation reflects more recent activity and future expectations for the accounts experiencing cost of removal by using the past three years. This three year average is the basis for the recommendations in this Study as discussed further below.

FERC Account 304.20 Land Rights

This account includes any salvage and removal cost related to structures used in connection with production of gas derived from petroleum based products. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 311.00 Liquefied Petroleum Gas Equipment

This account includes any salvage and removal cost related to structures used in the production of gas derived from petroleum based products. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 320.00 Other Equip

This account includes any salvage and removal cost related to structures used in the production of gas derived from petroleum based products. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

B. Other Storage Plant

FERC Account 361.00 Structures and Improvements

This account includes any salvage and removal cost related to structures used in connection with storage operations. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 362.00 Storage Tanks – Natural Gas

This account consists of salvage and removal costs associated with the storage tanks for natural gas. No salvage or cost of removal has been recorded. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 362.10 Storage Tanks - LNG

This account consists of salvage and removal costs associated with the storage tanks for liquefied natural gas. No salvage or cost of removal has been recorded. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 363.20 Vaporizing Equipment

This account includes any salvage and removal cost related to vaporizing equipment used in connection with LNG storage operations. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 363.40 Measuring & Regulating Equipment

This account includes any salvage and removal cost related to measuring and regulating equipment used in connection with LNG storage operations. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

C. Transmission Plant

FERC Account 365.20 Land Rights

This account includes any salvage and removal cost related to land rights used in conjunction with the Transmission function. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 367.00 Mains

This account consists of any salvage and removal cost related to Mains of all material types. The approved net salvage amount is \$33,367. This study recommends \$21,729 to the annual accrual for negative net salvage (cost of removal expenditures) based on a three year average for this account.

FERC Account 369.00 M&R Equipment

This account consists of any salvage and removal cost related to M&R Equipment related to transmission. The approved net salvage amount is zero. This study recommends adding \$29,789 to the annual accrual for negative net salvage (cost of removal expenditures) based on a three year average for this account.

FERC Account 371.00 Other Equipment

This account consists of any salvage and removal cost related to M&R Equipment related to transmission. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

D. Distribution Plant

FERC Account 374.00/374.20/374.30 Land Rights and Rights of Way

This account includes any salvage and removal cost related to land rights

or rights of way used in connection with distribution operations. Generally, little or no removal cost is incurred and no salvage is received at the retirement of land rights. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 375.00 Structures and Improvements

This account consists of any salvage and removal cost related to small structures and associated assets on the distribution system. Some salvage and cost of removal may be realized at time of retirement but recent experience continues to support zero. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 376.00 Mains

This account consists of any salvage and removal cost related to Mains of all material types. The approved net salvage amount is \$550,852. This study recommends \$1,948,242 to the annual accrual for negative net salvage (cost of removal expenditures) based on a three year average for this account.

FERC Account 378.00 Measuring & Regulating Station Equipment

This account includes any salvage and removal cost related to installed equipment used in regulating gas at entry points to the distribution system. The approved net salvage amount is \$2,018. This study recommends \$81,929 to the annual accrual for negative net salvage (cost of removal expenditures) based on a three year average for this account.

FERC Account 379.00 City Gate Equipment

This account includes any salvage and removal cost related to installed equipment used in regulating gas at city gate entry points to the distribution system. The approved net salvage amount is \$6,549. This study recommends \$12,255 to the annual accrual for negative net salvage (cost of removal

expenditures) based on a three year average for this account.

FERC Account 380.00 Services

This account includes any salvage and removal cost related to service lines on the distribution system. Service lines are the pipes and accessories leading from the main to the customers' premises. Generally, pipe is abandoned in place. However, removal cost is still incurred even when abandoning the pipe in place. For pipe that is being replaced, activities such as isolating the old pipe, cutting the old pipe, purging or foaming the old pipe and capping the old pipe are charged as removal costs. When the pipe is not being replaced, in addition to the above activities, dispatching a crew, uncovering the pipe, recovering the hole, and repairing the surface are additional activities charged to removal cost. The approved net salvage amount is \$1,503,863. This Study recommends \$4,556,636 to the annual accrual for negative net salvage (cost of removal expenditures) based on a three year average for this account.

FERC Account 381.00 Meters

This account includes any salvage and removal cost related to meters used in measuring gas to residential customers. The approved net salvage amount is \$190. This study recommends \$349 to the annual accrual for negative net salvage (cost of removal expenditures) based on a three year average for this account.

FERC Account 382.00 Meter Installations

This account includes any salvage and removal cost related to meter installations used in measuring gas to customers. The approved net salvage amount is zero. This study recommends \$120 to the annual accrual for negative net salvage (cost of removal expenditures) based on a three year average for this account.

FERC Account 383.00 House Regulators

This account includes any salvage and removal cost related to house regulators. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 384.00 House Regulator Installations

This account includes any salvage and removal cost related to house regulator installations. This study does not reflect any net salvage amount for this account.

FERC Account 385.00 Industrial Meter & Regulator Equipment

This account includes the salvage and removal costs related to measuring and regulating equipment used in industrial stations. The existing removal cost amount is zero. There has not been any cost of removal recorded over the last three years. Therefore, this study does not reflect any net salvage amount for this account.

FERC Account 387.00 Other Equipment

This account includes the salvage and removal costs related to miscellaneous distribution equipment used in distribution operations. The approved net salvage is zero. This study does not reflect any net salvage for this account.

GENERAL PLANT DEPRECIATED

FERC Account 390.00 Structures and Improvements

This account includes any salvage and removal cost related to structures and improvements used for general utility operations. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 392.00 Transportation Equipment

This account consists of salvage and removal costs associated with trailers, some heavy trucks, and other miscellaneous related equipment. This study reflects a segregated analysis of the accounts. The approved positive net salvage is \$1,970. This study recommends an amount of \$5,622, based on a three year average, be included as positive net salvage for this account.

FERC Account 392.10 Autos and Light Trucks

This account consists of salvage and removal costs associated with automobiles and some trucks. This study reflects a segregated analysis of the accounts. The approved positive net salvage is \$10,901. This study recommends an amount of \$126,505, based on a three year average, be included as positive net salvage for this account.

FERC Account 392.20 Service Trucks

This account consists of salvage and removal costs associated with service trucks and associated equipment. This study reflects a segregated analysis of the accounts. The approved positive net salvage is \$1,551. This study recommends an amount of \$26,234, based on a three year average, be included as positive net salvage for this account.

FERC Account 392.30 Heavy Trucks

This account consists of salvage and removal costs associated with heavy trucks and associated equipment. This study reflects a segregated analysis of the accounts. The approved positive net salvage is \$6,127. This study recommends an amount of \$113,018, based on a three year average, be included as positive net salvage for this account.

FERC Account 394.10 Natural Gas Vehicles

This account includes any salvage and removal cost related to various structures and equipment related to the natural gas vehicles stations. This is a new account with no historical experience. This study does not reflect any net salvage amount for this account.

FERC Account 396.00 Power Operated Equipment

This account includes any salvage and removal cost related to backhoes, forklifts, trenchers, and other power operated equipment that cannot be licensed on roadways. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 396.10 Power Operated - Tractors

This account includes any salvage and removal cost related to tractors and other power operated equipment that cannot be licensed on roadways. The approved net salvage is zero. This study recommends an amount of \$14,192, based on a three year average, be included as positive net salvage for this account.

GENERAL PLANT AMORTIZED

FERC Account 391.00 Office Furniture and Equipment

This account includes any salvage and removal cost related to office furniture and equipment. This study does not reflect any net salvage amount for this account.

FERC Account 391.10 Computer Equipment and Software

This account includes any salvage and removal cost related to personal computers, printers, peripherals and related software. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 391.11 Computer Software

This account includes any salvage and removal cost related to personal computers software. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 391.12 Computer Hardware

This account includes any salvage and removal cost related to computer hardware. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 391.20 Enterprise Systems

This account includes any salvage and removal cost related to enterprise system software. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 391.50 Individual Equipment

This account includes any salvage and removal cost related to computer laptops. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 393.00 Stores Equipment

This account consists of salvage and removal costs associated with forklifts, shelves and bins. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 394.00 Tools, Shop & Garage Equipment

This account consists of salvage and removal costs associated with air compressors, grinders, mixers, hoists, and cranes. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 395.00 Laboratory Equipment

This account consists of laboratory equipment used in general utility service. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 397.00 Communication Equipment

This account consists of miscellaneous communication equipment used in general utility service. The approved net salvage is zero. This study does not reflect any net salvage amount for this account.

FERC Account 398.00 Miscellaneous Equipment

This account consists of miscellaneous equipment used in general utility service. The approved net salvage is zero. Based on the most recent three year average, the negative net salvage (cost of removal expenditures) is \$64,294. However, this activity is not representative of the future. This study does not reflect any net salvage amount for this account.

APPENDIX A - Depreciation Rate Calculations

ELIZABETHTOWN GAS COMPANY
COMPUTATION OF DEPRECIATION ACCRUAL RATES
BASED ON DEPRECIABLE INVESTMENT AT DECEMBER 31, 2018

APPENDIX A-1

Account Description	Plant In Service 12/31/2018	Book Depreciation 12/31/2018	Net	Gross	Unaccrued Balance	Remaining Life	Life		COR	Total (Life and COR)	
			Salvage %	Salvage Amount			Accrual Amount	Accrual Accrual Rate	Accrual Amount	Accrual Amount	Accrual Accrual Rate
PRODUCTION PLANT											
304.20 Land Rights	\$ 61,423	\$ 23,214	0%	0	\$ 38,209	14.24	\$ 2,684	4.37%	0	\$ 2,684	4.37%
311.00 Liquefied Petroleum Gas Equipment	737,445	34,506	0%	0	702,939	33.27	21,128	2.87%	0	21,128	2.87%
320.00 Other Equipment	173,509	129,808	0%	0	43,701	9.75	4,484	2.58%	0	4,484	2.58%
Total Production	972,377	187,528		0	784,848		28,296	2.91%	0	28,296	2.91%
STORAGE PLANT											
361.00 Structures & Improvements	3,532,903	1,185,366	0%	0	2,347,537	43.62	53,818	1.52%	0	53,818	1.52%
362.00 Gas Holders - Natural Gas	0	0	0%	0	0	0.00	0	1.54% *	0	0	1.54%
362.10 Gas Holders - LNG	3,237,323	3,237,323	0%	0	0	25.51	0	1.54% *	0	0	1.54%
363.20 Vaporization	21,004,327	1,600,421	0%	0	19,403,906	32.76	592,374	2.82%	0	592,374	2.82%
363.40 M&R Equipment	2,929,952	1,275,411	0%	0	1,654,540	22.00	75,211	2.57%	0	75,211	2.57%
Total Storage	30,704,505	7,298,521		0	23,405,984		721,403	2.35%	0	721,403	2.35%
TRANSMISSION PLANT											
365.20 Rights Of Way	367,325	210,712	0%	0	156,613	45.42	3,448	0.94%	0	3,448	0.94%
367.00 Mains	11,803,151	1,876,760	0%	0	9,926,392	63.46	156,419	1.33%	21,729	178,148	1.51%
369.00 Measuring And Regulating St	8,077,646	713,520	0%	0	7,364,125	42.10	174,916	2.17%	29,789	204,705	2.53%
371.00 Other Equipment	3,874	1,615	0%	0	2,259	13.61	166	4.29%	0	166	4.29%
Total Transmission	20,251,995	2,802,606		0	17,449,389		334,949	1.65%	51,518	386,467	1.91%
DISTRIBUTION PLANT											
374.00 Land Right and Rights of Way	2,933,434	878,401	0%	0	2,055,033	61.88	33,208	1.13%	0	33,208	1.13%
375.00 Structures & Improvements	5,724,072	762,130	0%	0	4,961,941	37.62	131,903	2.30%	0	131,903	2.30%
376.00 Mains - All	660,393,504	146,216,419	0%	0	514,177,085	58.46	8,795,414	1.33%	1,948,242	10,743,656	1.63%
378.00 M&R Stations General	18,906,222	13,945,297	0%	0	4,960,925	14.40	344,412	1.82%	81,929	426,341	2.26%
379.00 M&R Stations City Gate	21,185,491	14,277,262	0%	0	6,908,229	23.16	298,301	1.41%	12,255	310,556	1.47%
380.00 Services - All	366,088,909	64,712,792	0%	0	301,376,117	50.33	5,987,599	1.64%	4,556,636	10,544,235	2.88%
381.00 Meters - All	106,639,754	21,716,655	0%	0	84,923,099	19.99	4,249,006	3.98%	349	4,249,355	3.98%
382.00 Meter Installation	29,413,532	17,312,690	0%	0	12,100,841	31.18	388,107	1.32%	120	388,227	1.32%
383-384 House Regulators and Installation	7,594,384	1,917,190	0%	0	5,677,194	28.59	198,558	2.61%	0	198,558	2.61%
385.00 Industrial M&R Equipment	15,751,970	10,515,958	0%	0	5,236,012	23.45	223,308	1.42%	0	223,308	1.42%
387.00 Other Equipment	2,669,628	2,302,165	0%	0	367,463	3.73	98,644	3.70%	0	98,644	3.70%
Total Distribution	1,237,300,898	294,556,959		0	942,743,940		20,748,460	1.68%	6,599,531	27,347,991	2.21%

ELIZABETHTOWN GAS COMPANY
COMPUTATION OF DEPRECIATION ACCRUAL RATES
BASED ON DEPRECIABLE INVESTMENT AT DECEMBER 31, 2018

APPENDIX A-1

Account Description	Plant In Service 12/31/2018	Book Depreciation 12/31/2018	Net	Gross	Unaccrued Balance	Remaining Life	Life		COR	Total (Life and COR)	
			Salvage %	Salvage Amount			Accrual Amount	Accrual Rate	Accrual Amount	Accrual Amount	Accrual Rate
GENERAL PLANT - DEPRECIATED											
390.00 Structures & Improvements	24,570,837	2,430,603	0%	0	22,140,234	34.60	639,968	2.60%	0	639,968	2.60%
392.00 Transportation Equipment	2,477,407	504,065	0%	5,622	1,967,720	11.26	174,796	7.06%	0	174,796	7.06%
392.10 Auto & Light Trucks	4,508,198	715,053	0%	126,505	3,666,640	8.22	446,231	9.90%	0	446,231	9.90%
392.20 Service Trucks	2,471,544	609,590	0%	26,234	1,835,720	5.59	328,141	13.28%	0	328,141	13.28%
392.30 Heavy Trucks	4,120,912	640,460	0%	113,018	3,367,434	6.27	537,146	13.03%	0	537,146	13.03%
394.10 Natural Gas Vehicle Stations	2,721,905	349,476	0%	0	2,372,428	16.97	139,824	5.14%	0	139,824	5.14%
396.00 Power Operated Equipment	1,242,872	186,852	0%	0	1,056,020	10.84	97,456	7.84%	0	97,456	7.84%
396.10 Power Operated - Tractors	165,479	31,312	0%	14,192	119,975	9.43	12,721	7.69%	0	12,721	7.69%
Total General Depreciated	42,279,152	5,467,412		285,571	36,526,170		2,376,282	5.62%	0	2,376,282	5.62%
							(1)			(1)	
391.00 Office Furniture And Equipment	562,868	74,906	0%	0	487,963		32,665	5.00%	0	32,665	5.00% *
391.10 Computer Equipment	969,865	96,987	0%	0	872,878		336,220	33.33%	0	336,220	33.33% *
391.11 Computer Equipment and Software	256,887	18,355	0%	0	238,532		36,697	14.29%	0	36,697	14.29% *
391.12 Computer Hardware	5,110,234	1,055,617	0%	0	4,054,617		768,755	14.29%	0	768,755	14.29% *
391.20 Enterprise Systems	3,837,753	191,888	0%	0	3,645,866		243,058	6.67%	0	243,058	6.67% *
391.50 Individual Equipment	164,898	39,023	0%	0	125,875		63,651	33.33%	0	63,651	33.33% *
393.00 Stores Equipment	60,377	7,372	0%	0	53,005		3,114	4.00%	0	3,114	4.00% *
394.00 Tools Shop And Garage Equip	3,862,256	875,693	0%	0	2,986,563		325,489	5.56%	0	325,489	5.56% *
395.00 Laboratory Equipment	0	0	0%	0	0		0	0.00%	0	0	0.00% *
397.00 Communication Equipment	1,651,581	153,161	0%	0	1,498,420		123,985	5.56%	0	123,985	5.56% *
398.00 Miscellaneous Equipment	1,077,164	270,263	0%	0	806,901		117,665	5.00%	0	117,665	5.00% *
Total General Amortized	17,553,884	2,783,265		0	14,770,619		2,051,298	11.69%	0	2,051,298	11.69%
Total General Depreciated & Amortized	59,833,036	8,250,676		285,571	51,296,789		4,427,580	7.40%	0	4,427,580	7.40%
Total Plant Depreciated and Amortized	\$ 1,349,062,811	\$ 313,096,290		\$ 285,571	\$ 1,035,680,950		\$ 26,260,689	1.95%	\$ 6,651,049	\$ 32,911,738	2.44%

*Denotes a 1/ASL (whole life) rate is proposed.

(1) General Plant - Amortized proposed accrual includes ongoing amortization (1/Life) plus fixed Deficit/Surplus accrual for 5 years.

ELIZABETHTOWN GAS COMPANY
COMPUTATION OF AMORTIZATION ACCRUAL RATE
AT DECEMBER 31, 2018

GENERAL PLANT - AMORTIZED		Plant Balance	Book Reserve	Theoretical Reserve	Reserve	Reserve Recovery	Amortize Reserve	Assets to Retire Greater Than
Account	Description	12/31/2018	12/31/2018	12/31/2018	(Deficit)/Surplus	Period (Yrs)	Deficit/Surplus	ASL
391.00	Office Furniture And Equipment	\$ 562,868	\$ 74,906	\$ 97,514	\$ (22,608)	5.00	\$ 4,522	\$ -
391.10	Computer Equipment	969,865	96,987	161,644	(64,658)	5.00	12,932	-
391.11	Computer Equipment and Software	256,887	18,355	18,349	6	5.00	(1)	-
391.12	Computer Hardware	5,110,234	1,055,617	1,249,226	(193,609)	5.00	38,722	-
391.20	Enterprise Systems	3,837,753	191,888	127,925	63,963	5.00	(12,793)	-
391.50	Individual Equipment	191,521	65,646	109,072	(43,426)	5.00	8,685	26,623
393.00	Stores Equipment	64,094	11,089	14,585	(3,495)	5.00	699	3,717
394.00	Tools Shop And Garage Equip	3,945,037	958,474	1,513,069	(554,595)	5.00	110,919	82,781
395.00	Laboratory Equipment	-	-	-	-	5.00	-	-
397.00	Communication Equipment	1,651,581	153,161	314,313	(161,151)	5.00	32,230	-
398.00	Miscellaneous Equipment	1,077,164	270,263	589,295	(319,032)	5.00	63,806	-
Total General Amortized		17,667,005	2,896,386	4,194,992	(1,298,606)		259,721	113,121

After Retirements of Assets With Age > Average Service Life

GENERAL PLANT - AMORTIZED		Plant Balance	Reserve	Proposed Life	Annual Amortization	Accrual For Reserve Deficit/Surplus	Total Amortization	Annual Amortization %
Account	Description	12/31/2018	12/31/2018					
391.00	Office Furniture And Equipment	562,868	74,906	20	28,143			5.00%
391.00	Office Furniture And Equipment					4,522		
391.00	Total						32,665	
391.10	Computer Equipment	969,865	96,987	3	323,288			33.33%
391.10	Computer Equipment					12,932		
391.10	Total						336,220	
391.11	Computer Equipment and Software	256,887	18,355	7	36,698			14.29%
391.11	Computer Equipment and Software					(1)		
391.11	Total						36,697	
391.12	Computer Hardware	5,110,234	1,055,617	7	730,033			14.29%
391.12	Computer Hardware					38,722		
391.12	Total						768,755	
391.20	Enterprise Systems	3,837,753	191,888	15	255,850			6.67%
391.20	Enterprise Systems					(12,793)		
391.20	Total						243,058	
391.50	Individual Equipment	164,898	39,023	3	54,966			33.33%
391.50	Individual Equipment					8,685		
391.50	Total						63,651	

After Retirements of Assets With Age > Average Service Life

GENERAL PLANT - AMORTIZED		Plant	Reserve	Proposed	Annual	Accrual	Total	Annual
Account	Description	Balance	12/31/2018	Life	Amortization	For Reserve	Amortization	Amortization
		12/31/2018	12/31/2018			Deficit/Surplus		%
393.00	Stores Equipment	60,377	7,372	25	2,415			4.00%
393.00	Stores Equipment					699		
393.00	Total						3,114	
394.00	Tools, Shop, and Garage Equipment	3,862,256	875,693	18	214,570			5.56%
394.00	Tools, Shop, and Garage Equipment					110,919		
394.00	Total						325,489	
395.00	Laboratory Equipment	-	-	20	-			5.00%
395.00	Laboratory Equipment					-		
395.00	Total						-	
397.00	Communication Equipment	1,651,581	153,161	18	91,755			5.56%
397.00	Communication Equipment					32,230		
397.00	Total						123,985	
398.00	Miscellaneous Equipment	1,077,164	270,263	20	53,858			5.00%
398.00	Miscellaneous Equipment					63,806		
398.00	Total						117,665	
Total General Amortized After Ret		\$ 17,553,884	\$ 2,783,265		\$ 1,791,577	\$ 259,721	\$ 2,051,298	
Assets Age > ASL		113,121	113,121					

APPENDIX B - Depreciation Expense Comparison

Elizabethtown Gas Company
Comparison of Depreciation Expense
Comparison of Existing and Proposed Depreciation Accrual Rates
Depreciation Study as of December 31, 2018

Account		Description	Plant Balance	Existing		Proposed		Change in Depreciation Expense
				Rate	Amount	Rate	Amount	
(a)	(b)	(c)	(d)	(e)	[f]	[g]	[h]	
INTANGIBLE PLANT								
301.00	Organization	\$ 77,895	0.00%	\$ -	0.00%	\$ -	\$ -	
302.00	Franchises and Consents	20,947	0.00%	-	0.00%	-	-	
Total Intangible		98,841		-		-	-	
PRODUCTION PLANT								
304.20	Land Rights	61,423	4.14%	2,545	4.37%	2,684	138	
305.00	Structures and Improvements	-	0.00%	-	0.00%	-	-	
311.00	Liquefied Petroleum Gas Equip	737,445	2.88%	21,256	2.87%	21,128	(129)	
320.00	Other Equipment	173,509	28.37%	49,220	2.58%	4,484	(44,736)	
Total Production		972,377	7.51%	73,022	2.91%	28,296	(44,726)	
STORAGE PLANT								
360.00	Land and Land Rights	68,417	0.00%	-	0.00%	-	-	
361.00	Structures and Improvements	3,532,903	2.22%	78,509	1.52%	53,818	(24,691)	
362.00	Gas Holders-Natural Gas	-	1.54%	-	1.54%	- *	-	
362.10	Gas Holders-LNG	3,237,323	1.54%		1.54%	*	-	
363.20	Vaporizing Equipment	21,004,327	2.86%	600,124	2.82%	592,374	(7,750)	
363.40	Measuring & Regulating Equip	2,929,952	2.86%	83,713	2.57%	75,211	(8,502)	
Total Storage		30,772,921	2.48%	762,345	2.34%	721,403	(40,942)	
TRANSMISSION PLANT								
365.20	Rights of Way	367,325	0.89%	3,267	0.94%	3,448	182	
367.00	Transmission-Mains	11,803,151	1.89%	223,387	1.51%	178,148	(45,239)	
369.00	Measuring & Regulating Equip	8,077,646	2.74%	221,587	2.53%	204,705	(16,882)	
371.00	Other Equipment	3,874	4.45%	173	4.29%	166	(7)	
Total Transmission		20,251,995	2.21%	448,413	1.91%	386,467	(61,945)	

Elizabethtown Gas Company
Comparison of Depreciation Expense
Comparison of Existing and Proposed Depreciation Accrual Rates
Depreciation Study as of December 31, 2018

Account	Description	Plant Balance	Existing		Proposed		Change in Depreciation Expense
			Rate	Amount	Rate	Amount	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
DISTRIBUTION PLANT							
374.00	Land and Land Rights	1,352,164	1.14%	15,428	1.13%	15,307	(120)
374.10	Land	895,051	0.00%	-	0.00%	-	-
374.20	Land Rights	878,866	1.14%	10,028	1.13%	9,949	(78)
374.30	Rights of Way	702,404	1.14%	8,014	1.13%	7,952	(63)
375.00	Structures & Improvements	5,724,072	4.52%	258,539	2.30%	131,903	(126,636)
376.00	Mains	660,393,504	1.36%	8,962,341	1.63%	10,743,656	1,781,315
378.00	M&R Station Equip - General	18,906,222	1.63%	308,012	2.26%	426,341	118,329
379.00	M&R Equipment - City Gate	21,185,491	1.70%	360,598	1.47%	310,556	(50,042)
380.00	Services	366,088,909	1.88%	6,883,912	2.88%	10,544,235	3,660,324
381.00	Meters	106,639,754	2.66%	2,833,881	3.98%	4,249,355	1,415,474
382.00	Meter Installations	29,413,532	1.70%	498,996	1.32%	388,227	(110,769)
383.00	House Regulators	6,120,160	2.48%	151,947	2.61%	160,014	8,067
384.00	Regulator Installations	1,474,223	2.48%	36,601	2.61%	38,544	1,943
385.00	Industrial M&R Station Equipment	15,751,970	1.70%	268,352	1.42%	223,308	(45,044)
386.00	Other Property On Customer Premises	-	0.00%	-	0.00%	-	-
387.00	Other Equipment	2,669,628	2.81%	74,988	3.70%	98,644	23,656
Total Distribution		1,238,195,950	1.67%	20,671,636	2.21%	27,347,991	6,676,355
GENERAL PLANT - DEPRECIATED							
389.00	Land and Land Rights	25,149	0.00%	-	0.00%	-	-
390.00	Structures & Improvements	24,570,837	2.56%	628,460	2.60%	639,968	11,508
392.00	Transportation Equip	2,477,407	6.78%	167,988	7.06%	174,796	6,808
392.10	Autos & Light Trucks	4,508,198	10.10%	455,462	9.90%	446,231	(9,231)
392.20	Service Trucks	2,471,544	11.73%	289,897	13.28%	328,141	38,243
392.30	Heavy Trucks	4,120,912	8.52%	351,169	13.03%	537,146	185,977
394.10	Natural Gas Vehicle Stations	2,721,905	5.02%	136,670	5.14%	139,824	3,154
396.00	Power Operated Equip	1,242,872	6.98%	86,701	7.84%	97,456	10,754
396.10	Power Operated Equip Tractors	165,479	9.96%	16,484	7.69%	12,721	(3,763)
Total General Depreciated		42,304,301	5.04%	2,132,832	5.62%	2,376,282	243,450

Elizabethtown Gas Company
Comparison of Depreciation Expense
Comparison of Existing and Proposed Depreciation Accrual Rates
Depreciation Study as of December 31, 2018

Account	Description	Plant Balance	Existing		Proposed		Change in Depreciation Expense
			Rate	Amount	Rate	Amount	
(a)	(b)	(c)	(d)	(e)	[f]	[g]	[h]
GENERAL PLANT - AMORTIZED							
391.00	Office Furniture and Equipment	562,868	5.00%	28,143	5.00%	32,665 (1)	4,522
391.10	Computer Equip and Software	969,865	20.00%	193,973	33.33%	336,220 (1)	142,247
391.11	Computer Software	256,887	14.29%	36,698	14.29%	36,697 (1)	(1)
391.12	Computer Hardware	5,110,234	14.29%	730,033	14.29%	768,755 (1)	38,722
391.20	Enterprise Systems	3,837,753	10.00%	383,775	6.67%	243,058 (1)	(140,718)
391.50	Individual Equipment	164,898	20.00%	32,980	33.33%	63,651 (1)	30,672
393.00	Stores Equipment	60,377	4.00%	2,415	4.00%	3,114 (1)	699
394.00	Tools, Shop, Garage Equipment	3,862,256	5.00%	193,113	5.56%	325,489 (1)	132,376
395.00	Laboratory Equipment	-	5.00%	-	5.00%	- (1)	-
397.00	Communication Equipment	1,651,581	5.00%	82,579	5.56%	123,985 (1)	41,406
398.00	Misc. Equipment	1,077,164	5.00%	53,858	5.00%	117,665 (1)	63,806
Total General Amortized		17,553,884	9.90%	1,737,568	11.69%	2,051,298	313,730
Total General Plant		59,858,185	6.47%	3,870,400	7.40%	4,427,580	557,180
TOTAL DEPRECIABLE PLANT IN SERVICE		\$ 1,349,062,811	1.91%	\$ 25,825,816	2.44%	\$ 32,911,738	\$ 7,085,922

* Denotes a whole life rate is being proposed for new additions as existing plant is fully accrued.

(1) General Plant - Amortized proposed accrual includes ongoing amortization (1/Life) plus fixed Deficit/Surplus accrual for 5 years

APPENDIX C - Depreciation Parameter Comparison

Elizabethtown Gas Company
Depreciation Study as of December 31, 2018
Comparison of Existing and Proposed Parameters

Account	Description	Existing Parameters			Proposed Parameters		
		Life	Curve	Approved Net Salvage Amount	Life	Curve	Net Salvage Amount
				\$			\$
MANUFACTURED GAS PLANT							
304.20	Land Rights	65	SQ	-	65	SQ	-
311.00	Liquefied Petroleum Gas Equipment	35	S3	-	35	S3	-
320.00	Other Equipment	7	L4	-	15	L1	-
	Total Manufactured Gas Plant			-			-
OTHER STORAGE PLANT							
361.00	Structures & Improvements	45	S4	-	45	S4	-
362.00	Gas Holders-Natural Gas	65	S4	-	65	S4	-
362.10	Gas Holders-LNG	65	S4	-	65	S4	-
363.20	Vaporizing Equipment	35	S3	-	35	S3	-
363.40	M&R Equipment	35	S3	-	25	S3	-
	Total Other Storage Plant			-			-
TRANSMISSION PLANT							
365.20	Rights of Way	75	R2	-	80	R2	-
367.00	Mains	65	R3	(33,367)	71	R2	(21,729)
369.00	M&R Equipment	35	S2	-	45	S2	(29,789)
371.00	Other Equipment	20	R2	-	20	R2	-
	Total Transmission Plant			(33,367)			(51,518)
DISTRIBUTION PLANT							
374.00	Land and Land Rights	75	R2	-	80	R2	-
374.20	Land Rights	75	R2	-	80	R2	-
374.30	Rights of Way	75	R2	-	80	R2	-
375.00	Structures & Improvements	20	L2	-	40	R5	-
376	All Mains	71	R2	(550,852)	71	R2	(1,948,242)
378.00	M&R Station Equipment - General	35	S2	(2,018)	35	S2	(81,929)
379.00	M&R Equipment - City Gate	40	S2	(6,549)	45	S2	(12,255)
380	All Services	60	S0	(1,503,863)	60	S0	(4,556,636)
381.00	Meters	33	S0.5	(190)	25	R1	(349)
382.00	Meter Installations	37	S5	-	50	S5	(120)
383.00	House Regulators	37	S5	-	36	L5	-
384.00	Regulator Installations	37	S5	-	36	L5	-
385.00	Industrial M&R Station Equipment	40	S2	-	45	S2	-
387.00	Other Equipment	17	R5	-			-
	Total Distribution Plant			(2,063,472)			(6,599,531)

Elizabethtown Gas Company
Depreciation Study as of December 31, 2018
Comparison of Existing and Proposed Parameters

Account	Description	Existing Parameters			Proposed Parameters		
		Life	Curve	Approved Net	Life	Curve	Net Salvage
				Salvage Amount			Amount
				\$			\$
GENERAL PLANT							
390.00	Structures & Improvements	40	R5	-	40	R5	-
391.00	Office Furniture & Equipment	20	SQ	-	20	SQ	-
391.10	Computer Equipment & Software	5	SQ	-	3	SQ	-
391.11	Computer Software	7	SQ	-	7	SQ	-
391.12	Computer Hardware	7	SQ	-	7	SQ	-
391.20	Enterprise Systems	10	SQ	-	15	SQ	-
391.50	Individual Equipment	5	SQ	-	3	SQ	-
392.00	Transportation Equipment	15	L3	1,970	15	L3	5,622
392.10	Transporttion - Auto & Light Trucks	12	R3	10,901	11	R3	126,505
392.20	Transportation - Service Trucks	9	L3	1,551	8	L3	26,234
392.30	Transportation - Heavy Trucks	13	R2.5	6,127	10	R5	113,018
393.00	Stores Equipment	25	SQ	-	25	SQ	-
394.00	Tools, Shop, & Garage Equipment	20	SQ	-	18	SQ	-
394.10	Natural Gas Vehicle Equipment	20	S4	-	20	S4	-
395.00	Laboratory Equipment	20	SQ	-	20	SQ	-
396.00	Power Operated Equipment	15	L2	-	14	L4	-
396.10	Power Operated Equipment Tractors	25	L2	-	12	L3	14,192
397.00	Communication Equipment	20	SQ	-	18	SQ	-
398.00	Miscellaneous Equipment	20	SQ	-	20	SQ	-
Total General Plant				20,550.00	285,571		
					(6,651,049)		
Total Net Salvage Amount Included in Annual Accrual				\$ (2,096,839)	\$ (6,365,478)		

APPENDIX D - Net Salvage Analysis

Elizabethtown Gas Company
Depreciation Study as of December 31, 2018
Net Salvage As Adjusted

Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
304	1999	-	0	0	0	NA									
304	2000	-	0	0	0	NA	NA								
304	2001	-	0	0	0	NA	NA	NA							
304	2002	1,113	0	0	0	0.00%	0.00%	0.00%	0.00%						
304	2003	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%					
304	2004	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%				
304	2005	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%			
304	2006	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%		
304	2007	6,217	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
304	2008	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
304	2009	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
304	2010	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
304	2011	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
304	2012	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
304	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
304	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
304	2015	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
304	2016	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
304	2017	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
304	2018	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
305	1999	-	0	0	0	NA									
305	2000	-	0	0	0	NA	NA								
305	2001	-	0	0	0	NA	NA	NA							
305	2002	860,334	0	0	0	0.00%	0.00%	0.00%	0.00%						
305	2003	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%					
305	2004	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%				
305	2005	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%			
305	2006	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%		
305	2007	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	
305	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
305	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
305	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
305	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
305	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
305	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
305	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
305	2015	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
305	2016	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
305	2017	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
305	2018	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
311.1	1999	5,934,489	0	0	0	0.00%									
311.1	2000	-	0	0	0	NA	0.00%								
311.1	2001	-	0	0	0	NA	NA	0.00%							
311.1	2002	529,682	0	0	0	0.00%	0.00%	0.00%	0.00%						

Elizabethtown Gas Company
Depreciation Study as of December 31, 2018
Net Salvage As Adjusted

Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
311.1	2003	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%					
311.1	2004	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%				
311.1	2005	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%			
311.1	2006	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%		
311.1	2007	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	
311.1	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
311.1	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
311.1	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
311.1	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
311.1	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
311.1	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
311.1	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
311.1	2015	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
311.1	2016	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
311.1	2017	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
311.1	2018	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
320	1999	-	0	0	0	NA									
320	2000	-	0	0	0	NA	NA								
320	2001	-	0	0	0	NA	NA	NA							
320	2002	577,745	0	0	0	0.00%	0.00%	0.00%	0.00%						
320	2003	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%					
320	2004	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%				
320	2005	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%			
320	2006	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%		
320	2007	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	
320	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
320	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
320	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
320	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
320	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
320	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
320	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
320	2015	9,380	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
320	2016	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
320	2017	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
320	2018	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
361	1999	-	0	0	0	NA									
361	2000	-	0	0	0	NA	NA								
361	2001	-	0	0	0	NA	NA	NA							
361	2002	-	0	0	0	NA	NA	NA	NA						
361	2003	-	0	0	0	NA	NA	NA	NA	NA					
361	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
361	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
361	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		

Elizabethtown Gas Company
Depreciation Study as of December 31, 201
Net Salvage As Adjusted

Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
361	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
361	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
361	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
361	2010	9,033	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
361	2011	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
361	2012	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
361	2013	274,823	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
361	2014	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
361	2015	193,586	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
361	2016	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
361	2017	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
361	2018	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362	1999	456,331	0	104,703	(104,703)	-22.94%									
362	2000	-	0	0	0	NA	-22.94%								
362	2001	-	0	0	0	NA	NA	-22.94%							
362	2002	-	0	0	0	NA	NA	NA	-22.94%						
362	2003	-	0	0	0	NA	NA	NA	NA	-22.94%					
362	2004	-	0	0	0	NA	NA	NA	NA	NA	-22.94%				
362	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	-22.94%			
362	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	-22.94%		
362	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	-22.94%	
362	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	-22.94%
362	2009	2,186,647	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362	2010	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362	2011	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362	2012	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362	2013	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362	2014	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
362	2015	-	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
362	2016	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
362	2017	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
362	2018	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
362.1	1999	56,123	0	0	0	0.00%									
362.1	2000	-	0	0	0	NA	0.00%								
362.1	2001	-	0	0	0	NA	NA	0.00%							
362.1	2002	-	0	0	0	NA	NA	NA	0.00%						
362.1	2003	-	0	0	0	NA	NA	NA	NA	0.00%					
362.1	2004	-	0	0	0	NA	NA	NA	NA	NA	0.00%				
362.1	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	0.00%			
362.1	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%		
362.1	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	
362.1	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
362.1	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
362.1	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Elizabethtown Gas Company
Depreciation Study as of December 31, 2018
Net Salvage As Adjusted

Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
362.1	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
362.1	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
362.1	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
362.1	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
362.1	2015	1,102,044	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362.1	2016	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362.1	2017	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362.1	2018	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362 Comt	1999	512,454	0	104,703	(104,703)	-20.43%									
362 Comt	2000	-	0	0	0	NA	-20.43%								
362 Comt	2001	-	0	0	0	NA	NA	-20.43%							
362 Comt	2002	-	0	0	0	NA	NA	NA	-20.43%						
362 Comt	2003	-	0	0	0	NA	NA	NA	NA	-20.43%					
362 Comt	2004	-	0	0	0	NA	NA	NA	NA	NA	-20.43%				
362 Comt	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	-20.43%			
362 Comt	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	-20.43%		
362 Comt	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	-20.43%	
362 Comt	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	-20.43%
362 Comt	2009	2,186,647	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362 Comt	2010	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362 Comt	2011	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362 Comt	2012	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362 Comt	2013	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362 Comt	2014	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
362 Comt	2015	1,102,044	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362 Comt	2016	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362 Comt	2017	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
362 Comt	2018	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
363.2	1999	-	0	0	0	NA									
363.2	2000	-	0	0	0	NA	NA								
363.2	2001	-	0	0	0	NA	NA	NA							
363.2	2002	-	0	0	0	NA	NA	NA	NA						
363.2	2003	-	0	0	0	NA	NA	NA	NA	NA					
363.2	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				

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Account	Year	Retirement	Salvage	Cost of	Net	Net	2-Yr	3-Yr	4-Yr	5-Yr	6-Yr	7-Yr	8-Yr	9-Yr	10-Yr
				Removal	Salvage	Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %
363.2	2015	446,836	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
363.2	2016	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
363.2	2017	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
363.2	2018	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
363.4	1999	-	0	0	0	NA									
363.4	2000	-	0	0	0	NA	NA								
363.4	2001	-	0	0	0	NA	NA	NA							
363.4	2002	-	0	0	0	NA	NA	NA	NA						
363.4	2003	-	0	0	0	NA	NA	NA	NA	NA					
363.4	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
363.4	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
363.4	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
363.4	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
363.4	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
363.4	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
363.4	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
363.4	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
363.4	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
363.4	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
363.4	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
363.4	2015	1,046,192	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
363.4	2016	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
363.4	2017	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
363.4	2018	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
367	1999	-	0	0	0	NA									
367	2000	-	0	0	0	NA	NA								
367	2001	-	0	0	0	NA	NA	NA							
367	2002	-	0	0	0	NA	NA	NA	NA						
367	2003	-	0	0	0	NA	NA	NA	NA	NA					
367	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
367	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
367	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
367	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
367	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
367	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
367	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
367	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
367	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
367	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
367	2014	-	0	154,600	(154,600)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
367	2015	-	0	12,232	(12,232)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
367	2016	-	0	1,697	(1,697)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
367	2017	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
367	2018	-	0	63,488	(63,488)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
3 year average				21,729											
369	2018	-	0	89,367	(89,367)	NA									
3 year average				29,789											
371	1999	-	0	0	0	NA									
371	2000	-	0	0	0	NA	NA								
371	2001	-	0	0	0	NA	NA	NA							
371	2002	-	0	0	0	NA	NA	NA	NA						
371	2003	-	0	0	0	NA	NA	NA	NA	NA					
371	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
371	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
371	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
371	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
371	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
371	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
371	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
371	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
371	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
371	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
371	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
371	2015	4,775	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
371	2016	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
371	2017	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
371	2018	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
374 C	1999	-	0	0	0	NA									
374 C	2000	-	0	0	0	NA	NA								
374 C	2001	-	0	0	0	NA	NA	NA							
374 C	2002	61,317	0	0	0	0.00%	0.00%	0.00%	0.00%						
374 C	2003	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%					
374 C	2004	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%				
374 C	2005	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%			
374 C	2006	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%		
374 C	2007	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	
374 C	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
374 C	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
374 C	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
374 C	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
374 C	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
374 C	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
374 C	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
374 C	2015	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
374 C	2016	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
374 C	2017	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
374 C	2018	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
375	1999	-	0	0	0	NA									
375	2000	-	0	0	0	NA	NA								
375	2001	-	0	9,792	(9,792)	NA	NA	NA							
375	2002	339,248	0	824	(824)	-0.24%	-3.13%	-3.13%	-3.13%						
375	2003	-	0	0	0	NA	-0.24%	-3.13%	-3.13%	-3.13%					
375	2004	-	0	29,080	(29,080)	NA	NA	-8.81%	-11.70%	-11.70%	-11.70%				
375	2005	-	0	0	0	NA	NA	NA	-8.81%	-11.70%	-11.70%	-11.70%			
375	2006	-	0	0	0	NA	NA	NA	NA	-8.81%	-11.70%	-11.70%	-11.70%		
375	2007	242,207	110,351	0	110,351	45.56%	45.56%	45.56%	33.55%	33.55%	13.84%	12.15%	12.15%	12.15%	
375	2008	-	0	0	0	NA	45.56%	45.56%	45.56%	33.55%	33.55%	13.84%	12.15%	12.15%	12.15%
375	2009	-	0	0	0	NA	NA	45.56%	45.56%	33.55%	33.55%	13.84%	12.15%	12.15%	12.15%
375	2010	444,214	0	0	0	0.00%	0.00%	0.00%	16.08%	16.08%	16.08%	11.84%	11.84%	7.84%	6.89%
375	2011	-	0	0	0	NA	0.00%	0.00%	0.00%	16.08%	16.08%	16.08%	11.84%	11.84%	7.84%
375	2012	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	16.08%	16.08%	16.08%	11.84%	11.84%
375	2013	1,563,832	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.90%	4.90%	4.90%	3.61%
375	2014	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.90%	4.90%	4.90%
375	2015	249,748	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.41%	4.41%
375	2016	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.41%
375	2017	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
375	2018	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
376 C	1999	188,587	0	741,866	(741,866)	-393.38%									
376 C	2000	1,363,725	0	609,608	(609,608)	-44.70%	-87.06%								
376 C	2001	173,780	0	267,126	(267,126)	-153.71%	-57.02%	-93.77%							
376 C	2002	848,409	0	514,389	(514,389)	-60.63%	-76.46%	-58.31%	-82.85%						
376 C	2003	329,530	0	443,042	(443,042)	-134.45%	-81.28%	-90.59%	-67.55%	-88.71%					
376 C	2004	417,134	0	508,214	(508,214)	-121.83%	-127.40%	-91.89%	-97.96%	-74.77%	-92.87%				
376 C	2005	71,199	0	98,374	(98,374)	-138.17%	-124.22%	-128.34%	-93.86%	-99.52%	-76.18%	-93.82%			
376 C	2006	-	0	76,625	(76,625)	NA	-245.79%	-139.91%	-137.71%	-98.46%	-103.68%	-78.58%	-96.08%		
376 C	2007	4,480,577	0	(9,863)	9,863	0.22%	-1.49%	-3.63%	-13.55%	-21.07%	-26.53%	-30.03%	-32.63%	-41.27%	
376 C	2008	29,574	0	22,153	(22,153)	-74.91%	-0.27%	-1.97%	-4.09%	-13.91%	-21.37%	-26.76%	-30.24%	-32.79%	-41.40%
376 C	2009	4,352,275	0	638,158	(638,158)	-14.66%	-15.07%	-7.34%	-8.20%	-9.24%	-14.26%	-18.35%	-21.76%	-23.90%	-26.25%
376 C	2010	238,328	0	1,533,288	(1,533,288)	-643.35%	-47.30%	-47.48%	-24.00%	-24.84%	-25.72%	-29.90%	-33.37%	-35.52%	-37.40%
376 C	2011	211,069	0	839,241	(839,241)	-397.61%	-527.94%	-62.70%	-62.78%	-32.46%	-33.29%	-34.08%	-37.82%	-40.96%	-42.48%
376 C	2012	3,586	0	659,597	(659,597)	-18391.91%	-698.25%	-669.37%	-76.38%	-76.37%	-39.53%	-40.35%	-41.10%	-44.53%	-47.46%
376 C	2013	-	0	(1,672,684)	1,672,684	NA	28248.51%	80.99%	-300.11%	-41.57%	-41.78%	-21.58%	-22.40%	-23.28%	-27.47%
376 C	2014	2,625,440	0	1,404,761	(1,404,761)	-53.51%	10.20%	-14.90%	-43.34%	-89.79%	-45.79%	-45.90%	-28.60%	-29.24%	-29.88%
376 C	2015	1,048,684	0	1,523,347	(1,523,347)	-145.26%	-79.70%	-34.17%	-52.07%	-70.83%	-103.89%	-58.09%	-58.15%	-38.02%	-38.61%
376 C	2016	1,125,284	0	2,569,028	(2,569,028)	-228.30%	-188.24%	-114.54%	-79.69%	-93.36%	-106.17%	-130.54%	-78.03%	-78.02%	-53.19%
376 C	2017	1,828,790	0	963,945	(963,945)	-52.71%	-119.60%	-126.32%	-97.48%	-72.24%	-82.15%	-91.88%	-110.44%	-73.98%	-73.98%
376 C	2018	3,166,484	0	2,311,753	(2,311,753)	-73.01%	-65.58%	-95.49%	-102.77%	-89.57%	-72.49%	-79.20%	-85.91%	-98.87%	-73.77%
3 year average				1,948,242											
378	1999	-	0	0	0	NA									
378	2000	-	0	0	0	NA	NA								

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378	2001	-	0	0	0	NA	NA	NA							
378	2002	-	0	0	0	NA	NA	NA	NA						
378	2003	-	0	0	0	NA	NA	NA	NA	NA					
378	2004	1,923	0	1,735	(1,735)	-90.22%	-90.22%	-90.22%	-90.22%	-90.22%	-90.22%				
378	2005	-	0	0	0	NA	-90.22%	-90.22%	-90.22%	-90.22%	-90.22%	-90.22%			
378	2006	-	0	0	0	NA	NA	-90.22%	-90.22%	-90.22%	-90.22%	-90.22%	-90.22%		
378	2007	-	0	953	(953)	NA	NA	NA	-139.75%	-139.75%	-139.75%	-139.75%	-139.75%	-139.75%	
378	2008	-	0	8,703	(8,703)	NA	NA	NA	NA	-592.30%	-592.30%	-592.30%	-592.30%	-592.30%	-592.30%
378	2009	-	0	0	0	NA	NA	NA	NA	NA	-592.30%	-592.30%	-592.30%	-592.30%	-592.30%
378	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	-592.30%	-592.30%	-592.30%	-592.30%
378	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	-592.30%	-592.30%	-592.30%
378	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	-592.30%	-592.30%
378	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	-592.30%
378	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
378	2015	-	0	10,089	(10,089)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
378	2016	-	0	89,829	(89,829)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
378	2017	-	0	20,466	(20,466)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
378	2018	-	0	135,492	(135,492)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3 year average				81,929											
379	1999	-	0	0	0	NA									
379	2000	-	0	0	0	NA	NA								
379	2001	-	0	0	0	NA	NA	NA							
379	2002	-	0	0	0	NA	NA	NA	NA						
379	2003	-	0	0	0	NA	NA	NA	NA	NA					
379	2004	-	0	4,015	(4,015)	NA	NA	NA	NA	NA	NA				
379	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
379	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
379	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
379	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
379	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
379	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
379	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
379	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
379	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
379	2014	-	0	32,744	(32,744)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
379	2015	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
379	2016	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
379	2017	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
379	2018	-	0	36,764	(36,764)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3 year average				12,255											
380 C	1999	865	0	931,002	(931,002)	-107630.29%									
380 C	2000	11,304	0	601,129	(601,129)	-5317.84%	-12590.44%								
380 C	2001	10,970	0	432,820	(432,820)	-3945.49%	-4641.95%	-8491.94%							
380 C	2002	898,459	0	642,687	(642,687)	-71.53%	-118.26%	-182.10%	-282.95%						

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Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
380 C	2003	537,415	0	671,918	(671,918)	-125.03%	-91.55%	-120.77%	-161.06%	-224.78%					
380 C	2004	698,025	0	539,122	(539,122)	-77.24%	-98.02%	-86.87%	-106.61%	-133.93%	-177.03%				
380 C	2005	145,743	0	94,180	(94,180)	-64.62%	-75.06%	-94.50%	-85.45%	-103.93%	-129.54%	-169.92%			
380 C	2006	-	0	434,490	(434,490)	NA	-362.74%	-126.55%	-125.96%	-104.51%	-122.90%	-148.41%	-188.79%		
380 C	2007	1,038,341	0	535,372	(535,372)	-51.56%	-93.40%	-89.86%	-85.18%	-94.03%	-87.94%	-100.65%	-118.31%	-146.14%	
380 C	2008	3,036,933	0	481,281	(481,281)	-15.85%	-24.95%	-35.61%	-36.61%	-42.38%	-50.52%	-53.49%	-60.19%	-69.51%	-84.10%
380 C	2009	5,782,368	0	428,637	(428,637)	-7.41%	-10.32%	-14.66%	-19.07%	-19.73%	-23.48%	-28.34%	-31.54%	-35.07%	-39.98%
380 C	2010	3,262,399	0	1,660,527	(1,660,527)	-50.90%	-23.10%	-21.28%	-23.67%	-26.98%	-27.40%	-29.89%	-33.41%	-35.64%	-38.42%
380 C	2011	1,953,987	0	402,823	(402,823)	-20.62%	-39.56%	-22.66%	-21.18%	-23.28%	-26.16%	-26.53%	-28.75%	-31.89%	-33.95%
380 C	2012	1,380,802	0	343,588	(343,588)	-24.88%	-22.38%	-36.48%	-22.91%	-21.51%	-23.41%	-26.05%	-26.39%	-28.44%	-31.35%
380 C	2013	1,612,165	0	969,893	(969,893)	-60.16%	-43.89%	-34.69%	-41.13%	-27.20%	-25.17%	-26.69%	-29.10%	-29.38%	-31.15%
380 C	2014	1,455,837	0	2,322,503	(2,322,503)	-159.53%	-107.31%	-81.73%	-63.08%	-58.97%	-39.67%	-35.76%	-36.60%	-38.82%	-39.01%
380 C	2015	938,044	0	3,480,510	(3,480,510)	-371.04%	-242.41%	-169.07%	-132.11%	-102.43%	-86.58%	-58.64%	-51.95%	-51.93%	-54.05%
380 C	2016	4,348,127	0	6,367,582	(6,367,582)	-146.44%	-186.30%	-180.52%	-157.29%	-138.51%	-118.80%	-103.99%	-77.05%	-69.23%	-68.49%
380 C	2017	3,648,636	0	1,691,678	(1,691,678)	-46.36%	-100.78%	-129.16%	-133.41%	-123.57%	-113.39%	-101.57%	-92.68%	-72.46%	-66.19%
380 C	2018	6,649,000	0	5,610,649	(5,610,649)	-84.38%	-70.91%	-93.34%	-110.05%	-114.28%	-109.60%	-103.76%	-96.37%	-90.50%	-75.02%
3 year average				4,556,636											
381 C	1999	-	0	0	0	NA									
381 C	2000	-	0	0	0	NA	NA								
381 C	2001	-	0	0	0	NA	NA	NA							
381 C	2002	1,623,067	0	0	0	0.00%	0.00%	0.00%	0.00%						
381 C	2003	361,471	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
381 C	2004	663,636	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%				
381 C	2005	309,546	0	1,495	(1,495)	-0.48%	-0.15%	-0.11%	-0.05%	-0.05%	-0.05%	-0.05%			
381 C	2006	652,142	0	9,858	(9,858)	-1.51%	-1.18%	-0.70%	-0.57%	-0.31%	-0.31%	-0.31%	-0.31%		
381 C	2007	55,957	0	18,018	(18,018)	-32.20%	-3.94%	-2.89%	-1.75%	-1.44%	-0.80%	-0.80%	-0.80%	-0.80%	
381 C	2008	26,248	0	0	0	0.00%	-21.92%	-3.80%	-2.81%	-1.72%	-1.42%	-0.80%	-0.80%	-0.80%	-0.80%
381 C	2009	6,537,860	0	0	0	0.00%	0.00%	-0.27%	-0.38%	-0.39%	-0.36%	-0.34%	-0.29%	-0.29%	-0.29%
381 C	2010	34,224	0	0	0	0.00%	0.00%	0.00%	-0.27%	-0.38%	-0.39%	-0.35%	-0.34%	-0.29%	-0.29%
381 C	2011	119,773	0	0	0	0.00%	0.00%	0.00%	0.00%	-0.27%	-0.38%	-0.38%	-0.35%	-0.34%	-0.28%
381 C	2012	34,287	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	-0.26%	-0.37%	-0.38%	-0.35%	-0.33%
381 C	2013	23,236	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.26%	-0.37%	-0.38%	-0.35%
381 C	2014	933,870	0	645	(645)	-0.07%	-0.07%	-0.07%	-0.06%	-0.06%	-0.01%	-0.01%	-0.24%	-0.34%	-0.34%
381 C	2015	3,513,011	0	307	(307)	-0.01%	-0.02%	-0.02%	-0.02%	-0.02%	-0.02%	-0.01%	-0.01%	-0.17%	-0.24%
381 C	2016	1,084,371	0	0	0	0.00%	-0.01%	-0.02%	-0.02%	-0.02%	-0.02%	-0.02%	-0.01%	-0.01%	-0.15%
381 C	2017	4,945,653	0	27	(27)	0.00%	0.00%	0.00%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%
381 C	2018	3,514,391	0	1,021	(1,021)	-0.03%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%
3 year average				349											
382	1999	-	0	3,802	(3,802)	NA									
382	2000	-	0	1,216	(1,216)	NA	NA								
382	2001	-	0	1,420	(1,420)	NA	NA	NA							
382	2002	-	0	4,865	(4,865)	NA	NA	NA	NA						
382	2003	1,018,882	0	39	(39)	0.00%	-0.48%	-0.62%	-0.74%	-1.11%					
382	2004	-	0	0	0	NA	0.00%	-0.48%	-0.62%	-0.74%	-1.11%				

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Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
382	2005	-	0	0	0	NA	NA	0.00%	-0.48%	-0.62%	-0.74%	-1.11%			
382	2006	50,092	0	0	0	0.00%	0.00%	0.00%	0.00%	-0.46%	-0.59%	-0.71%	-1.06%		
382	2007	4,774	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	-0.46%	-0.59%	-0.70%	-1.06%	
382	2008	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	-0.46%	-0.59%	-0.70%	-1.06%
382	2009	100,668	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.42%	-0.54%	-0.64%
382	2010	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.42%	-0.54%
382	2011	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.42%
382	2012	110,828	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
382	2013	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
382	2014	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
382	2015	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
382	2016	237,712	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
382	2017	25,276	0	359	(359)	-1.42%	-0.14%	-0.14%	-0.14%	-0.14%	-0.10%	-0.10%	-0.10%	-0.08%	-0.08%
382	2018	34,561	0	0	0	0.00%	-0.60%	-0.12%	-0.12%	-0.12%	-0.12%	-0.09%	-0.09%	-0.09%	-0.07%
3 year average				120											
383	1999	110	0	14	(14)	-12.73%									
383	2000	-	0	0	0	NA	-12.73%								
383	2001	-	0	0	0	NA	NA	-12.73%							
383	2002	-	0	0	0	NA	NA	NA	-12.73%						
383	2003	529,614	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
383	2004	-	0	23,585	(23,585)	NA	-4.45%	-4.45%	-4.45%	-4.45%	-4.46%				
383	2005	-	0	9,147	(9,147)	NA	NA	-6.18%	-6.18%	-6.18%	-6.18%	-6.18%			
383	2006	-	0	0	0	NA	NA	NA	-6.18%	-6.18%	-6.18%	-6.18%	-6.18%		
383	2007	-	0	0	0	NA	NA	NA	NA	-6.18%	-6.18%	-6.18%	-6.18%	-6.18%	
383	2008	-	0	0	0	NA	NA	NA	NA	NA	-6.18%	-6.18%	-6.18%	-6.18%	-6.18%
383	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	-6.18%	-6.18%	-6.18%	-6.18%
383	2010	2,736	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	-334.26%	-1196.16%	-6.15%	-6.15%	-6.15%
383	2011	8	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-333.25%	-1192.54%	-6.15%	-6.15%
383	2012	15	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-331.44%	-1186.09%	-6.15%
383	2013	2	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-331.24%	-1185.38%
383	2014	823	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-255.21%
383	2015	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
383	2016	84,579	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
383	2017	487	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
383	2018	505	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
383-384	1999	110	0	14	(14)	-12.78%									
383-384	2000	-	0	0	0	NA	-12.78%								
383-384	2001	-	0	0	0	NA	NA	-12.78%							
383-384	2002	-	0	0	0	NA	NA	NA	-12.78%						
383-384	2003	529,614	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
383-384	2004	-	0	23,585	(23,585)	NA	-4.45%	-4.45%	-4.45%	-4.45%	-4.46%				
383-384	2005	-	0	9,147	(9,147)	NA	NA	-6.18%	-6.18%	-6.18%	-6.18%	-6.18%			
383-384	2006	-	0	0	0	NA	NA	NA	-6.18%	-6.18%	-6.18%	-6.18%	-6.18%		
383-384	2007	-	0	0	0	NA	NA	NA	NA	-6.18%	-6.18%	-6.18%	-6.18%	-6.18%	

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Account	Year	Retirement	Salvage	Cost of	Net	Net	2-Yr	3-Yr	4-Yr	5-Yr	6-Yr	7-Yr	8-Yr	9-Yr	10-Yr
				Removal	Salvage	Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %
383-384	2008	-	0	0	0	NA	NA	NA	NA	NA	-6.18%	-6.18%	-6.18%	-6.18%	-6.18%
383-384	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	-6.18%	-6.18%	-6.18%	-6.18%
383-384	2010	2,736	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	-334.26%	-1196.16%	-6.15%	-6.15%	-6.15%
383-384	2011	8	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-333.25%	-1192.54%	-6.15%	-6.15%
383-384	2012	15	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-331.44%	-1186.09%	-6.15%
383-384	2013	2	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-331.24%	-1185.38%
383-384	2014	823	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-255.21%
383-384	2015	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
383-384	2016	84,579	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
383-384	2017	487	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
383-384	2018	505	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
385	1999	-	0	0	0	NA									
385	2000	-	0	0	0	NA	NA								
385	2001	-	0	0	0	NA	NA	NA							
385	2002	-	0	0	0	NA	NA	NA	NA						
385	2003	-	0	0	0	NA	NA	NA	NA	NA					
385	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
385	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
385	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
385	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
385	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
385	2009	941	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
385	2010	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
385	2011	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
385	2012	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
385	2013	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
385	2014	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
385	2015	3,291	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
385	2016	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
385	2017	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
385	2018	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
387	1999	-	0	0	0	NA									
387	2000	-	0	0	0	NA	NA								
387	2001	-	0	0	0	NA	NA	NA							
387	2002	21,905	0	0	0	0.00%	0.00%	0.00%	0.00%						
387	2003	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%					
387	2004	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%				
387	2005	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%			
387	2006	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%		
387	2007	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	
387	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
387	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
387	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
387	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%

**Elizabethtown Gas Company
Depreciation Study as of December 31, 2018
Net Salvage As Adjusted**

Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
387	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
387	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
387	2014	-	0	100,088	(100,088)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
387	2015	61,531	0	14,782	(14,782)	-24.02%	-186.69%	-186.69%	-186.69%	-186.69%	-186.69%	-186.69%	-186.69%	-186.69%	-186.69%
387	2016	-	0	0	0	NA	-24.02%	-186.69%	-186.69%	-186.69%	-186.69%	-186.69%	-186.69%	-186.69%	-186.69%
387	2017	-	0	0	0	NA	NA	-24.02%	-186.69%	-186.69%	-186.69%	-186.69%	-186.69%	-186.69%	-186.69%
387	2018	-	0	0	0	NA	NA	NA	-24.02%	-186.69%	-186.69%	-186.69%	-186.69%	-186.69%	-186.69%
3 year average				0											
390	1999	611	0	0	0	0.00%									
390	2000	-	0	0	0	NA	0.00%								
390	2001	-	0	0	0	NA	NA	0.00%							
390	2002	146,641	0	0	0	0.00%	0.00%	0.00%	0.00%						
390	2003	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%					
390	2004	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%				
390	2005	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%			
390	2006	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%		
390	2007	53,155	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
390	2008	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
390	2009	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
390	2010	13,956,643	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
390	2011	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
390	2012	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
390	2013	5,022,313	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
390	2014	1,560,149	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
390	2015	3,043,781	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
390	2016	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
390	2017	413,256	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
390	2018	5,977	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39100	1999	-	0	0	0	NA									
39100	2000	-	0	0	0	NA	NA								
39100	2001	-	0	0	0	NA	NA	NA							
39100	2002	-	0	0	0	NA	NA	NA	NA						
39100	2003	-	0	0	0	NA	NA	NA	NA	NA					
39100	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
39100	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
39100	2006	1,115,008	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
39100	2007	2,109	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
39100	2008	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39100	2009	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39100	2010	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39100	2011	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39100	2012	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
39100	2013	531	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39100	2014	74,135	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

**Elizabethtown Gas Company
Depreciation Study as of December 31, 2018
Net Salvage As Adjusted**

Account	Year	Cost of			Net	Net	2-Yr	3-Yr	4-Yr	5-Yr	6-Yr	7-Yr	8-Yr	9-Yr	10-Yr
		Retirement	Salvage	Removal	Salvage	Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %
39100	2015	1,615,101	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39100	2016	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39100	2017	9,272	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39100	2018	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39110	1999	-	0	0	0	NA									
39110	2000	-	0	0	0	NA	NA								
39110	2001	-	0	0	0	NA	NA	NA							
39110	2002	-	0	0	0	NA	NA	NA	NA						
39110	2003	-	0	0	0	NA	NA	NA	NA	NA					
39110	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
39110	2005	7,240	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
39110	2006	6,802,867	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
39110	2007	6,330,625	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
39110	2008	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39110	2009	416,916	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39110	2010	81,271	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39110	2011	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39110	2012	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39110	2013	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39110	2014	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39110	2015	1,259,673	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39110	2016	25,015	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39110	2017	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39110	2018	1,229,203	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39111	1999	-	0	0	0	NA									
39111	2000	-	0	0	0	NA	NA								
39111	2001	-	0	0	0	NA	NA	NA							
39111	2002	-	0	0	0	NA	NA	NA	NA						
39111	2003	-	0	0	0	NA	NA	NA	NA	NA					
39111	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
39111	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
39111	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
39111	2007	505,192	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39111	2008	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39111	2009	4,712	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39111	2010	9,924	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39111	2011	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39111	2012	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39111	2013	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39111	2014	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39111	2015	35,383	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39111	2016	28,224	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39111	2017	40,259	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39111	2018	5,433,319	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Elizabethtown Gas Company
Depreciation Study as of December 31, 2018
Net Salvage As Adjusted

Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
39112	1999	-	0	0	0	NA									
39112	2000	-	0	0	0	NA	NA								
39112	2001	-	0	0	0	NA	NA	NA							
39112	2002	-	0	0	0	NA	NA	NA	NA						
39112	2003	-	0	0	0	NA	NA	NA	NA	NA					
39112	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
39112	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
39112	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
39112	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
39112	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39112	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39112	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39112	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39112	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39112	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39112	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39112	2015	145,834	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39112	2016	6,571	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39112	2017	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39112	2018	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39120	1999	-	0	0	0	NA									
39120	2000	-	0	0	0	NA	NA								
39120	2001	-	0	0	0	NA	NA	NA							
39120	2002	37,708	0	0	0	0.00%	0.00%	0.00%	0.00%						
39120	2003	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%					
39120	2004	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%				
39120	2005	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%			
39120	2006	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%		
39120	2007	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	
39120	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
39120	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
39120	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
39120	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
39120	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39120	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39120	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39120	2015	173,549	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39120	2016	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39120	2017	12,345,327	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39120	2018	29,285,577	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39130	1999	-	0	0	0	NA									
39130	2000	-	0	0	0	NA	NA								

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Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
39130	2001	-	0	0	0	NA	NA	NA							
39130	2002	2,497,743	0	0	0	0.00%	0.00%	0.00%	0.00%						
39130	2003	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%					
39130	2004	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%				
39130	2005	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%			
39130	2006	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%		
39130	2007	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	
39130	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
39130	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
39130	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
39130	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
39130	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39130	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39130	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39130	2015	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39130	2016	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39130	2017	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39130	2018	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39150	1999	-	0	0	0	NA									
39150	2000	-	0	0	0	NA	NA								
39150	2001	-	0	0	0	NA	NA	NA							
39150	2002	-	0	0	0	NA	NA	NA	NA						
39150	2003	-	0	0	0	NA	NA	NA	NA	NA					
39150	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
39150	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
39150	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
39150	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
39150	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39150	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39150	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39150	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39150	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39150	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39150	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39150	2015	4,183	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39150	2016	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39150	2017	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39150	2018	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39200	2016	-	16,092	0	16,092	NA									
39200	2017	-	225	0	225	NA	NA								
39200	2018	-	550	0	550	NA	NA	NA							
3 year average			5,622												

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Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
39210	1999	-	0	0	0	NA									
39210	2000	-	0	0	0	NA	NA								
39210	2001	-	0	0	0	NA	NA	NA							
39210	2002	-	23,991	0	23,991	NA	NA	NA	NA						
39210	2003	-	0	0	0	NA	NA	NA	NA	NA					
39210	2004	-	20,637	0	20,637	NA	NA	NA	NA	NA	NA				
39210	2005	158,460	18,570	0	18,570	11.72%	24.74%	24.74%	39.88%	39.88%	39.88%	39.88%			
39210	2006	657,243	64,311	0	64,311	9.78%	10.16%	12.69%	12.69%	15.63%	15.63%	15.63%	15.63%		
39210	2007	14,647	10,887	0	10,887	74.33%	11.19%	11.29%	13.78%	13.78%	16.67%	16.67%	16.67%	16.67%	
39210	2008	488,495	0	0	0	0.00%	2.16%	6.48%	7.11%	8.67%	8.67%	10.49%	10.49%	10.49%	10.49%
39210	2009	521,644	0	0	0	0.00%	0.00%	1.06%	4.47%	5.09%	6.22%	6.22%	7.52%	7.52%	7.52%
39210	2010	72,868	0	0	0	0.00%	0.00%	0.00%	0.99%	4.29%	4.90%	5.98%	5.98%	7.23%	7.23%
39210	2011	1,172,583	0	0	0	0.00%	0.00%	0.00%	0.00%	0.48%	2.57%	3.04%	3.71%	3.71%	4.48%
39210	2012	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.48%	2.57%	3.04%	3.71%	3.71%
39210	2013	886,440	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.34%	1.97%	2.36%	2.88%
39210	2014	446,064	44,234	0	44,234	9.92%	3.32%	3.32%	1.77%	1.72%	1.43%	1.23%	1.53%	2.80%	3.12%
39210	2015	355,871	58,515	0	58,515	16.44%	12.81%	6.09%	6.09%	3.59%	3.50%	2.97%	2.61%	2.87%	3.86%
39210	2016	5,527,237	182,281	0	182,281	3.30%	4.09%	4.50%	3.95%	3.95%	3.40%	3.37%	3.17%	3.01%	3.12%
39210	2017	426,565	71,477	0	71,477	16.76%	4.26%	4.95%	5.28%	4.66%	4.66%	4.04%	4.01%	3.79%	3.60%
39210	2018	732,831	125,757	0	125,757	17.16%	17.01%	5.68%	6.22%	6.44%	5.76%	5.76%	5.05%	5.01%	4.76%
3 year average			126,505	0											
39220	1999	-	0	0	0	NA									
39220	2000	-	0	0	0	NA	NA								
39220	2001	-	0	0	0	NA	NA	NA							
39220	2002	-	0	0	0	NA	NA	NA	NA						
39220	2003	-	0	0	0	NA	NA	NA	NA	NA					
39220	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
39220	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
39220	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
39220	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
39220	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39220	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39220	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39220	2011	92,280	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39220	2012	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39220	2013	76,703	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39220	2014	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39220	2015	31,697	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39220	2016	147,181	27,188	0	27,188	18.47%	15.20%	15.20%	10.64%	10.64%	7.82%	7.82%	7.82%	7.82%	7.82%
39220	2017	31,127	10,667	0	10,667	34.27%	21.23%	18.03%	18.03%	13.20%	13.20%	9.99%	9.99%	9.99%	9.99%
39220	2018	58,162	40,848	0	40,848	70.23%	57.69%	33.28%	29.35%	29.35%	22.82%	22.82%	18.00%	18.00%	18.00%
3 year average			26,234												
39230	1999	-	0	0	0	NA									
39230	2000	-	0	0	0	NA	NA								

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Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
39230	2001	-	0	0	0	NA	NA	NA							
39230	2002	-	0	0	0	NA	NA	NA	NA						
39230	2003	-	0	0	0	NA	NA	NA	NA	NA					
39230	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
39230	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
39230	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
39230	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
39230	2008	12,098	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39230	2009	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39230	2010	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39230	2011	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39230	2012	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39230	2013	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
39230	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
39230	2015	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
39230	2016	1,409,025	177,228	0	177,228	12.58%	12.58%	12.58%	12.58%	12.58%	12.58%	12.58%	12.58%	12.47%	12.47%
39230	2017	692,789	128,378	0	128,378	18.53%	14.54%	14.54%	14.54%	14.54%	14.54%	14.54%	14.54%	14.54%	14.46%
39230	2018	586,146	33,450	0	33,450	5.71%	12.65%	12.61%	12.61%	12.61%	12.61%	12.61%	12.61%	12.61%	12.61%
3 year average			113,018												
39240	1999	-	0	0	0	NA									
39240	2000	-	0	0	0	NA	NA								
39240	2001	-	0	0	0	NA	NA	NA							
39240	2002	230,545	0	0	0	0.00%	0.00%	0.00%	0.00%						
39240	2003	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%					
39240	2004	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%				
39240	2005	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%			
39240	2006	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%		
39240	2007	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	
39240	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
39240	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
39240	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
39240	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
39240	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39240	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39240	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39240	2015	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39240	2016	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39240	2017	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39240	2018	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39250	1999	203,643	0	0	0	0.00%									
39250	2000	-	0	0	0	NA	0.00%								
39250	2001	-	0	0	0	NA	NA	0.00%							
39250	2002	1,955,549	0	0	0	0.00%	0.00%	0.00%	0.00%						
39250	2003	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%					

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Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
39250	2004	766,946	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%				
39250	2005	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
39250	2006	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
39250	2007	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
39250	2008	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39250	2009	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
39250	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
39250	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
39250	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
39250	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
39250	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39250	2015	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39250	2016	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39250	2017	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39250	2018	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
392 All	1999	203,643	0	0	0	0.00%									
392 All	2000	-	0	0	0	NA	0.00%								
392 All	2001	-	0	0	0	NA	NA	0.00%							
392 All	2002	2,186,094	23,991	0	23,991	1.10%	1.10%	1.10%	1.00%						
392 All	2003	-	0	0	0	NA	1.10%	1.10%	1.10%	1.00%					
392 All	2004	766,946	20,637	0	20,637	2.69%	2.69%	1.51%	1.51%	1.51%	1.41%				
392 All	2005	158,460	18,570	0	18,570	11.72%	4.24%	4.24%	2.03%	2.03%		1.91%			
392 All	2006	657,243	64,311	0	64,311	9.78%	10.16%	6.54%	6.54%	3.38%	3.38%	3.38%	3.21%		
392 All	2007	14,647	10,887	0	10,887	74.33%	11.19%	11.29%	7.16%	7.16%	3.66%	3.66%	3.66%	3.47%	
392 All	2008	500,593	0	0	0	0.00%	2.11%	6.41%	7.05%	5.45%	5.45%	3.23%	3.23%	3.23%	3.08%
392 All	2009	521,644	0	0	0	0.00%	0.00%	1.05%	4.44%	5.06%	4.37%	2.88%	2.88%	2.88%	2.88%
392 All	2010	72,868	0	0	0	0.00%	0.00%	0.00%	0.98%	4.26%	4.87%	4.25%	4.25%	2.84%	2.84%
392 All	2011	1,264,863	0	0	0	0.00%	0.00%	0.00%	0.00%	0.46%	2.48%	2.94%	2.89%	2.89%	2.25%
392 All	2012	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.46%	2.48%	2.94%	2.89%	2.89%
392 All	2013	963,143	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.33%	1.88%	2.26%	2.33%
392 All	2014	446,064	44,234	0	44,234	9.92%	3.14%	3.14%	1.65%	1.61%	1.35%	1.17%	1.46%	2.69%	3.00%
392 All	2015	387,567	58,515	0	58,515	15.10%	12.33%	5.72%	5.72%	3.36%	3.28%	2.81%	2.47%	2.72%	3.69%
392 All	2016	7,083,442	402,789	0	402,789	5.69%	6.17%	6.39%	5.69%	4.98%	4.95%	4.71%	4.50%	4.59%	
392 All	2017	1,150,480	210,747	0	210,747	18.32%	7.45%	7.80%	7.90%	7.14%	6.34%	6.30%	6.02%	5.78%	
392 All	2018	1,377,139	200,605	0	200,605	14.57%	16.27%	8.47%	8.73%	8.78%	8.04%	8.04%	7.24%	7.19%	6.91%
3 year average			271,380												
393	1999	-	0	0	0	NA									
393	2000	-	0	0	0	NA	NA								
393	2001	-	0	0	0	NA	NA	NA							
393	2002	-	0	0	0	NA	NA	NA	NA						
393	2003	-	0	0	0	NA	NA	NA	NA	NA					
393	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
393	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
393	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		

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Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
393	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
393	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
393	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
393	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
393	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
393	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
393	2013	137,798	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
393	2014	22,742	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
393	2015	129,057	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
393	2016	3,749	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
393	2017	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
393	2018	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
394	1999	-	0	0	0	NA									
394	2000	-	0	0	0	NA	NA								
394	2001	-	0	0	0	NA	NA	NA							
394	2002	-	0	0	0	NA	NA	NA	NA						
394	2003	-	0	0	0	NA	NA	NA	NA	NA					
394	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
394	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
394	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
394	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
394	2008	1,274	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
394	2009	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
394	2010	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
394	2011	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
394	2012	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
394	2013	4,110,187	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
394	2014	56,243	34,000	0	34,000	60.45%	0.82%	0.82%	0.82%	0.82%	0.82%	0.82%	0.82%	0.82%	0.82%
394	2015	1,156,973	0	0	0	0.00%	2.80%	0.64%	0.64%	0.64%	0.64%	0.64%	0.64%	0.64%	0.64%
394	2016	188,956	0	0	0	0.00%	0.00%	2.42%	0.62%	0.62%	0.62%	0.62%	0.62%	0.62%	0.62%
394	2017	279,078	0	0	0	0.00%	0.00%	0.00%	2.02%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%
394	2018	-	0	0	0	NA	0.00%	0.00%	0.00%	2.02%	0.59%	0.59%	0.59%	0.59%	0.59%
395	1999	-	0	0	0	NA									
395	2000	-	0	0	0	NA	NA								
395	2001	-	0	0	0	NA	NA	NA							
395	2002	-	0	0	0	NA	NA	NA	NA						
395	2003	-	0	0	0	NA	NA	NA	NA	NA					
395	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
395	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
395	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
395	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
395	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
395	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
395	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Elizabethtown Gas Company
Depreciation Study as of December 31, 201
Net Salvage As Adjusted

				Cost of	Net	Net	2-Yr	3-Yr	4-Yr	5-Yr	6-Yr	7-Yr	8-Yr	9-Yr	10-Yr
Account	Year	Retirement	Salvage	Removal	Salvage	Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %	Net Salvage %
395	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
395	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
395	2013	21,114	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
395	2014	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
395	2015	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
395	2016	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
395	2017	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
395	2018	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
39600	1999	-	0	0	0	NA									
39600	2000	-	0	0	0	NA	NA								
39600	2001	-	0	0	0	NA	NA	NA							
39600	2002	-	0	0	0	NA	NA	NA	NA						
39600	2003	-	0	0	0	NA	NA	NA	NA	NA					
39600	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
39600	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
39600	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
39600	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
39600	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39600	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39600	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39600	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39600	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39600	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39600	2014	16,600	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39600	2015	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39600	2016	82,111	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39600	2017	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39600	2018	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39610	1999	-	0	0	0	NA									
39610	2000	-	0	0	0	NA	NA								
39610	2001	-	0	0	0	NA	NA	NA							
39610	2002	-	0	0	0	NA	NA	NA	NA						
39610	2003	-	0	0	0	NA	NA	NA	NA	NA					
39610	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
39610	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
39610	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
39610	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
39610	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39610	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39610	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39610	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39610	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39610	2013	123,082	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39610	2014	23,945	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Elizabethtown Gas Company
Depreciation Study as of December 31, 2018
Net Salvage As Adjusted

Account	Year	Retirement	Salvage	Cost of Removal	Net Salvage	Net Salvage %	2-Yr Net Salvage %	3-Yr Net Salvage %	4-Yr Net Salvage %	5-Yr Net Salvage %	6-Yr Net Salvage %	7-Yr Net Salvage %	8-Yr Net Salvage %	9-Yr Net Salvage %	10-Yr Net Salvage %
39610	2015	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39610	2016	130,286	42,575	0	42,575	32.68%	32.68%	27.60%	15.35%	15.35%	15.35%	15.35%	15.35%	15.35%	15.35%
39610	2017	245,200	0	0	0	0.00%	11.34%	11.34%	10.66%	8.15%	8.15%	8.15%	8.15%	8.15%	8.15%
39610	2018	-	0	0	0	NA	0.00%	11.34%	11.34%	10.66%	8.15%	8.15%	8.15%	8.15%	8.15%
3 year average			14,192												
39620	1999	-	0	0	0	NA									
39620	2000	-	0	0	0	NA	NA								
39620	2001	-	0	0	0	NA	NA	NA							
39620	2002	-	0	0	0	NA	NA	NA	NA						
39620	2003	-	0	0	0	NA	NA	NA	NA	NA					
39620	2004	-	0	0	0	NA	NA	NA	NA	NA	NA				
39620	2005	-	0	0	0	NA	NA	NA	NA	NA	NA	NA			
39620	2006	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
39620	2007	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
39620	2008	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39620	2009	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39620	2010	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39620	2011	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39620	2012	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39620	2013	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39620	2014	-	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39620	2015	8,133	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39620	2016	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39620	2017	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39620	2018	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
397	1999	-	0	0	0	NA									
397	2000	-	0	0	0	NA	NA								
397	2001	14,679	0	0	0	0.00%	0.00%	0.00%							
397	2002	-	0	0	0	NA	0.00%	0.00%	0.00%						
397	2003	-	0	0	0	NA	NA	0.00%	0.00%	0.00%					
397	2004	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%				
397	2005	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%			
397	2006	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%		
397	2007	2,221,989	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
397	2008	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
397	2009	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
397	2010	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
397	2011	-	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
397	2012	-	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
397	2013	1,850,786	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
397	2014	-	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
397	2015	-	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
397	2016	-	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
397	2017	68,683	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Elizabethtown Gas Company
Depreciation Study as of December 31, 201
Net Salvage As Adjusted

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Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Alaska	Regulatory Commission of Alaska	U-18-121	Municipal Power and Light City of Anchorage	2018	Electric Depreciation Study
Various	FERC	RP19-352-000	Sea Robin	2018	Gas Depreciation Study
Texas New Mexico	Federal Energy Regulatory Commission	ER19-404-000	Southwestern Public Service Company	2018	Electric Transmission Depreciation Study
California	Federal Energy Regulatory Commission	ER19-221-000	San Diego Gas and Electric	2018	Electric Transmission Depreciation Study
Kentucky	Kentucky Public Service Commission	2018-00281	Atmos Kentucky	2018	Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-18-054	Matanuska Electric Coop	2018	Electric Generation Depreciation Study
California	California Public Utilities Commission	A17-10-007	San Diego Gas and Electric	2018	Electric and Gas Depreciation Study
Texas	Public Utility Commission of Texas	48401	Texas New Mexico Power	2018	Electric Depreciation Study
Nevada	Public Utility Commission of Nevada	18-05031	Southwest Gas	2018	Gas Depreciation Study
Texas	Public Utility Commission of Texas	48231	Oncor Electric Delivery	2018	Depreciation Rates
Texas	Public Utility Commission of Texas	48371	Entergy Texas	2018	Electric Depreciation Study
Kansas	Kansas Corporation Commission	18-KCPE-480-RTS	Kansas City Power and Light	2018	Electric Depreciation Study
Arkansas	Arkansas Public Service Commission	18-027-U	Liberty Pine Bluff Water	2018	Water Depreciation Study

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Kentucky	Kentucky Public Service Commission	2017-00349	Atmos KY	2018	Gas Depreciation Rates
Tennessee	Tennessee Public Utility Commission	18-00017	Chattanooga Gas	2018	Gas Depreciation Study
Texas	Railroad Commission of Texas	10679	Si Energy	2018	Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-17-104	Anchorage Water and Wastewater	2017	Water and Waste Water Depreciation Study
Michigan	Michigan Public Service Commission	U-18488	Michigan Gas Utilities Corporation	2017	Gas Depreciation Study
Texas	Railroad Commission of Texas	10669	CemterPoint South Texas	2017	Gas Depreciation Study
Arkansas	Arkansas Public Service Commission	17-061-U	Empire District Electric Company	2017	Depreciation Rates for New Wind Generation
Kansas	Kansas Corporation Commission	18-EPDE-184-PRE	Empire District Electric Company	2017	Depreciation Rates for New Wind Generation
Oklahoma	Oklahoma Corporation Commission	PUD 201700471	Empire District Electric Company	2017	Depreciation Rates for New Wind Generation
Missouri	Missouri Public Service Commission	EO-2018-0092	Empire District Electric Company	2017	Depreciation Rates for New Wind Generation
Michigan	Michigan Public Service Commission	U-18457	Upper Peninsula Power Company	2017	Electric Depreciation Study
Florida	Florida Public Service Commission	20170179-GU	Florida City Gas	2017	Gas Depreciation Study
Michigan	FERC	ER18-56-000	Consumers Energy	2017	Electric Depreciation Study

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Missouri	Missouri Public Service Commission	GR-2018-0013	Liberty Utilites	2017	Gas Depreciation Study
Michigan	Michigan Public Service Commission	U-18452	SEMCO	2017	Gas Depreciation Study
Texas	Public Utility Commission of Texas	47527	Southwestern Public Service Company	2017	Electric Production Depreciation Study
MultiState	FERC	ER17-1664	American Transmission Company	2017	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-17-008	Municipal Power and Light City of Anchorage	2017	Generating Unit Depreciation Study
Mississippi	Mississippi Public Service Commission	2017-UN-041	Atmos Energy	2017	Gas Depreciation Study
Texas	Public Utility Commission of Texas	46957	Oncor Electric Delivery	2017	Electric Depreciation Study
Oklahoma	Oklahoma Corporation Commission	PUD 201700078	CenterPoint Oklahoma	2017	Gas Depreciation Study
New York	FERC	ER17-1010-000	New York Power Authority	2017	Electric Depreciation Study
Texas	Railroad Commission of Texas	GUD 10580	Atmos Pipeline Texas	2017	Gas Depreciation Study
Texas	Railroad Commission of Texas	GUD 10567	CenterPoint Texas	2016	Gas Depreciation Study
MultiState	FERC	ER17-191-000	American Transmission Company	2016	Electric Depreciation Study
New Jersey	New Jersey Board of Public Utilities	GR16090826	Elizabethtown Natural Gas	2016	Gas Depreciation Study
North Carolina	North Carolina Utilities Commission	Docket G-9 Sub 77H	Piedmont Natural Gas	2016	Gas Depreciation Study

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Michigan	Michigan Public Service Commission	U-18195	Consumers Energy/DTE Electric	2016	Ludington Pumped Storage Depreciation Study
Alabama	FERC	ER16-2313-000	SEGCO	2016	Electric Depreciation Study
Alabama	FERC	ER16-2312-000	Alabama Power Company	2016	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-18127	Consumers Energy	2016	Natural Gas Depreciation Study
Mississippi	Mississippi Public Service Commission	2016 UN 267	Willmut Natural Gas	2016	Natural Gas Depreciation Study
Iowa	Iowa Utilities Board	RPU-2016-0003	Liberty-Iowa	2016	Natural Gas Depreciation Study
Illinois	Illinois Commerce Commission	GRM #16-208	Liberty-Illinois	2016	Natural Gas Depreciation Study
Kentucky	FERC	RP16-097-000	KOT	2016	Natural Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-16-067	Alaska Electric Light and Power	2016	Generating Unit Depreciation Study
Florida	Florida Public Service Commission	160170-EI	Gulf Power	2016	Electric Depreciation Study
Arizona	Arizona Corporation Commission	G-01551A-16-0107	Southwest Gas	2016	Gas Depreciation Study
Texas	Public Utility Commission of Texas	45414	Sharyland	2016	Electric Depreciation Study
Colorado	Colorado Public Utilities Commission	16A-0231E	Public Service Company of Colorado	2016	Electric Depreciation Study
Multi-State NE US	FERC	16-453-000	Northeast Transmission Development, LLC	2015	Electric Depreciaton Study

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Arkansas	Arkansas Public Service Commission	15-098-U	CenterPoint Arkansas	2015	Gas Depreciation Study and Cost of Removal Study
New Mexico	New Mexico Public Regulation Commission	15-00296-UT	Southwestern Public Service Company	2015	Electric Depreciation Study
Atmos Energy Corporation	Tennessee Regulatory Authority	14-00146	Atmos Tennessee	2015	Natural Gas Depreciation Study
New Mexico	New Mexico Public Regulation Commission	15-00261-UT	Public Service Company of New Mexico	2015	Electric Depreciation Study
Hawaii	NA	NA	Hawaii American Water	2015	Water/Wastewater Depreciation Study
Kansas	Kansas Corporation Commission	16-ATMG-079-RTS	Atmos Kansas	2015	Gas Depreciation Study
Texas	Public Utility Commission of Texas	44704	Entergy Texas	2015	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-15-089	Fairbanks Water and Wastewater	2015	Water and Waste Water Depreciation Study
Arkansas	Arkansas Public Service Commission	15-031-U	Source Gas Arkansas	2015	Underground Storage Gas Depreciation Study
New Mexico	New Mexico Public Regulation Commission	15-00139-UT	Southwestern Public Service Company	2015	Electric Depreciation Study
Texas	Public Utility Commission of Texas	44746	Wind Energy Transmission Texas	2015	Electric Depreciation Study
Colorado	Colorado Public Utilities Commission	15-AL-0299G	Atmos Colorado	2015	Gas Depreciation Study
Arkansas	Arkansas Public Service Commission	15-011-U	Source Gas Arkansas	2015	Gas Depreciation Study
Texas	Railroad Commission of Texas	GUD 10432	CenterPoint- Texas Coast Division	2015	Gas Depreciation Study

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Kansas	Kansas Corporation Commission	15-KCPE-116-RTS	Kansas City Power and Light	2015	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-14-120	Alaska Electric Light and Power	2014-2015	Electric Depreciation Study
Texas	Public Utility Commission of Texas	43950	Cross Texas Transmission	2014	Electric Depreciation Study
New Mexico	New Mexico Public Regulation Commission	14-00332-UT	Public Service of New Mexico	2014	Electric Depreciation Study
Texas	Public Utility Commission of Texas	43695	Xcel Energy	2014	Electric Depreciation Study
Multi State – SE US	FERC	RP15-101	Florida Gas Transmission	2014	Gas Transmission Depreciation Study
California	California Public Utilities Commission	A.14-07-006	Golden State Water	2014	Water and Waste Water Depreciation Study
Michigan	Michigan Public Service Commission	U-17653	Consumers Energy Company	2014	Electric and Common Depreciation Study
Colorado	Public Utilities Commission of Colorado	14AL-0660E	Public Service of Colorado	2014	Electric Depreciation Study
Wisconsin	Wisconsin	05-DU-102	WE Energies	2014	Electric, Gas, Steam and Common Depreciation Studies
Texas	Public Utility Commission of Texas	42469	Lone Star Transmission	2014	Electric Depreciation Study
Nebraska	Nebraska Public Service Commission	NG-0079	Source Gas Nebraska	2014	Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-14-055	TDX North Slope Generating	2014	Electric Depreciation Study

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Alaska	Regulatory Commission of Alaska	U-14-054	Sand Point Generating LLC	2014	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-14-045	Matanuska Electric Coop	2014	Electric Generation Depreciation Study
Texas, New Mexico	Public Utility Commission of Texas	42004	Southwestern Public Service Company	2013-2014	Electric Production, Transmission, Distribution and General Plant Depreciation Study
New Jersey	New Jersey Board of Public Utilities	GR13111137	South Jersey Gas	2013	Gas Depreciation Study
Various	FERC	RP14-247-000	Sea Robin	2013	Gas Depreciation Study
Arkansas	Arkansas Public Service Commission	13-078-U	Arkansas Oklahoma Gas	2013	Gas Depreciation Study
Arkansas	Arkansas Public Service Commission	13-079-U	Source Gas Arkansas	2013	Gas Depreciation Study
California	California Public Utilities Commission	Proceeding No.: A.13-11-003	Southern California Edison	2013	Electric Depreciation Study
North Carolina/South Carolina	FERC	ER13-1313	Progress Energy Carolina	2013	Electric Depreciation Study
Wisconsin	Public Service Commission of Wisconsin	4220-DU-108	Northern States Power Company - Wisconsin	2013	Electric, Gas and Common Transmission, Distribution and General
Texas	Public Utility Commission of Texas	41474	Sharyland	2013	Electric Depreciation Study
Kentucky	Kentucky Public Service Commission	2013-00148	Atmos Energy Corporation	2013	Gas Depreciation Study
Minnesota	Minnesota Public Utilities Commission	13-252	Allete Minnesota Power	2013	Electric Depreciation Study

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
New Hampshire	New Hampshire Public Service Commission	DE 13-063	Liberty Utilities	2013	Electric Distribution and General
Texas	Railroad Commission of Texas	10235	West Texas Gas	2013	Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-12-154	Alaska Telephone Company	2012	Telecommunications Utility
New Mexico	New Mexico Public Regulation Commission	12-00350-UT	Southwestern Public Service Company	2012	Electric Depreciation Study
Colorado	Colorado Public Utilities Commission	12AL-1269ST	Public Service Company of Colorado	2012	Gas and Steam Depreciation Study
Colorado	Colorado Public Utilities Commission	12AL-1268G	Public Service Company of Colorado	2012	Gas and Steam Depreciation Study
Alaska	Regulatory Commission of Alaska	U-12-149	Municipal Power and Light City of Anchorage	2012	Electric Depreciation Study
Texas	Texas Public Utility Commission	40824	Xcel Energy	2012	Electric Depreciation Study
South Carolina	Public Service Commission of South Carolina	Docket 2012-384-E	Progress Energy Carolina	2012	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-12-141	Interior Telephone Company	2012	Telecommunications Utility
Michigan	Michigan Public Service Commission	U-17104	Michigan Gas Utilities Corporation	2012	Gas Depreciation Study
North Carolina	North Carolina Utilities Commission	E-2 Sub 1025	Progress Energy Carolina	2012	Electric Depreciation Study
Texas	Texas Public Utility Commission	40606	Wind Energy Transmission Texas	2012	Electric Depreciation Study
Texas	Texas Public Utility Commission	40604	Cross Texas Transmission	2012	Electric Depreciation Study

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Minnesota	Minnesota Public Utilities Commission	12-858	Northern States Power Company - Minnesota	2012	Electric, Gas and Common Transmission, Distribution and General
Texas	Railroad Commission of Texas	10170	Atmos Mid-Tex	2012	Gas Depreciation Study
Texas	Railroad Commission of Texas	10174	Atmos West Texas	2012	Gas Depreciation Study
Texas	Railroad Commission of Texas	10182	CenterPoint Beaumont/ East Texas	2012	Gas Depreciation Study
Kansas	Kansas Corporation Commission	12-KCPE-764-RTS	Kansas City Power and Light	2012	Electric Depreciation Study
Nevada	Public Utility Commission of Nevada	12-04005	Southwest Gas	2012	Gas Depreciation Study
Texas	Railroad Commission of Texas	10147, 10170	Atmos Mid-Tex	2012	Gas Depreciation Study
Kansas	Kansas Corporation Commission	12-ATMG-564-RTS	Atmos Kansas	2012	Gas Depreciation Study
Texas	Texas Public Utility Commission	40020	Lone Star Transmission	2012	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-16938	Consumers Energy Company	2011	Gas Depreciation Study
Colorado	Public Utilities Commission of Colorado	11AL-947E	Public Service of Colorado	2011	Electric Depreciation Study
Texas	Texas Public Utility Commission	39896	Entergy Texas	2011	Electric Depreciation Study
MultiState	FERC	ER12-212	American Transmission Company	2011	Electric Depreciation Study
California	California Public Utilities Commission	A1011015	Southern California Edison	2011	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-16536	Consumers Energy Company	2011	Wind Depreciation Rate Study

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Texas	Public Utility Commission of Texas	38929	Oncor	2011	Electric Depreciation Study
Texas	Railroad Commission of Texas	10038	CenterPoint South TX	2010	Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-10-070	Inside Passage Electric Cooperative	2010	Electric Depreciation Study
Texas	Public Utility Commission of Texas	36633	City Public Service of San Antonio	2010	Electric Depreciation Study
Texas	Texas Railroad Commission	10000	Atmos Pipeline Texas	2010	Gas Depreciation Study
Multi State – SE US	FERC	RP10-21-000	Florida Gas Transmission	2010	Gas Depreciation Study
Maine/ New Hampshire	FERC	10-896	Granite State Gas Transmission	2010	Gas Depreciation Study
Texas	Public Utility Commission of Texas	38480	Texas New Mexico Power	2010	Electric Depreciation Study
Texas	Public Utility Commission of Texas	38339	CenterPoint Electric	2010	Electric Depreciation Study
Texas	Texas Railroad Commission	10041	Atmos Amarillo	2010	Gas Depreciation Study
Georgia	Georgia Public Service Commission	31647	Atlanta Gas Light	2010	Gas Depreciation Study
Texas	Public Utility Commission of Texas	38147	Southwestern Public Service	2010	Electric Technical Update
Alaska	Regulatory Commission of Alaska	U-09-015	Alaska Electric Light and Power	2009-2010	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-10-043	Utility Services of Alaska	2009-2010	Water Depreciation Study
Michigan	Michigan Public Service Commission	U-16055	Consumers Energy/DTE Energy	2009-2010	Ludington Pumped Storage Depreciation Study
Michigan	Michigan Public Service Commission	U-16054	Consumers Energy	2009-2010	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-15963	Michigan Gas Utilities Corporation	2009	Gas Depreciation Study

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Michigan	Michigan Public Service Commission	U-15989	Upper Peninsula Power Company	2009	Electric Depreciation Study
Texas	Railroad Commission of Texas	9869	Atmos Energy	2009	Shared Services Depreciation Study
Mississippi	Mississippi Public Service Commission	09-UN-334	CenterPoint Energy Mississippi	2009	Gas Depreciation Study
Texas	Railroad Commission of Texas	9902	CenterPoint Energy Houston	2009	Gas Depreciation Study
Colorado	Colorado Public Utilities Commission	09AL-299E	Public Service Company of Colorado	2009	Electric Depreciation Study
Louisiana	Louisiana Public Service Commission	U-30689	Cleco	2008	Electric Depreciation Study
Texas	Public Utility Commission of Texas	35763	Southwestern Public Service Company	2008	Electric Production, Transmission, Distribution and General Plant Depreciation Study
Wisconsin	Wisconsin	05-DU-101	WE Energies	2008	Electric, Gas, Steam and Common Depreciation Studies
North Dakota	North Dakota Public Service Commission	PU-07-776	Northern States Power Company - Minnesota	2008	Net Salvage
New Mexico	New Mexico Public Regulation Commission	07-00319-UT	Southwestern Public Service Company	2008	Testimony – Depreciation
Multiple States	Railroad Commission of Texas	9762	Atmos Energy	2007-2008	Shared Services Depreciation Study
Minnesota	Minnesota Public Utilities Commission	E015/D-08-422	Minnesota Power	2007-2008	Electric Depreciation Study
Texas	Public Utility Commission of Texas	35717	Oncor	2008	Electric Depreciation Study
Texas	Public Utility Commission of Texas	34040	Oncor	2007	Electric Depreciation Study

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Michigan	Michigan Public Service Commission	U-15629	Consumers Energy	2006-2009	Gas Depreciation Study
Colorado	Colorado Public Utilities Commission	06-234-EG	Public Service Company of Colorado	2006	Electric Depreciation Study
Arkansas	Arkansas Public Service Commission	06-161-U	CenterPoint Energy – Arkla Gas	2006	Gas Distribution Depreciation Study and Removal Cost Study
Texas, New Mexico	Public Utility Commission of Texas	32766	Southwestern Public Service Company	2005-2006	Electric Production, Transmission, Distribution and General Plant Depreciation Study
Texas	Railroad Commission of Texas	9670/9676	Atmos Energy Corp	2005-2006	Gas Distribution Depreciation Study
Texas	Railroad Commission of Texas	9400	TXU Gas	2003-2004	Gas Distribution Depreciation Study
Texas	Railroad Commission of Texas	9313	TXU Gas	2002	Gas Distribution Depreciation Study
Texas	Railroad Commission of Texas	9225	TXU Gas	2002	Gas Distribution Depreciation Study
Texas	Public Utility Commission of Texas	24060	TXU	2001	Line Losses
Texas	Public Utility Commission of Texas	23640	TXU	2001	Line Losses
Texas	Railroad Commission of Texas	9145-9148	TXU Gas	2000-2001	Gas Distribution Depreciation Study
Texas	Public Utility Commission of Texas	22350	TXU	2000-2001	Electric Depreciation Study, Unbundling
Texas	Railroad Commission of Texas	8976	TXU Pipeline	1999	Pipeline Depreciation Study
Texas	Public Utility Commission of Texas	20285	TXU	1999	Fuel Company Depreciation Study

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Texas	Public Utility Commission of Texas	18490	TXU	1998	Transition to Competition
Texas	Public Utility Commission of Texas	16650	TXU	1997	Customer Complaint
Texas	Public Utility Commission of Texas	15195	TXU	1996	Mining Company Depreciaton Study
Texas	Public Utility Commission of Texas	12160	TXU	1993	Fuel Company Depreciation Study
Texas	Public Utility Commission of Texas	11735	TXU	1993	Electric Depreciation Study

**IN THE MATTER OF THE PETITION OF
ELIZABETHTOWN GAS COMPANY FOR APPROVAL OF
INCREASED BASE TARIFF RATES AND CHARGES
FOR GAS SERVICE, CHANGES TO DEPRECIATION
RATES AND OTHER TARIFF REVISIONS**

BPU DOCKET NO. GR19_____

DIRECT TESTIMONY

OF

THOMAS KAUFMANN

**On Behalf Of
Elizabethtown Gas Company**

Exhibit P-11

April 18, 2019

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**ELIZABETHTOWN GAS COMPANY
DIRECT TESTIMONY OF
THOMAS KAUFMANN**

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 **A.** My name is Thomas Kaufmann. My business address is 520 Green Lane, Union,
4 New Jersey 07083.

5 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

6 **A.** I am employed by Elizabethtown Gas Company (“Elizabethtown” or “Company”) as
7 Manager of Rates and Tariffs.

8 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL RESPONSIBILITIES.**

9 **A.** I am responsible for designing and developing rates and rate schedules for regulatory
10 filings with the New Jersey Board of Public Utilities (“Board”) and internal
11 management purposes. I also oversee daily rate department functions, including tariff
12 administration, monthly parity pricing, competitive analyses and preparation of
13 management reports.

14 **Q. WHAT ARE YOUR PROFESSIONAL AND EDUCATIONAL**
15 **QUALIFICATIONS?**

16 **A.** In June 1977, I graduated from Rutgers University, Newark, N.J., with a Bachelor of
17 Arts degree in Business Administration, majoring in accounting and economics. In
18 July 1979, I graduated from Fairleigh Dickinson University, Madison, N.J., with a
19 Masters of Business Administration, majoring in finance.

20 My professional responsibilities have encompassed financial analysis,
21 accounting, planning, and pricing in manufacturing and energy services companies in

1 both regulated and unregulated industries. In 1977, I was employed by Allied
 2 Chemical Corp. as a staff accountant. In 1980, I was employed by Celanese Corp. as
 3 a financial analyst. In 1981, I was employed by Suburban Propane as a Strategic
 4 Planning Analyst, promoted to Manager of Rates and Pricing in 1986 and to Director
 5 of Acquisitions and Business Analysis in 1990. In 1993, I was employed by
 6 Concurrent Computer as a Manager, Pricing Administration. In 1996, I joined NUI
 7 Utilities Inc., now part of South Jersey Industries, Inc. ("SJI"), as a Rate Analyst, was
 8 promoted to Manager of Regulatory Support in August 1997, Manager of Regulatory
 9 Affairs in February 1998, and named Manager of Rates and Tariffs in July 1998.

10 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

11 **A.** In support of the Company's April 2019 base rate filing, the purpose of my direct
 12 testimony is to: (i) present the Company's revenue determinants forecast; (ii) present
 13 tariff revisions designed to streamline and clarify the tariff, as well as to bring the tariff
 14 into closer conformity with the Board's regulations and South Jersey Gas Company's
 15 ("SJG") tariff; and (iii) provide bill comparisons between present and proposed rates.

16 **Q. DO YOU SPONSOR ANY SCHEDULES IN YOUR DIRECT TESTIMONY?**

17 **A.** My testimony includes the following schedules that were prepared by me or under my
 18 direction:

<u>Schedule</u>	<u>Description</u>
Schedule TK-1	Billing Determinants, consisting of Post-Test Year Forecast of Customers, Demand and Therm Usage;
Schedule TK-2	TK-2.1 Test Year and TK-2.2 Post-Test Year, consisting of a Test Year and Post-Test Year Customer Annualization Summary of Therms, Margin Revenue and the Cost of Gas;

1	Schedule TK-3	Test Year and Post-Test Year Customer Counts and Therms;
2	Schedule TK-4	Test Year and Post-Test Year Newark Airport Monthly Normal
3		Degree Days;
4	Schedule TK-5	Weather Normalization Clause Test Year revenue adjustment
5		from a 20-year normal to a 10-year normal weather pattern;
6	Schedule TK-6	Bill Comparisons for Residential and Commercial Customers;
7	Schedule TK-7	Complete proposed tariff; and
8	Schedule TK-8	Complete proposed tariff in redline form.

9 **II. REVENUE FORECAST**

10 **Q. FOR WHAT PERIODS ARE ELIZABETHTOWN’S TEST YEAR AND POST-**
 11 **TEST YEAR FIRM DEMANDS FORECAST?**

12 **A.** Elizabethtown’s forecast determinants reflect annualized and normalized firm
 13 demand for a test year ending August 31, 2019 and a post-test year period ending nine
 14 months later, on May 31, 2020, as shown on Schedule TK-1.

15 **Q. PLEASE EXPLAIN HOW ELIZABETHTOWN DEVELOPED THE DEMAND**
 16 **FORECAST ON SCHEDULE TK-1.**

17 **A.** The demand forecast is prepared on a class-by-class basis using different methods
 18 that are explained later in my testimony. The forecast amounts shown on Schedule
 19 TK-1 are based on projections of customers utilizing gas service inclusive of new
 20 customer growth projections. The forecast customers and therms shown on Schedule
 21 TK-3 reflect a normalized level of monthly billing therms. This therm forecast is
 22 further adjusted to annualize the therm usage and revenues to the customer count,
 23 which is summarized on Schedule TK-2.1 for the test year period and Schedule TK-

1 2.2 for the post-test year period. The post-test year forecast results, inclusive of the
2 annualization, are set forth on Schedule TK-1 and are the basis on which the proposed
3 rates are developed in order to achieve the requested revenue increase.

4 **Q. PLEASE EXPLAIN THE RESULTS OF THE CUSTOMER**
5 **ANNUALIZATION AS SET FORTH ON SCHEDULES TK-2.1 AND 2.2.**

6 **A.** Schedules TK-2.1 and TK-2.2 summarize the annualization of firm customers to the
7 customer count at the end of the test year ending August 31, 2019 and post-test year
8 ending May 31, 2020, respectively. The annualization was calculated using April 1,
9 2019, pre-tax service and distribution charge rates and classes based on class
10 customer counts at the end of the post-test year, May 31, 2020.

11 **Q. PLEASE EXPLAIN WHAT YOU MEAN BY “ANNUALIZED.”**

12 **A.** Annualizing is taking a set of conditions at a specific point in time and applying them
13 for an entire period. The Company annualizes based upon two sets of conditions as
14 specified at given points in time – (i) the number of customers and (ii) the tariff rates
15 in effect. The Company applies these two points to the difference in the customer
16 counts from that on May 31, 2020 and then uses the post-test year monthly therm
17 usage per customer in computing the annualized margin revenue attributable to that
18 month. Schedule TK-3 presents the projection of the number of customers billed for
19 the test year and post-test year periods and the annual change in customer counts from
20 May 2019 to May 2020. In annualizing the number of customers, the Company
21 accounts for the fact that even if the number of connected customers does not change,
22 the monthly number of billed customers will vary over an annual period for reasons
23 such as customers moving in and out of premises and accounts being turned on and

1 off for payment of back bills and for non-payment, as well as customers whose
2 service is turned off and on seasonally. These normal monthly fluctuations are a real
3 on-going occurrence that affects the Company's revenue stream. Consequently, the
4 Company annualizes the forecast to properly reflect the number of customers that the
5 Company would expect to bill each month during these annual periods.

6 **Q. PLEASE EXPLAIN HOW THE TEST YEAR AND POST-TEST YEAR**
7 **CUSTOMER CONSUMPTION ARE NORMALIZED.**

8 **A.** Normalization is a process that adjusts occurrences to reflect a normal or commonly
9 expected set of conditions. In the context of the Company's demand forecast, the
10 Company normalizes for those conditions that influence gas consumption and thus,
11 revenues. Many conditions may affect customer consumption to some degree and
12 they can vary by class of customers. However, the primary factors that affect the
13 total demands of residential and commercial customers are the number of customers
14 and weather. Annualizing the number of customers effectively normalizes the
15 customer count upon which rates will be established. Therefore, the remaining
16 adjustment for normalization of residential and commercial customers is to utilize an
17 average or normal weather pattern during the test year and post-test year periods.

18 In the case of large industrial accounts, which are not as weather sensitive as
19 other categories of customers, consumption is normalized individually by adjusting
20 for factors that may influence gas consumption. This was accomplished on an
21 individual customer basis through a review of historical consumption for each
22 account in consultation with the Company's Marketing representatives.

1 For temperature sensitive classes of customers, such as the residential and
2 commercial classes, weather normalization is accomplished by applying a normal
3 weather pattern to consumption equations derived for each class, as described more
4 fully later in my testimony.

5 **Q. WHY DO YOU ADJUST THE POST-TEST YEAR DEMAND AND**
6 **REVENUES OUT TO MAY 31, 2020?**

7 **A.** Demand and revenue are calculated as of May 31, 2020 to match the outside date for
8 which certain expenses are included in the Company's filing. If revenues were
9 employed from a period ending prior to this date, then the base rates established for
10 the Company would reflect certain costs but not offsetting revenues. Conversely, if
11 revenues were employed from a point after this date, then the base rates established
12 for Elizabethtown would not reflect costs that match revenues. Neither result
13 provides a proper matching.

14 **Q. PLEASE DISCUSS THE COMPANY'S APPROACH TO FORECASTING**
15 **DEMAND AND REVENUE FOR THE TEST YEAR AND POST-TEST YEAR**
16 **PERIODS.**

17 **A.** The Company forecasts throughput and revenues for the various service
18 classifications in its tariff. Because of the differences in customer classes, different
19 approaches are used to forecast demand and revenues for (i) the Residential Delivery
20 Service ("RDS"); (ii) sales and transportation customers served under the Small
21 General Service ("SGS") and General Delivery Service ("GDS") service classes; and
22 (iii) all other customers.

1 **Q. PLEASE EXPLAIN THE APPROACH USED TO FORECAST DEMAND AND**
2 **REVENUE FOR RDS CUSTOMERS.**

3 **A.** The RDS class possesses a large number of temperature-sensitive customers that are
4 relatively homogenous in their demand for gas from customer to customer and as a
5 category from year to year. As a result, the Company employs a multi-step approach
6 that begins with statistically modeling gas usage per customer using a regression
7 equation based upon monthly data that extends for more than twenty years. Next, the
8 monthly number of customers billed is projected using historical trends. After this, a
9 consumption forecast is developed by applying the use-per-customer models to the
10 projected number of customers. Then, a revenue forecast is generated by applying
11 the class demands along with other billing determinants to existing rates.

12 **Q. PLEASE EXPLAIN THE APPROACH USED TO FORECAST DEMAND AND**
13 **REVENUE FOR THE SGS AND GDS CLASSES.**

14 **A.** These classes also possess a large number of customers who are generally
15 temperature-sensitive, and homogenous in their demand for gas from customer to
16 customer and as a category from year to year. The Company employs a multi-step
17 approach that begins with statistically modeling gas usage per customer using a
18 master regression equation for the combined classes for a period of time that extends
19 back more than twenty years. Next, gas usage per customer is modeled statistically
20 using allocation regression equations for each class separately based upon a recent
21 five-year period of time. After this, an overall consumption forecast is developed by
22 multiplying the results of the master commercial use-per-customer model by the
23 projected number of customers for both classes. The results of this forecast are then

1 used to allocate the results of the master commercial forecast usage model to each
2 class. Next, a revenue forecast for each class is generated by applying the class
3 demands along with other billing determinants to existing rates.

4 **Q. PLEASE EXPLAIN THE APPROACH USED TO FORECAST DEMAND FOR**
5 **ALL OTHER CUSTOMERS.**

6 **A.** For all other classes of customers, the Company begins by projecting the class's
7 demand on a customer-by-customer basis. This process takes into account historical
8 consumption for the individual customer and makes appropriate adjustments based
9 upon the Company's marketing representatives' knowledge of the customer and its
10 operations. Then, by applying the customer's projected demand along with other
11 billing determinants including, but not limited to, the customer's contract demand
12 quantities to the existing rate structure, forecast revenues for each customer are
13 generated.

14 **Q. HOW WERE THE USE-PER-CUSTOMER MODELS DEVELOPED FOR**
15 **THE RDS, SGS, AND GDS SERVICE CLASSES?**

16 **A.** First, customer demand for the RDS class was separated into two categories, (1)
17 residential heating ("RH") and (2) residential non-heating ("RNH"). For customers
18 under the SGS and GDS tariffs, demands were aggregated into a total commercial
19 class. By employing statistical and econometric regression techniques that correlated
20 historical consumption with, most significantly, historical heating degree days,
21 equations were developed to model gas usage per customer for the three categories of
22 customers. The equations were based upon more than twenty years of monthly data
23 for each category of customers. In general, the models break down monthly

1 consumption into base usage (non-temperature sensitive) and variable usage (usually
2 temperature sensitive) components. Statistical testing, as well as validation through
3 the use of ex-post forecasts (segmenting the data set into two periods, using one to
4 develop the model and the other to evaluate forecast performance) and “back casts”
5 (comparing actual historical results to results predicted by the statistical model) were
6 used to confirm the accuracy and predictability of the models.

7 **Q. HOW WERE THE ALLOCATION USE-PER-CUSTOMER MODELS**
8 **DEVELOPED FOR CUSTOMER CLASSES SERVED UNDER THE SGS AND**
9 **GDS TARIFFS?**

10 **A.** For customers under the SGS and GDS tariffs, demands were broken down into SGS
11 heating and non-heating and GDS heating and non-heating. GDS was further broken
12 down to calendar month read and billed, as well cycle read and billed categories. By
13 employing statistical and econometric regression techniques, which correlated
14 historical consumption with, most significantly, historical heating degree days,
15 allocation equations were developed to model gas usage per customer for the three
16 categories of customers. The equations were based upon up to five years of monthly
17 data for each cycle and category of customers. Again, in general, the model breaks
18 down monthly consumption into base usage (non-temperature sensitive) and variable
19 usage (usually temperature sensitive) components. Statistical testing, as well as
20 validation through the use of ex-post forecasts and “back casts,” were used to confirm
21 the accuracy and predictability of the models.

1 **Q. HOW WAS THE NUMBER OF CUSTOMERS IN EACH SGS AND GDS**
2 **CATEGORY DEVELOPED FOR THE TEST YEAR AND POST-TEST YEAR**
3 **PERIODS?**

4 **A.** The aggregate number of customers by category by month was arrived at by adding
5 monthly growth projections, expected customer migration, and seasonal changes in
6 customer patterns from historical patterns to recent actual customer counts to arrive at
7 the projected number of customers as of the end of each month, as shown on
8 Schedule TK-3.

9 **Q. IS COMPETITION WITH OTHER ENERGY SOURCES A**
10 **CONSIDERATION IN FORECASTING NEW CUSTOMER GROWTH FOR**
11 **ELIZABETHTOWN IN ITS MARKETS?**

12 **A.** Yes. In the residential market, Elizabethtown competes directly with No. 2 fuel oil
13 and propane, which are major sources of energy used for space heating in the
14 Company's service territories. In some situations, builders or conversion customers
15 will not pay the cost of service extensions and instead install less environmentally
16 friendly fuel, such as fuel oil or propane. To a much lesser extent, the Company
17 competes with electricity for use in space heating. In domestic appliance uses, such
18 as cooking equipment and clothes drying, the Company competes directly with
19 electricity and propane.

1 **Q. ARE THERE ANY OTHER DISCERNABLE COMPETITIVE AND**
2 **ECONOMIC TRENDS THAT MAY AFFECT ELIZABETHTOWN’S**
3 **PRESENT AND FUTURE GROWTH?**

4 **A.** Yes. While the new commercial market has shown modest customer growth, the
5 Company’s new residential growth has changed from single family to smaller
6 townhouse and condominium units. Further, increased efficiency that results when
7 customers replace their existing equipment is slowly reducing base customer demand.

8 **Q. HOW WAS CONSUMPTION DEVELOPED FOR THE CUSTOMER**
9 **CATEGORIES SERVED UNDER THE RDS, SGS AND GDS SERVICE**
10 **CLASSIFICATIONS?**

11 **A.** Consumption for each category was calculated by first multiplying the category’s
12 projected number of customers by its projected use-per-customer. The projected use-
13 per-customer was derived from the regression models discussed earlier, assuming
14 normal weather.

15 A review of load from new residential customers, in coordination with the
16 Marketing Department, has led to the development of equation adjustment factors to
17 adjust the system average use as determined from the customer equations to more
18 closely match the gas consumption patterns exhibited by different types of new
19 residential customers. The effect is to segment the forecast of new residential
20 customer demand by type of dwelling – townhouse/condominium, detached single-
21 family home, and conversion from other fuels. The primary residential consumption
22 equations are modified by a factor for each of the market segments specified, and

1 then applied to the projected number of customers for each segment. This demand is
2 then aggregated with the demand from existing residential customers.

3 **Q. PLEASE DESCRIBE THE PROCESS USED TO PROJECT CONSUMPTION**
4 **FOR ALL OTHER CUSTOMERS IN THE TEST AND POST-TEST YEAR**
5 **MONTHS.**

6 **A.** Projected consumption for customers in the Large Volume Demand (“LVD”),
7 Interruptible Service (“IS”), Electric Generation Service Firm (“EGF”), Firm
8 Transportation Service (“FTS”), and Interruptible Transportation Service (“ITS”)
9 classes was developed on a customer-specific basis. The Company’s representatives
10 consider possible shifts to other tariffs or changes to operations, including
11 conversions to transportation service, economic factors, plant closings, or other
12 competitive situations that may result in a loss of demand.

13 **Q. HOW WERE THE REVENUES FOR THE TEST AND POST-TEST YEAR**
14 **PERIODS DEVELOPED?**

15 **A.** The Company developed the revenues for the test year and post-test year periods by
16 applying the forecast of normalized consumption and the projected annualized
17 number of customers, to the existing rate structure from the Company’s tariff.

18 **Q. WHAT HEATING DEGREE DAY PATTERN WAS APPLIED TO THE USE-**
19 **PER-CUSTOMER MODELS?**

20 **A.** The Company applied a ten-year (temperature data from July 1, 2008 through June
21 30, 2018) normal Newark Airport weather pattern, as set forth in Schedule TK-4, in
22 the use-per-customer models.

1 **Q. HOW DOES THE USE OF A 10-YEAR NORMAL WEATHER PATTERN**
2 **AFFECT THE WEATHER NORMALIZATION CLAUSE (“WNC”)?**

3 **A.** The 10-year normal weather pattern will be incorporated in the WNC so that the
4 WNC will properly adjust margin revenues for differences between the actual
5 weather pattern and the normal weather pattern used to design rates.

6 **Q. DOES THE COMPANY PLAN TO MAKE UPDATES TO THE WNC FILED**
7 **THERMS PER DEGREE?**

8 **A.** Yes. The Therms per Degree Day presented in the WNC Rider for October through
9 March are based on 2018 – 2019 actual data, while April and May are from 2018.
10 The Company will update April and May to 2019 actual results when they become
11 available.

12 **Q. PLEASE EXPLAIN THE 20-YEAR NORMAL TO 10-YEAR NORMAL**
13 **ADJUSTMENT SHOWN ON SCHEDULE TK-5?**

14 **A.** The Company’s current WNC is based on a 20-year normal weather pattern and it has
15 booked monthly excesses and deficiencies in the test year months of October 2018
16 through February 2019 based on the WNC tariff terms. In that the Company is
17 proposing a 10-year normal weather pattern in this case, the respective months were
18 restated to the results that would have been calculated had a ten-year pattern been in
19 use at the current margin revenue factor. This adjustment was included along with
20 other test year adjustments to arrive at adjusted test year revenues.

1 **III. TARIFF CHANGES**

2 **Q. WHAT TARIFF CHANGES ARE BEING PROPOSED BY THE COMPANY**
3 **IN THIS FILING?**

4 **A.** The Company is proposing to make a number of changes to its tariff, which are
5 reflected in the clean and redlined versions of the tariff in Schedules TK-7 and TK-8.
6 These proposed changes are as follows:

- 7 (i) the addition of language to the Application for Service provision to clearly set
8 forth the Company's turn-on practice when a Commercial or Industrial
9 customer initiates a service disconnection;
- 10 (ii) a change to the Company's main and service extension language to conform
11 more closely to the Board's main and service extension rules and with SJG's
12 tariff;
- 13 (iii) the elimination of discounts applied to distributed generation, under 12
14 kilowatts ("KW"), and air conditioning under 10 tons from the GDS service
15 classification;
- 16 (iv) merger of the Company's LVD sales and FTS transportation service
17 classifications, which have the same general terms, rate structure and rates but
18 are listed as separate classes in the tariff; and
- 19 (v) the addition of language setting forth the Company's longstanding practice of
20 applying the On-System Margin Credit only to firm service classifications that
21 take Basic Gas Supply Service ("BGSS").

1 **Q. WHAT IS THE COMPANY’S PROPOSAL WITH RESPECT TO**
2 **ADDITIONAL LANGUAGE UNDER THE APPLICATION FOR SERVICE**
3 **SECTION OF THE TARIFF?**

4 **A.** The Company is proposing to add language to discourage customers from initiating
5 seasonal turn-offs, and if not, to clearly provide that Commercial or Industrial
6 customers seeking to reinstate service will not be placed ahead of other customers in
7 the queue when seeking reinstatement.

8 **Q. WHAT IS THE COMPANY’S PROPOSAL WITH RESPECT TO THE**
9 **TERMS OF MAIN AND/OR SERVICE EXTENSIONS?**

10 **A.** The Company is proposing to change its main and service extension language to more
11 closely conform to SJG’s tariff and the Board’s extension rules as set forth in
12 *N.J.A.C. 14:3-8.1 et seq.* The primary difference from the Company’s current tariff is
13 the addition of a provision that permits the Company to provide up to 200 feet of
14 normal residential facilities and the elimination of the waiver provision for extensions
15 that would require a deposit of \$500 or less.

16 **Q. WHY IS THE COMPANY PROPOSING TO ELIMINATE THE DISCOUNTS**
17 **FOR DISTRIBUTED GENERATION UNDER 12KW AND AIR**
18 **CONDITIONING UNDER 10 TONS FROM THE GDS SERVICE CLASS?**

19 **A.** The Company has not signed up a customer under this provision since its inception in
20 2002.

1 **Q. PLEASE DESCRIBE THE COMPANY’S EXISTING LVD AND FTS**
2 **SERVICE CLASSIFICATIONS.**

3 **A.** The Company currently provides sales service to the LVD service classification and
4 transportation service under its FTS classification. These services are available to
5 customers with a daily demand quantity of 2,000 or more therms. These classes are
6 charged identical Service Charges, Demand Charges and Distribution Charges. These
7 classes are also charged the same riders except that LVD receives commodity sales
8 service under the Company’s monthly BGSS-M rate while FTS customers purchase
9 their commodity from Third Party Suppliers.

10 **Q. WHY AND HOW IS THE COMPANY PROPOSING TO COMBINE THE**
11 **LVD AND FTS CLASSES?**

12 **A.** A combined LVD / FTS service would be consistent with the Company’s RDS, SGS
13 and GDS service classifications offering sales or transportation services that have the
14 same charges, except for the BGSS rider. Like these classes, LVD and FTS have the
15 same general terms, rate structure and rates; the primary differences are the
16 provisions related to transportation under the FTS classification which would remain
17 as part of an expanded LVD classification as special provisions.

1 **IV. BILL COMPARISONS**

2 **Q. HAVE YOU PREPARED A BILL COMPARISON FOR THE PRESENT AND**
3 **PROPOSED RESIDENTIAL AND COMMERCIAL SERVICE CLASSES**
4 **RATES?**

5 **A.** Yes. Schedule TK-6 sets forth bill comparisons for the RDS, SGS and GDS service
6 classifications for sales service. These classes comprise the majority of our
7 customers.

8 **Q. PLEASE DESCRIBE THE BILL COMPARISON FOR THE AVERAGE**
9 **RESIDENTIAL HEAT AND NON-HEAT CUSTOMER.**

10 **A.** The proposed rates for the RDS service class would result in an increase of \$16.97 or
11 17.8% for a residential heat customer using 100 therms per month, and \$6.08 or
12 36.0% for a residential non-heat customer using 10 therms per month.

13 **V. CONCLUSION**

14 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

15 **A.** Yes, it does.

ELIZABETHTOWN GAS COMPANY
Revenue Proof Billing Determinants

Schedule TK- 1

		Number of Bills Test Year <u>May 2020 *12</u>	Daily Contract Quantity (DCQ) Monthly <u>Dth's</u> Annual <u>Therms</u> =Dth's*10*12		Therms Post Test Year <u>Total</u>	Customer Annualization to May 2020	Total <u>Therms</u>
RDS	Residential Delivery Service	3,300,264			229,671,200	1,784,065	231,455,265
SGS	Small General Service	199,104			20,689,400	332,487	21,021,887
GDS	General Delivery Service	86,652	142,566.3	17,107,956	128,242,607	2,186,377	130,428,984
GDSAC	GDS - CIAC , Apr-Oct discounted rate	36			426,917	0	426,917
NGV	Public Station, per therm	144			156,250	16,876	173,126
LVD	Large Volume Demand	84	2,286.1	274,332	1,108,719	0	1,108,719
EGF	Electric Generation Firm	48	77.5	9,300	122,163	0	122,163
GLS	Unmetered Gas Light, per mantle	156			28,800	0	28,800
CSI	Interruptible Cogeneration Srv.	24			1,236	0	1,236
IS	Interruptible Service	0	1,063.0	127,560	0	0	0
FTS	Firm Transportation Srv.	516	32,955.1	3,954,612	40,418,410	0	40,418,410
ITS-IS	Interruptible Transportation Srv.	156	2,289.2	274,704	2,123,735	0	2,123,735
ITS-CSI	Interruptible Transportation Srv.	0			0	0	0
ITS-LVD	Int.Trans.Srv.	468	33,856.6	4,062,792	38,783,827	0	38,783,827
<u>Proof Flex and Special Contracts:</u>							
FTS-MSC	M.SC	12			13,612,932		13,612,932
CS-4	CS- Special Provision 4	12			1,715,948		1,715,948
S. Boiler	S.B ITS -LVD Flex	12	4,299.3	515,916	333,212		333,212
D.NP	D.NP All ITS-LVD	12			9,904,926		9,904,926
M.ULT	M.ULT. ITS-LVD	12			19,629,745		19,629,745
Total		<u>3,587,712</u>	<u>219,393</u>	<u>26,327,172</u>	<u>506,970,027</u>	<u>4,319,805</u>	<u>511,289,832</u>

Schedule TK- 2.1

**ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENTS TO OPERATING INCOME**

**TEST YEAR ANNUALIZATION
TO THE POST TEST YEAR CUSTOMER COUNT AT MAY 2020**

Line No.		Annualized		
		<u>Therms</u>	<u>Margin Revenue</u>	<u>Cost of Gas *</u>
1	Residential Delivery Service (RDS)	3,460,567	\$1,564,453	\$1,507,423
2	Small General Service (SGS)	635,972	\$325,109	\$106,334
3	General Delivery Service (GDS)	(560,113)	(\$107,631)	(\$123,225)
4	GDS - CIAC , Apr-Oct discounted rate	(279,921)	(\$34,094)	(\$123,165)
5	Natural Gas Vehicle (NGV)	57,813	\$53,027	\$25,436
6	Large Volume Demand (LVD), includes FTS	3,351,937	\$144,559	\$44,244
7	Electric Generation Firm (EGF)	27,679	\$1,699	\$12,179
8	Unmetered Gas Light, per mantle (GLS)	5,538	\$2,304	\$2,436
9	Interruptible Cogeneration Srv. (CSI)	0	\$0	\$0
10	Interruptible Service (IS)	0	(\$2,664)	\$0
11	Firm Transportation Srv. (FTS), included in LVD			
12	Interruptible Transportation Srv. (ITS-IS)	268,550	\$10,614	\$0
13	Interruptible Transportation Srv. (ITS-CSI)	0	\$0	\$0
14	Interruptible Transportation Srv. (ITS-LVD)	1,013,426	\$87,236	\$0
15	Total Adjustment	7,981,448	\$2,044,612	\$1,451,662

*RDS, SGS, GDS and LVD/FTS costs are estimated per the percentage sales therms taking BGSS service.

Schedule TK- 2.2

**ELIZABETHTOWN GAS COMPANY
PRO FORMA ADJUSTMENTS TO OPERATING INCOME**

**POST TEST YEAR ANNUALIZATION
TO THE POST TEST YEAR CUSTOMER COUNT AT MAY 2020**

Line No.		Annualized		
		<u>Therms</u>	<u>Margin Revenue</u>	<u>Cost of Gas *</u>
1				
1	Residential Delivery Service (RDS)	1,784,065	\$747,701	\$777,138
2	Small General Service (SGS)	332,487	\$133,924	\$55,592
3	General Delivery Service (GDS)	2,186,377	\$418,463	\$481,004
4	GDS - CIAC , Apr-Oct discounted rate	0	\$0	\$0
5	Natural Gas Vehicle (NGV)	16,876	\$15,478	\$7,424
6	Large Volume Demand (LVD), includes FTS	0	\$0	\$0
7	Electric Generation Firm (EGF)	0	\$0	\$0
8	Unmetered Gas Light, per mantle (GLS)	0	\$0	\$0
9	Interruptible Cogeneration Srv. (CSI)	0	\$0	\$0
10	Interruptible Service (IS)	0	\$0	\$0
11	Firm Transportation Srv. (FTS), included in LVD			
12	Interruptible Transportation Srv. (ITS-IS)	0	\$0	\$0
13	Interruptible Transportation Srv. (ITS-CSI)	0	\$0	\$0
14	Interruptible Transportation Srv. (ITS-LVD)	0	\$0	\$0
15	Total Adjustment	4,319,805	\$1,315,566	\$1,321,158

*RDS, SGS, GDS and LVD/FTS costs are estimated per the percentage sales therms taking BGSS service.

ELIZABETHTOWN GAS COMPANY
TEST YEAR AND POST TEST YEAR CUSTOMER COUNTS AND THERMS

Schedule TK- 3
 Consisting of 2 Pages

Proof Rate Classes		Test Year Sep <u>Act Counts</u>	Test Year Oct 2018 <u>Act Counts</u>	Test Year Nov <u>Act Counts</u>	Test Year Dec <u>Act Counts</u>	Test Year Jan 2019 <u>Act Counts</u>	Test Year Feb <u>Act Counts</u>	Test Year Mar <u>Projected</u>	Test Year Apr <u>Projected</u>	Test Year May <u>Projected</u>	Test Year Jun <u>Projected</u>	Test Year Jul <u>Projected</u>	Test Year Aug <u>Projected</u>
RDS	Residential Delivery Service	268,151	268,573	269,441	270,342	270,832	271,131	272,347	272,245	271,938	271,788	271,557	271,416
SGS	Small General Service	15,142	15,282	15,441	15,483	16,320	16,345	16,594	16,577	16,455	16,354	16,284	16,226
GDS	General Delivery Service	7,594	7,646	7,686	7,729	6,989	7,002	7,056	7,073	7,064	7,049	7,029	7,038
GDSAC	GDS - CIAC , Apr-Oct discounted rate	5	5	5	6	6	6	3	3	3	3	3	3
NGV	Public Station, per therm	7	7	8	5	4	5	10	10	10	10	10	10
LVD	Large Volume Demand	6	6	6	6	6	7	7	7	7	7	7	7
EGF	Electric Generation Firm	2	1	2	2	2	4	4	4	4	4	4	4
GLS	Unmetered Gas Light, per mantle	8	8	8	8	8	8	13	13	13	13	13	13
CSI	Interruptible Cogeneration Srv.	2	2	2	2	2	2	2	2	2	2	2	2
IS	Interruptible Service	1	1	1	1	2	2	0	0	0	0	0	0
FTS	Firm Transportation Srv.	38	36	36	36	35	36	43	43	43	43	43	43
ITS-IS	Interruptible Transportation Srv.	10	10	10	10	10	10	13	13	13	13	13	13
ITS-CSI	Interruptible Transportation Srv.	0	0	0	0	0	0	0	0	0	0	0	0
ITS-LVD	Int.Trans.Srv.	37	37	37	37	37	37	39	39	39	39	39	39
<u>Proof Flex and Special Contracts:</u>													
FTS-MSC	M.SC	1	1	1	1	1	1	1	1	1	1	1	1
CS-4	CS- Special Provision 4	1	1	1	1	1	1	1	1	1	1	1	1
S. Boiler	S.B ITS -LVD Flex	1	1	1	1	1	1	1	1	1	1	1	1
D.NP	D.NP All ITS-LVD	1	1	1	1	1	1	1	1	1	1	1	1
M.ULT	M.ULT. ITS-LVD	1	1	1	1	1	1	1	1	1	1	1	1
Total		291,008	291,619	292,688	293,672	294,258	294,600	296,136	296,034	295,596	295,330	295,009	294,819

RDS	Residential Delivery Service	4,956,100	9,736,200	23,449,700	37,072,800	48,146,200	39,199,200	32,686,300	15,648,400	5,988,300	3,475,200	3,824,000	3,820,000
SGS	Small General Service	328,700	764,000	1,752,600	3,054,000	4,687,900	3,668,900	2,787,900	1,213,300	518,500	326,100	291,500	295,600
GDS	General Delivery Service	3,988,700	7,779,800	12,914,170	18,647,697	22,889,900	18,409,955	15,678,368	9,079,917	5,277,900	3,585,200	3,659,100	3,708,200
GDSAC	GDS - CIAC , Apr-Oct discounted rate	102,480	93,704	0	0	0	0	0	0	28,170	40,476	78,741	83,346
NGV	Public Station, per therm	8,000	8,000	8,000	8,000	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500
LVD	Large Volume Demand	63,602	113,496	80,480	113,915	121,437	100,337	81,631	87,687	91,633	92,021	94,589	68,015
EGF	Electric Generation Firm	9,066	8,613	9,868	11,241	12,262	9,602	11,652	11,401	11,396	9,969	8,794	8,299
GLS	Unmetered Gas Light, per mantle	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
CSI	Interruptible Cogeneration Srv.	0	10	0	10	103	103	103	103	103	103	103	103
IS	Interruptible Service	0	0	0	0	0	0	0	0	0	0	0	0
FTS	Firm Transportation Srv.	2,635,122	2,683,086	2,998,192	3,385,290	3,356,660	3,386,750	3,833,770	3,079,106	3,008,317	2,621,075	2,562,602	2,816,972
ITS-IS	Interruptible Transportation Srv.	118,841	140,947	189,568	237,431	250,462	219,675	245,952	199,431	142,365	125,633	120,451	122,876
ITS-CSI	Interruptible Transportation Srv.	0	0	0	0	0	0	0	0	0	0	0	0
ITS-LVD	Int.Trans.Srv.	2,540,394	3,197,252	3,559,772	3,727,679	3,844,722	3,160,104	3,406,806	3,444,150	3,060,335	3,161,046	2,969,877	3,123,331
<u>Proof Flex and Special Contracts:</u>													
FTS-MSC	M.SC	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411
CS-4	CS- Special Provision 4	274,526	262,169	0	0	0	0	0	0	135,446	321,332	437,345	289,155
S. Boiler	S.B ITS -LVD Flex	0	0	0	0	138,080	49,193	118,250	18,937	2,398	(15)	697	12,210
D.NP	D.NP All ITS-LVD	702,247	820,405	953,224	1,087,411	1,105,184	916,739	998,089	855,041	830,191	807,625	828,770	0
M.ULT	M.ULT. ITS-LVD	800,789	1,227,863	1,415,064	1,867,800	2,033,184	1,922,194	1,891,385	1,763,302	1,731,556	1,618,594	1,593,146	1,654,969
Total		17,665,378	27,972,356	48,467,449	70,350,085	87,735,405	72,192,063	62,889,517	36,550,086	21,975,921	17,333,670	17,619,026	17,152,387

ELIZABETHTOWN GAS COMPANY
TEST YEAR AND POST TEST YEAR CUSTOMER COUNTS AND THERMS

Schedule TK- 3
Consisting of 2 Pages

															May 2019 to May 2020		
Proof Rate Classes		Post Test	Post Test	Post Test	Post Test	Post Test	Post Test	Post Test	Post Test	Post Test	Post Test	Post Test	Post Test	Post Test	Marketing Additions	Other Changes	Net Growth
		Jun <u>Projected</u>	Jul <u>Projected</u>	Aug <u>Projected</u>	Sep <u>Projected</u>	Oct <u>Projected</u>	Nov <u>Projected</u>	Dec <u>Projected</u>	Jan 2020 <u>Projected</u>	Feb <u>Projected</u>	Mar <u>Projected</u>	Apr <u>Projected</u>	May <u>Projected</u>				
RDS	Residential Delivery Service	271,788	271,557	271,416	271,620	272,346	273,292	274,210	274,771	275,128	275,417	275,322	275,022		3,007	77	3,084
SGS	Small General Service	16,354	16,284	16,226	16,168	16,192	16,340	16,529	16,590	16,667	16,743	16,721	16,592		186	(49)	137
GDS	General Delivery Service	7,049	7,029	7,038	7,064	7,056	7,083	7,145	7,187	7,214	7,214	7,231	7,221		181	(24)	157
GDSAC	GDS - CIAC , Apr-Oct discounted	3	3	3	3	3	3	3	3	3	3	3	3			-	-
NGV	Public Station, per therm	10	10	10	10	10	10	10	12	12	12	12	12			2	2
LVD	Large Volume Demand	7	7	7	7	7	7	7	7	7	7	7	7			-	-
EGF	Electric Generation Firm	4	4	4	4	4	4	4	4	4	4	4	4			-	-
GLS	Unmetered Gas Light, per mantle	13	13	13	13	13	13	13	13	13	13	13	13			-	-
CSI	Interruptible Cogeneration Srv.	2	2	2	2	2	2	2	2	2	2	2	2			-	-
IS	Interruptible Service	0	0	0	0	0	0	0	0	0	0	0	0			-	-
FTS	Firm Transportation Srv.	43	43	43	43	43	43	43	43	43	43	43	43			-	-
ITS-IS	Interruptible Transportation Srv.	13	13	13	13	13	13	13	13	13	13	13	13			-	-
ITS-CSI	Interruptible Transportation Srv.	0	0	0	0	0	0	0	0	0	0	0	0			-	-
ITS-LVD	Int.Trans.Srv.	39	39	39	39	39	39	39	39	39	39	39	39			-	-
<u>Proof Flex and Special Contracts:</u>																-	-
FTS-MSC	M.SC	1	1	1	1	1	1	1	1	1	1	1	1			-	-
CS-4	CS- Special Provision 4	1	1	1	1	1	1	1	1	1	1	1	1			-	-
S. Boiler	S.B ITS -LVD Flex	1	1	1	1	1	1	1	1	1	1	1	1			-	-
D.NP	D.NP All ITS-LVD	1	1	1	1	1	1	1	1	1	1	1	1			-	-
M.ULT	M.ULT. ITS-LVD	1	1	1	1	1	1	1	1	1	1	1	1			-	-
Total		295,330	295,009	294,819	294,991	295,733	296,854	298,023	298,689	299,150	299,515	299,415	298,976		3,374	6	3,380

		Post Test Year 12 Mos May 2020														
RDS	Residential Delivery Service	3,475,200	3,824,000	3,820,000	4,047,400	9,776,600	23,736,500	37,564,900	48,872,500	40,941,100	32,636,500	15,196,800	5,779,700	229,671,200		
SGS	Small General Service	326,100	291,500	295,600	379,800	833,400	1,991,500	3,546,100	4,756,600	3,816,400	2,786,200	1,174,100	492,100	20,689,400		
GDS	General Delivery Service	3,585,200	3,659,100	3,708,200	4,114,400	7,745,400	12,988,770	18,773,797	23,610,000	19,601,155	15,965,968	9,146,817	5,343,800	128,242,607		
GDSAC	GDS - CIAC , Apr-Oct discounted	40,476	78,741	83,346	102,480	93,704	0	0	0	0	0	0	28,170	426,917		
NGV	Public Station, per therm	12,500	12,500	12,500	12,500	12,500	12,500	12,500	13,750	13,750	13,750	13,750	13,750	156,250		
LVD	Large Volume Demand	92,021	94,589	68,015	63,602	113,496	80,480	113,915	121,437	100,337	81,631	87,563	91,633	1,108,719		
EGF	Electric Generation Firm	9,969	8,794	8,299	9,066	8,613	9,868	11,241	12,262	9,602	11,652	11,401	11,396	122,163		
GLS	Unmetered Gas Light, per mantle	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	28,800		
CSI	Interruptible Cogeneration Srv.	103	103	103	103	103	103	103	103	103	103	103	103	1,236		
IS	Interruptible Service	0	0	0	0	0	0	0	0	0	0	0	0	0		
FTS	Firm Transportation Srv.	2,621,075	2,562,602	2,816,972	2,994,458	3,033,859	3,444,299	3,829,840	3,897,280	3,921,510	4,370,160	3,499,919	3,426,436	40,418,410		
ITS-IS	Interruptible Transportation Srv.	125,633	120,451	122,876	119,295	141,591	190,678	238,985	252,050	221,106	247,599	200,574	142,897	2,123,735		
ITS-CSI	Interruptible Transportation Srv.	0	0	0	0	0	0	0	0	0	0	0	0	0		
ITS-LVD	Int.Trans.Srv.	3,161,046	2,969,877	3,123,331	2,526,858	3,170,003	3,503,489	3,679,461	3,744,655	3,137,351	3,366,996	3,418,104	2,982,656	38,783,827		
<u>Proof Flex and Special Contracts:</u>																
FTS-MSC	M.SC	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411	1,134,411	13,612,932		
CS-4	CS- Special Provision 4	321,332	437,345	289,155	272,467	260,203	0	0	0	0	0	0	135,446	1,715,948		
S. Boiler	S.B ITS -LVD Flex	(15)	697	12,210	0	0	0	0	135,318	48,209	115,885	18,558	2,350	333,212		
D.NP	D.NP All ITS-LVD	807,625	828,770	0	702,247	820,405	953,224	1,087,411	1,105,184	916,739	998,089	855,041	830,191	9,904,926		
M.ULT	M.ULT. ITS-LVD	1,618,594	1,593,146	1,654,969	806,795	1,237,072	1,425,677	1,881,808	2,048,433	1,936,611	1,905,570	1,776,527	1,744,543	19,629,745		
Total		17,333,670	17,619,026	17,152,387	17,288,282	28,383,760	49,473,899	71,876,872	89,706,383	75,800,784	63,636,914	36,536,068	22,161,982	506,970,027		

ELIZABETHTOWN GAS COMPANY
Test Year and Post Year
Newark Airport Monthly Normal Degree Days

(based upon 24 point, 10am to 10am, 3-hour, Interval Data
for the period July 1, 2008 through June 30, 2018)

Test Year		Post Test Year	
Month	Degree Days Base 65°F	Month	Degree Days Base 65°F
Sep-18	21	Jun-19	10
Oct-18	225	Jul-19	0
Nov-18	523	Aug-19	0
Dec-18	807	Sep-19	21
Jan-19	1,012	Oct-19	225
Feb-19	823	Nov-19	523
Mar-19	685	Dec-19	807
Apr-19	338	Jan-20	1,012
May-19	105	Feb-20	847 *
Jun-19	10	Mar-20	677
Jul-19	0	Apr-20	327
Aug-19	0	May-20	101
Total	4,549	Total	4,550

* Leap Year Degree Days February - May 2020

Elizabethtown Gas Company
Weather Normalization Clause (WNC)

Test Year Adjustment from 20 Year to 10 Year Normal

Month	Margin Revenue Excess / (Deficiency)		
	Booked Per 20 Year Normal	per 10 Year Normal	Inc / (Dec) In Excess / (Deficiency)
Oct-18	\$459,224	\$814,752	\$355,528
Nov	\$1,810,924	\$1,828,171	\$17,247
Dec	(\$549,978)	\$0	\$549,978
Jan-19	\$552,148	\$456,950	(\$95,198)
Feb	(\$508,571)	(\$1,271,429)	(\$762,858)
Mar	\$0	\$0	\$0
Apr	\$0	\$0	\$0
May	\$0	\$0	\$0
Total	\$1,763,747	\$1,828,444	\$64,697

**ELIZABETHTOWN GAS COMPANY
2019 Rate Case**

Schedule TK-6

Proposed Bill Changes

Sales Tax	Class				
<u>Residential Service</u>	<u>Avg Thms</u>	<u>From</u>	<u>To</u>	<u>Change</u>	<u>% Chg.</u>
Customer Charge		\$8.19	\$13.06		
Distribution Charge		\$0.3625	\$0.4835		
BGSS-P		\$0.4691	\$0.4691		
CAC		\$0.0397	\$0.0397		
Average Bill	70.1	\$69.27	\$82.62	\$13.35	19.3%
Average Annual Bill	841.2	\$831.22	\$991.44	\$160.22	19.3%
100 Therm Bill	100.0	\$95.32	\$112.29	\$16.97	17.8%
Ann 1,000 Therm Bill	1,000.0	\$969.58	\$1,149.02	\$179.44	18.5%
<u>Small General Service</u>					
Customer Charge		\$21.92	\$35.19		
Distribution Charge		\$0.3175	\$0.4006		
BGSS-P		\$0.4691	\$0.4691		
CAC		\$0.0397	\$0.0397		
Average Bill	105.6	\$109.18	\$131.22	\$22.04	20.2%
Average Annual Bill	1,267.2	\$1,310.13	\$1,574.67	\$264.54	20.2%
<u>General Delivery Service</u>					
Customer Charge		\$28.90	\$47.98		
Demand Charge	197.4	\$0.806	\$0.960		
Distribution Charge		\$0.1893	\$0.2814		
BGSS-M, using P as a proxy		\$0.4691	\$0.4691		
CAC		\$0.0397	\$0.0397		
Average Bill	1,509.5	\$1,241.79	\$1,430.29	\$188.50	15.2%
Average Annual Bill	18,114.0	\$14,564.31	\$16,599.25	\$2,034.94	14.0%

ELIZABETHTOWN GAS COMPANY

**TARIFF FOR GAS SERVICE
B.P.U. NO. 17**

2019 Rate Case

ELIZABETHTOWN GAS COMPANY
TARIFF FOR GAS SERVICE

Date of Issue: XXX1

Effective: Service Rendered
on and after XXX2

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated XXX3 in Docket No. XXX4

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TERRITORY SERVED
WHOLLY WITHIN THE STATE OF NEW JERSEY

ELIZABETHTOWN DIVISIONNORTHWEST DIVISIONMiddlesex County

1. Carteret
2. Edison (part)
3. Metuchen
4. Perth Amboy
5. Woodbridge
- Avenel
- Colonia
- Fords
- Iselin
- Keasbey
- Port Reading
- Sewaren

Union County

1. Clark
2. Cranford
3. Elizabeth
4. Fanwood
5. Garwood
6. Hillside
7. Kenilworth
8. Linden
9. Mountainside
10. Rahway
11. Roselle
12. Roselle Park
13. Scotch Plains
14. Union
15. Westfield
16. Winfield
17. Winfield Park

Hunterdon County (Southern District)

1. Alexandria
2. Bethlehem
3. Bloomsbury
4. Califon
5. Clinton (Town)
6. Clinton (Twp.)/ Annandale
7. Delaware
8. East Amwell/ Ringoes
9. Flemington
10. Franklin
11. Frenchtown
12. Glen Gardner
13. Hampton
14. High Bridge
15. Holland
16. Kingwood (Twp.)
17. Lambertville
18. Lebanon (Bor.)
19. Lebanon (Twp.)/Stockton
20. Milford (Bor.)
21. Raritan
22. Readington (part)
23. Stockton
24. Union
25. West Amwell

Mercer County (Southern District)

1. Hopewell (Bor.)
2. Hopewell (Twp. Part)
3. Lawrence
4. Pennington

Morris County (Central District)

1. Mount Olive (Twp. Part) / Budd Lake
2. Washington (Twp. Part) / Long Valley

Sussex County

(Northern District)

1. Andover (Bor.)
2. Andover (Twp.)
3. Branchville
4. Frankford
5. Franklin (Bor.)
6. Fredon
7. Green
8. Hamburg
9. Hampton
10. Hardyston
11. Lafayette
12. Newton
13. Ogdensburg
14. Sparta
15. Sussex
16. Vernon
17. Wantage

Warren County

(Central District)

1. Allamuchy
2. Alpha
3. Belvidere
4. Franklin
5. Greenwich
6. Hackettstown
7. Harmony
8. Independence
9. Lopatcong
10. Mansfield
11. Oxford
12. Phillipsburg
13. Pohatcong
14. Washington (Bor.)
15. Washington (Twp.)
16. White

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STANDARD TERMS AND CONDITIONS

1. GENERAL

1.01 - Applicability

These Standard Terms and Conditions, filed as part of the Tariff of Elizabethtown Gas Company (hereinafter referred to as “Gas Company” or “Company”), set forth the terms and conditions under which service is rendered and will be supplied. They govern all classes of service to the extent applicable and are made a part of all agreements for the supply of gas service unless specifically modified by the terms of a particular service classification or by special terms written in and made a part of a contract for service.

Failure by the Gas Company to enforce any provisions, terms, or conditions set forth in this Tariff shall not be deemed a waiver thereof.

Per the New Jersey Administrative Code (“N.J.A.C.”) 14:3 (“Chapter”) Section 14:3-1.3(i) Tariffs states: If there is any inconsistency with this Chapter and a tariff, these rules shall govern, except if the tariff provides for more favorable treatment of Customers than does this Chapter, in which case the tariff shall govern.

1.02 – Termination or Revision of Tariff

This Tariff is subject to the orders of the Board of Public Utilities of the State of New Jersey (hereinafter referred to as “Board” or “BPU”), effective as of this date or as may be promulgated and become legally effective in the future.

Gas Company reserves the right at all times and in any manner permitted by law and the applicable rules and regulations of the Board to terminate, change or modify by revision, amendment, supplement, or otherwise, this Tariff or any part thereof, or any revision, amendment or supplement thereto. All contracts for service are accepted subject to the above reservations.

1.03 – Agents

No representative or agent of Gas Company has the authority to modify, alter, or waive any provision contained in this Tariff or to bind Gas Company by any promise or representation thereto.

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1.04 – Application of Tariff

Receipt of gas service from Gas Company makes the receiver a “Customer”, as defined in Section 2.01 hereof. However, Gas Company will not be required to continue to render service unless, if upon request of Gas Company, (a) Customer makes, or has made, an application for service in accordance with the Standard Terms and Conditions set forth herein and (b) such application is accepted by Gas Company in accordance with the terms of said Standard Terms and Conditions.

Service furnished by Gas Company prior to its acceptance of Customer’s application shall, nevertheless, be charged for at the rates contained in the applicable service classification. The applicable service classification, in a case where more than one service classification might apply and Customer has failed to make a selection, shall be that service classification which in the sole judgement of Gas Company is most advantageous to Customer. (See Section 2.03)

1.05 – Inspection of Tariff

The tariff is available to all Customers for public inspection in each office where applications for service may be made. The Tariff is also available for review or copying at the Company’s website at www.Elizabethtowngas.com.

2. OBTAINING SERVICE

2.01 – Application for Service

An application for service may be made at any commercial office of Gas Company, either in person, by mail, by telephone, or by any other means made available by the Company. A written application form or agreement may be required from any person, firm, organization, partnership, corporation, or otherwise, applying for or using gas service (hereinafter referred to as “Customer”). If the Company requires a written application, the application may be subsequently submitted to the Customer for signature. There will be a \$15.00 administration charge to establish service to a new Customer or re-establish service to an existing Customer.

Applicant(s) may be required by the Gas Company to supply proof of identity and prior address. Any such requirement to provide proof of identity or prior address shall be in accordance with the provisions of N.J.A.C. 14:3-3.2 as may be amended or superseded.

Separate application may be required in each case where gas service is applied to the same person, firm, organization, partnership, corporation, or otherwise, at two or more non-contiguous properties. For purposes of applying these rates, service at each non-contiguous location shall be considered as service to a separate Customer.

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Customer shall state, at the time of making application for service, the conditions under which service will be required. Customer may be required to sign an agreement covering special circumstances necessary for the supply of service in accordance with Customer's requirements. In the case in which the Customer signs a main and/or service extension agreement and subsequently does not install any of the indicated equipment within a reasonable time, not to exceed one year, or purchase the requested quantities of gas, the Company reserves the right to charge the Customer for the full cost of providing the service and main, as applicable.

Gas Company reserves the right to place limitations on the amount and character of gas service it will supply; to refuse service to new Customers or to existing Customers for additional load, if unable to obtain the necessary equipment and facilities to supply such service; to reject applications for service or additional service where such service is not available or where such service might affect the supply of gas to other Customers; or for other good and sufficient reasons.

When an existing Commercial or Industrial Customer initiates a service disconnection and is no longer charged for service by the Company and later seeks to re-instate service, the scheduling of a turn-on or installation of a meter will be on a first available basis as determined by the Company.

2.02 – Form of Application

Standard applications or agreements to supply gas service shall be in accordance with the particular service classification. Agreements for longer term than that specified in the service classification may be required where large or special investment is necessary to supply service, where special facilities are required to serve a Customer, or where the hourly capacity of the Gas Company's facilities required to serve the Customer's demand, in the opinion of the Gas Company, may be out of proportion to the monthly or annual use of gas service for occasional, intermittent, or low load factor purposes. Gas Company reserves the right to require contributions towards the investment required for such service and to establish such minimum charges and facilities charges as may be equitable under the circumstances involved.

2.03 – Selection of Rate

Gas Company will assist in the selection of the available rate which is most desirable from the standpoint of Customer. However, the responsibility for making the selection shall, at all times, rest with Customer. Any advice given by Gas Company will be based on Customer's statements.

Customer may request Gas Company to change the service classification under which they are billed. However, Gas Company shall not be obligated to make such a change more than once in 12 calendar months even though Customer may qualify for service under more than one service classification.

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2.04 – Deposit and Guarantee

Where an applicant's credit is not established, where the credit of a Customer with Gas Company has become impaired, or where Gas Company deems it necessary for other reasons, a deposit or other guarantee satisfactory to Gas Company may be required as security for the payment of future and final bills for gas service and other charges resulting from the rendering of gas service before Gas Company will commence or continue to render service. Service shall not be discontinued for failure to make such deposit, unless said deposit had been included on prior bills, or notices to the Customer. All requests for deposits shall be in accordance with N.J.A.C. 14:3-3.4.

All deposits shall bear simple interest at the rate equal to the average yield on new six-month Treasury Bills for the twelve month period ending each September 30 and shall be paid by the utility on all deposits held by it. Said rate shall become effective on January 1 of the following year. The Board shall perform the annual calculation to determine the applicable interest rate and shall notify the Gas Company of said rate.

Interest accrued from deposits for Residential Service accounts shall be credited to Customer's bill, unless the Customer requests a separate check, at least once during a 12-month period for such service rendered or to be rendered. Customers not purchasing gas under the Residential Service classification will be refunded interest accrued from their service deposit at the time that the deposit is refunded to the Customer. A deposit shall bear interest until it is returned or applied to an outstanding balance.

Gas Company shall review a residential Customer's account at least once every year and non-residential Customer's account at least once every two years and if such review indicates that a Customer has established good credit, the Gas Company will apply the deposit to the outstanding balance on the Customers' account, unless the Customer requests a separate check.

Gas Company reserves the right to apply a deposit, plus accrued interest on said deposit, against unpaid bills for service or other charges resulting from the rendering of gas service. If such action is taken and the Customer continues to receive gas service the Customer shall be required to restore the deposit to the original amount or such other reasonable amount as Gas Company may determine. If the account is closed only the remaining balance will be refunded.

Gas Company shall have a reasonable time in which to read meters and to ascertain that all the obligations of Customer have been fully performed before being required to refund any deposit, in accordance with N.J.A.C. 14:3-3.5.

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2.05 – Planning Area Certification for Extensions

The Gas Company, prior to accepting application for new or upgraded gas service, will determine the planning area in which service is being requested. Such planning areas are as designated by the New Jersey State Planning Commission in accordance with N.J.A.C. 5:85-1.4.

A deposit or contribution in aid of construction may be required towards the Cost of installing an Extension, as set forth in Section 3 of these Standard Terms and Conditions.

2.06 – Permits

The Gas Company shall obtain or cause to be obtained all easements, licenses or permits necessary to enable the Gas Company or its agents access to connect its mains to the Customer's equipment. This shall be construed to mean all permits and certificates, municipal or otherwise, required by law or the Gas Company's rules. The Gas Company shall not be obliged to furnish service unless and until such permits, instruments, consents and certificates shall have been delivered to the Company. The Company reserves the right to require that Customer obtain or cause to be obtained all easements, licenses, or permits necessary to enable the Company or its agents access to connect its mains to the Customer's equipment.

The Customer may be responsible for payment of the amount by which such easements, licenses or permit fees exceeds \$15.00. Payment shall be made prior to the Company filing for said documents.

By making application for service, Customer grants to Gas Company a right-of-way for its lines and other facilities, across, over, under or along the property owned or controlled by Customer, to the extent that the same is necessary to enable Gas Company to render service to premises.

2.07 – Temporary Service

Where service is to be used for a limited period, the use of the service shall be classified as temporary and Customer shall be required to assume the actual cost of the facilities required to furnish service and also their connection and removal, which shall not be less than twice the minimum charge per month for residential service. The minimum period for billing of gas consumption shall be one (1) month. Temporary service will be furnished only where Gas Company's facilities are suitable and quantity of gas is available without in any way interfering with other Customers of Gas Company.

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2.08 – Authorization to Turn On Gas to the Meter

Only duly authorized employees or agents of Gas Company shall be permitted to turn on gas.

3. EXTENSIONS OF MAINS AND/OR SERVICE LINES3.01 –General Provisions

The provisions and definitions within N.J.A.C. 14:3-8.1, *et seq.*, shall be applicable.

The construction of main extensions are subject to the regulations at N.J.A.C. 14:3-8.1, *et seq.* The Company may construct and will own and maintain distribution mains located on streets, highways, and right of way, used or usable as a part of its distribution system. The making of a deposit or contribution by the Customer shall not give the Customer any interest in the facilities, the ownership being vested exclusively in the Company.

The Company may require up-front contributions, or deposits, pursuant to N.J.A.C. 14:3-8.1, *et seq.* These charges shall be increased for any tax consequences to the Company. If the Company accepts an application for an extension, the Company may furnish and place, at no cost to the Customer, up to 200 feet of normal residential facilities.

Deposits that are received from Customers pursuant to the Extensions of Mains and Services shall be refunded without interest in accordance with the applicable formula contained in N.J.A.C. 14:3-8.10 and N.J.A.C. 14:3-8.11. In no event shall the Company refund more than the total deposit amount received from the Customer. Any deposit amount not refunded within ten (10) years from the date service was initiated, shall remain with the Company and shall constitute a contribution in aid of construction.

3.02 Main and Service Extensions Requested by Customers1) Residential

The Company shall extend its gas mains and services to serve an individual residential Customer at no charge where the Extension Cost does not exceed ten (10) times the annual Distribution Revenue. The Distribution Revenue shall be the incremental initial or actual total annual billings, as determined by the Gas Company, derived from the Applicant's and/or existing Customer's applicable Service Classification, inclusive of Sales and Use Tax, minus the Basic Gas Supply Service, inclusive of Sales and Use Tax. The Company may require a deposit equal to the Extension Cost in excess of ten (10) times the annual Distribution Revenue and shall include any tax consequences to the Company.

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2) - Non-Residential

The Company will extend its gas mains and services to an individual firm commercial or industrial Customer and may require a deposit equal to the Extension Costs, increased by any tax consequences to the Company. In lieu of a deposit for Extension Costs, the Company and the Customer may agree upon a satisfactory revenue guarantee.

3) - Extension of Service to New Developments

The Company may require a deposit for an extension subject to this Section, in an amount no greater than the Extension Cost required to serve the development. The deposit shall be increased by any tax consequences to the Company.

3.03 - Service Connection Location

Service connections will be measured at right angles from the nearest curb line to the Applicant's building, at the point of service entrance designated by the Company. Meters and regulators will be furnished and installed by the Company. The costs of meters and regulators (including the installation) may be waived by the Company.

The Applicant shall consult the Company as to the exact point at which the service pipe will enter the building before installing interior gas piping or starting any other work dependent upon the location of the service pipe. The Company will determine the location of the service pipe depending upon physical constraints in the street and other practical considerations.

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4. SERVICE CONNECTIONS

4.01 – General

Subject to the provisions of the Extensions of Mains and/or Service Lines section of this tariff, gas service will normally be supplied to each premise through a single service pipe, except where, in the judgment of Gas Company, it is deemed desirable to install more than one service pipe. The Gas Company may also choose to install multiple meters on one service pipe providing service to several premises. If more than one service is installed for the convenience of the Customer, each location will be considered as a separate Customer. In addition, at its expense and option, the Company may include a “customer valve” on the premise side of the meter on new, existing and/or re-established existing services. The ownership of the valve will be transferred to the Customer upon gas flowing through the valve.

4.02 – Change in Existing Installations

Any change in the location of the existing service pipe or meter set requested by Customer and approved by Gas Company shall be made at the expense of Customer. The Gas Company reserves the right to change the location of an existing service pipe or meter set to a placement and location determined solely by the Gas Company upon giving the Customer ten (10) days notice, unless it is done as part of an unforeseen repair or an upgrade to the main. The Gas Company shall bear all costs related to such changes including re-connecting pipes to the premise side of the meter and appurtenances related to any meter reading devices.

A Customer who qualifies pursuant to 49 CFR Section 192 and/or has a service line that is 2” or less and has a system minimum pressure of ten (10) pounds per square inch gauge or more may request installation of an Excess Flow Valve (EFV). If a Customer does not qualify for an EFV the Company will offer to install a Curb Stop. The Customer will be required to pay all EFV or Curb Stop installation costs associated with such installation before the Company begins work if:

- a) the Company has not scheduled the Customer’s premises for a service line replacement or a new service line or,
- b) the Customer requests the installation prior to the Company’s scheduled installation time.

5. METERS AND ASSOCIATED EQUIPMENT

5.01 – General

Subject to the provisions of the Extensions of Mains and/or Service Lines section of this tariff, the Gas Company will furnish, install and maintain meters for each premise and/or service. In addition where appropriate, when a Customer has two or more service classifications, the Customer will have separate meters.

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Where more than one meter is installed in a premise, the readings of all such meters supplying a Customer under the same service classification may be combined for billing purposes. The Customer may be charged a monthly service charge for each meter even if said meters are combined for billing purposes.

5.02 - Customer's Responsibility

Customer shall provide and maintain, without charge to Gas Company, a suitable space for the metering and associated equipment. Such space shall be as near as practicable to the point of entrance of the service pipe, adequately ventilated, dry, free from corrosive vapors, not subject to extreme temperatures, free from appreciable vibrations or any other conditions that may impact the meter as well as being readily accessible to authorized employees or agents of Gas Company. In apartment houses, office buildings, townhouses or condominiums with multiple service, all meters shall, whenever possible, be grouped together. Adequate passageway, maintained free of obstacles and unsafe and hazardous conditions, shall be provided at all times.

Customer shall not tamper with or remove meters or other equipment or permit access thereto, except by authorized employees or agents of Gas Company.

With the exception of the "customer valve" on the premise side of the meter, when installed (see Section 4.01), all equipment furnished by the Gas Company shall remain its property and may be replaced whenever deemed necessary by the Gas Company or as required by the Board and may be removed by Gas Company at any time after discontinuance of service.

In case of loss or damage from the act or negligence of Customer or the Customer's agents, employees and or contractors, or of failure to return property supplied by Gas Company, Customer shall pay to Gas Company the value of such property.

5.03 – Automatic Meter Reading Equipment (AMR)

The Company in its sole discretion may install, at its expense, an AMR device to monitor a Customer's gas consumption. However, when gas is to be delivered at a pressure in excess of the Company's standard gauge pressure noted in Section 7.02, or such equipment is required by the service classification under which the Customer will receive service, the Company shall determine any necessary equipment inclusive of compensating and AMR devices to be installed at the Customer's expense. When such devices require attachment to telephone and/or electric utilities, the Customer shall provide and pay for suitable connections unless the Company elects to make such connections. When an AMR device is requested by the Customer, the AMR device and any necessary appurtenances shall be installed at the Customer's expense if the installation is deemed feasible by the Company. Where feasible, the Company will make data from the AMR device or other equipment available to the Customer upon the signing of a Service Agreement.

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Payments made by the Customer shall not give the Customer ownership of the equipment. All equipment remains the sole property of the Company. Installation of an AMR does not relieve the Customer of the obligations of Sections 5.02 or 9.

6. CUSTOMER'S INSTALLATION

6.01 – General

No material change in the size, total capacity, or method of operation of Customer's equipment shall be made without previous written notice to the Gas Company and subsequent approval by the Gas Company.

The Gas Company will assume no responsibility for the condition of Customer's gas installation or for accidents, fires, or failures which may occur as the result of the condition of such gas installation.

Neither by inspection or non-rejection, nor in any other way, does the Gas Company give any warranty, expressed or implied, as to the adequacy, safety, or other characteristics of any structure, equipment, wires, pipes, appliances, or devices used by the Customer.

Gas Company shall not be liable for damages to the Customer's equipment or injuries sustained by Customer due to the condition or character of Customer's facilities and equipment. The Gas Company will not be responsible for the use, care or handling of the gas delivered to Customer after same passes beyond the point at which the Company's service facilities connect to the Customer's facility. Gas Company also shall not be liable for any claim for damage resulting from the supply, use, care or handling of the gas or from the presence or operation of the Company's structures, equipment, pipes or devices except for direct damages resulting from the Gas Company's negligence, recklessness or willful misconduct. The Gas Company will not be liable for special or consequential damages.

6.02 – Equipment, Piping and Installation

Customer appliances, piping and installations shall be made and maintained in accordance with the standards and specifications set forth in American National Standard, National Fuel Gas Code, ANSI Z223.1, and such other regulations as may be promulgated from time to time by any governmental agency having jurisdiction over the Customer's installation.

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on and after XXX2

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated XXX3 in Docket No. XXX4

6.03 – Back Pressure and Suction

When the nature of Customer's gas equipment is such that it may cause back pressure or suction in the piping system, meters, or other associated equipment of Gas Company, suitable protective devices, subject to inspection and approval by Gas Company, shall be furnished, installed, and maintained by Customer.

6.04 – Adequacy and Safety of Installation

Gas Company shall not be required to supply gas service until Customer's installation has been approved by the authorities, if any, having jurisdiction, and Gas Company further reserves the right to withhold its service or to discontinue its service whenever such installation, or part thereof, is deemed by Gas Company to be unsafe, inadequate or unsuitable for receiving service, to interfere with or impair the continuity or quality of service to Customer or others, or for other good and sufficient reason.

7. METER READINGS AND BILLING

7.01 – General

Gas Company will select the type and make of metering equipment and may, from time to time, change or alter such equipment. It shall be the obligation of Gas Company to supply meters that will accurately and adequately furnish records for billing purposes. Bills will be based upon registration of Gas Company meters, except as otherwise provided for herein.

At such time as Gas Company may deem proper or as the Board may require, Gas Company will test its meters in accordance with the standards and bases prescribed by the Board. The performance of a test outside of these standards is at the Company's option. Any Customer requesting such a meter test more than once in a twelve (12) month period shall be charged all related costs to test the equipment, inclusive but not limited to time and material costs with overhead factors for the second and subsequent tests. In the event of a dispute the Gas Company's meter will be presumed to be correct, subject to test results in accordance with N.J.A.C. 14:3-4.5 and 14:3-4.6.

7.02 – Correction for Pressure and/or Temperature

For purposes of measurement, a cubic foot of gas is that volume occupying one cubic foot (12" x 12" x 12") at the Company's standard gauge pressure of five (5) inches water column and at a temperature of 60°F.

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In any case where Gas Company measures or the Customer has requested that the gas delivered is at a pressure greater than five (5) inches of water column or at temperatures other than 60° F, the cubic feet of gas registered by the meter shall be subject to correction for billing purposes by the application of proper correction factors or by the use of pressure and/or temperature compensating devices, see 5.03.

7.03 – Therm Conversion Factor

Meter readings of Customers shall be converted from cubic feet to therms by applying a therm conversion factor. A therm is defined as a unit of heat energy equal to 100,000 British Thermal Units (B.T.U.'s). For billing purposes, the Customer's gas usage in cubic feet will be converted to therms using a therm conversion factor representing the actual weighted average BTU value per 100 cubic feet of gas that was delivered into the Company's system in the second preceding calendar month as adjusted to a dry basis as reported each month to the Board in accordance with N.J.A.C. 14:6-3.2. This therm conversion factor expressed to precision of at least three decimal places, shall be applied in calculating bills on a service rendered basis. The Gas Company may at its option, upon 30 day notice to Board and the New Jersey Division of Rate Counsel ("Rate Counsel or RC"), modify the calendar period used in determining the BTU factor, if it is modified toward or at a period closer to that of the Customer billing periods. In that event, the Company's reports to the Board concerning the BTU value of gas delivered into the Company's system shall contain sufficient detail to allow the Board to review the Company's calculation of therm conversion factors.

7.04 – Billing Period

Unless otherwise specified, the charges in this Tariff are stated on a "monthly" basis. The term "month" for billing purposes, shall mean a period of thirty (30) days.

Bills for service furnished will normally be rendered monthly. However, the Company reserves the right to bill bi-monthly. Gas Company also expressly reserves the right to render to any Customer bills based on meter reading periods which may be shorter than a month. Such bills will be prorated as provided in Section 7.05 hereof and are due as provided in Section 7.10 hereof.

7.05 – Proration of Monthly Charges

Except for temporary service accounts, the monthly charges for all initial bills, all final bills, and all bills for periods longer than five (5) days more, or shorter than five (5) days less, than the regular monthly billing period shall be prorated on the basis of a thirty-day month or the actual number of days in the billing period. For temporary service accounts, the minimum billing period for billing purposes shall be one month.

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7.06 – Estimated Bills and Discontinuance of Service for Excessive Estimated Reads

Where Gas Company is unable for any reason to read the meter, Gas Company reserves the right to estimate the amount of gas supplied based upon past usage and other information available and submit a bill determined on that basis. Such a bill shall be marked as to the fact that it is an estimated bill. During the summer period (defined here as May 15th through September 15th) the Gas Company may suspend the reading of manually read meters when the Company determines such suspension is necessary to permit the Company to redirect its work force to higher priority projects, provided, however, that the Company may not suspend meter readings for any individual Customer for four (4) or more consecutive billing periods (monthly accounts) or two (2) or more consecutive billing periods (bimonthly and quarterly accounts). During such time the accounts will be billed based on estimated usage. Adjustment of Customer's estimated use to actual use shall be made when an actual reading is next obtained. Notwithstanding the above, the Gas Company reserves the right to discontinue gas service when a meter reading is not obtained in accordance with N.J.A.C. 14:3-7.2(e)(3) which states "When a utility estimates an account for four consecutive billing periods (monthly accounts), or two consecutive billing periods (bimonthly and quarterly accounts), the utility shall mail a notice marked "Important Notice" to the Customer on the fifth and seventh months, respectively, explaining that a meter reading must be obtained and said notice shall explain the penalty for failure to complete an actual meter reading. After all reasonable means to obtain a meter reading have been exhausted, including, but not limited to, offering to schedule meter readings for evenings and on weekends, the utility may discontinue service provided at least eight months have passed since the last meter reading was obtained, the Board has been so notified and the Customer has been properly notified by prior mailing. If service is discontinued and subsequently restored, the utility may charge a reconnection charge equal to the reconnection charge for restoring service after discontinuance for nonpayment."

7.07 – Billing Adjustments Due to Inaccurate Meter Recordings

When it is determined that the Gas Company's meter is inaccurate or defective, the use of gas service shall be determined by a test of the meter, or by registration of the meter set in its place during the period next following, or after due consideration of previous or subsequent properly measured deliveries. Whenever a meter is found to be registering fast by more than 2% an adjustment of charges shall be made in accordance with the provisions of N.J.A.C. 14:3-4.6.

If a meter is found to be registering less than 100% of the service provided, the Gas Company shall not adjust the charges retrospectively and/or require the Customer to repay the amount undercharged except if: 1) the meter was tampered with; 2) the meter failed to register at all; or 3) the circumstances are such that the Customer should reasonably have known that the bill did

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not reflect the actual usage. In rebilling a Customer under such conditions, the Gas Company may, per its determination, utilize previous or subsequent properly measured deliveries, perform a load analysis and/or a degree day analysis to estimate the usage. The Gas Company shall allow the Customer to make payment over a period of time equal to that during which the undercharges occurred, in accordance with N.J.A.C. 14:3-4.6(f).

Any adjustment to the Customer's account resulting from the terms in this section will be billed or applied to the account as the case may be. If the adjustment results in a credit, such amount may be refunded upon request by the Customer, in lieu of bill credit, in accordance with N.J.A.C. 14:3-4.6, as may be amended or superseded.

7.08 – Separate Billing for Each Installation

The service classifications are based upon the rendering of service through a single delivery and metering point. Service rendered to the same Customer at other points of delivery shall be separately metered and billed, except as provided in Section 5.01 hereof.

7.09 – Sale for Resale of Gas Service and Sub-Metering

1. General

Gas service supplied by the Company shall not be resold by Customer to others except where the Customer is another publicly regulated gas utility, where the gas is used for conversion to Compressed Natural Gas ("CNG"), or the Customer of record is sub-metering in accordance with the conditions set forth below.

2. Sub-Metering

- a. Gas sub-metering is the practice in which a Customer of record of the Gas Company, through the use of direct metering devices, monitors, evaluates or measures the Customer of record's own utility consumption or the consumption of a tenant for accounting or conservation purposes.

Gas sub-meters are devices that measure the volume of gas being delivered to particular locations in a system after measurement by a Company owned meter.

- b. If the Customer of record charges the tenant for the usage incurred by the tenant, the sum of such charge(s) to the tenant shall not exceed the cost incurred by the Customer of record for providing gas service, including reasonable administrative expenses. Further, the sum of such charge(s) to the tenant shall not exceed the amount the utility would have charged such tenant if the tenant had been served and billed by the Company directly. The reselling of sub-metering gas service for profit is prohibited.

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- c. Gas sub-metering, in accordance with the conditions described hereinabove, is permitted in new or existing buildings or premises where the basic characteristic of use is industrial or commercial. Gas sub-metering is not permitted in existing buildings or premises where the basic characteristic of use is residential except where such buildings or premises are publicly financed or government owned or are charitable in nature or are condominiums or cooperative housing.
- d. The Customer of record shall contact the Company prior to the installation of any gas sub-metering device, in order to ascertain whether the affected premises is located within a low pressure portion of the Company's supply system and whether or not the installation of a gas check metering device will cause any significant pressure drop to the affected premises.
- e. All gas consuming devices in any unit must be metered through a single gas sub- meter.

7.10 – Payment of Bills

At least 15 days' time for payment shall be allowed after the date a bill is mailed. Bills are payable at any commercial office at Gas Company or at any duly authorized collection agency or by mail or any other means made available by the Company. The Gas Company may discontinue service for nonpayment of bills provided the amount is greater than \$100 and or more than three (3) months delinquent and it gives the Customer at least 10 days' written notice of its intention to discontinue service. The notice of discontinuance shall not be mailed until the expiration of the said initial 15-day period. However, in cases of fraud, illegal use, or when it is clearly indicated that the Customer is preparing to leave, immediate payment of accounts may be required. The Gas Company reserves the right to request wire transfer of funds for payment of bills when the Company reasonably determines that payment by wire transfer is required.

A late payment charge equal to one-twelfth of the lower of 18% or the highest rate allowed by law shall be applied to the monthly billing for all non-residential Customers. However, service to a governmental entity will not be subject to a late payment charge. Per Section 14:3-7.1(e) of the N.J.A.C., the utility shall not apply a late payment charge sooner than twenty five (25) days after a bill is rendered. Therefore, the Company may, beginning on the twenty-sixth (26th) day after rendering a bill, assess late payment charges. The charge will be applied to all amounts previously billed including late payment charges and accounts payable that are not received by Gas Company within the days specified above. The amount of the late payment charge to be added to the unpaid balance shall be calculated by multiplying the unpaid balance by the late charge rate. When payment is received by the Company from a Customer who has an unpaid balance which includes charges for late payment, the Customer's payment shall be applied first to such late payment charges and then the remainder to the unpaid balance.

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7.11 – Reimbursement of Expense for Processing Uncollectible Checks

A charge of \$15.00 will be made to reimburse the Company for the expense of processing Customer checks which are returned by the Company's bank as uncollectible. A charge of \$8.00 will be made to reimburse the Company for the expense of processing Customer checks that are re-submitted and again returned by the Company's bank as uncollectible.

7.12 – Beginning and Ending Service

Any Customer starting the use of service without making application for service and enabling Gas Company to read the meter will be held liable for any amount due for service supplied to the premises from the last reading of the meter immediately preceding the Customer's occupancy, as shown by the records of Gas Company.

Customers shall give reasonable notice of intended removal from any premises wherein they are receiving gas service. Customer shall be liable for service taken after notice of termination has been received by the Company until such time as the meter is read and disconnected, not to exceed forty-eight (48) hours. Notice to discontinue service does not relieve a Customer from any minimum or guaranteed payment under any service classification or contract.

7.13 – Budget Plan

Heating Customers billed under Service Classification RDS have the option of paying for their use of total service in equal estimated monthly installments as set forth in the applicable Gas Company's House Heat Budget Plan. The Company may offer a budget plan to all classes of Customers.

8. LEAKAGE

Customer shall immediately give notice to Gas Company of any escape of gas in or about Customer's premises.

9. ACCESS TO PREMISES

Properly identified employees or agents of Gas Company shall have access to Customer's premises at all reasonable times for any and all necessary purposes in connection with the rendering of service or the removal of its property.

10. RIGHT TO SUSPEND, CURTAIL, OR DISCONTINUE SERVICE

Gas Company shall have, upon reasonable notice, when it can be reasonably given, the right to suspend, curtail or discontinue its service for any of the following reasons:

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- (1) For the purpose of making repairs, changes, replacements, or improvements in any part of its system.
- (2) For compliance in good faith with any governmental order or directive, whether federal, state, municipal, or otherwise, notwithstanding such order or directive subsequently may be held to be invalid.
- (3) For any of the following act(s) or omission(s) on the part of Customer:
 - a. Non-payment of a valid bill due for service furnished at the present or any previous locations. However, nonpayment for business service shall not be a reason for discontinuance of residential service.
 - b. Tampering with any facility of Gas Company.
 - c. Fraudulent representation in relation to the use of gas service.
 - d. Customer moving from the premises unless the Customer requests that service be continued.
 - e. Delivering gas service to others without written approval of Gas Company except as permitted under 7.09 – Sale for Resale of Gas Service, Check Metering and Sub-metering.
 - f. Failure to make or increase an advance payment or deposit when requested by Gas Company.
 - g. Refusal to contract for service where such contract is required.
 - h. Connecting and operating equipment in such a manner as to produce disturbing effects on the gas system of Gas Company or on systems of other Customers.
 - i. Failure to comply with any of these Standard Terms and Conditions.
 - j. Where the conditions of Customer's installation or facilities presents a hazard to life or property.
 - k. Failure of Customer to repair any faulty facility of Customer.
 - l. Failure to provide access to the meter to obtain a reading as permitted under 7.06 – Estimated Bills and Discontinuance of Service for Excessive Estimated Reads.

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- (4) For refusal of reasonable access to Customer's premises for necessary purposes in connection with the rendering of service, including meter installation, reading or testing, or the maintenance or removal of the property of Gas Company.

Failure of Gas Company to exercise its rights to suspend, curtail or discontinue service, for any of the above reasons, shall not be deemed a waiver thereof.

Should gas service be terminated for any of the above reasons, the minimum charge for the unexpired portion of the term shall become due and payable immediately, provided, however, that if satisfactory arrangements are subsequently made by Customer for reconnection of the service, the immediate payment of the minimum charge for the unexpired portion of the contract term may be waived or modified as the circumstances indicate would be just and reasonable.

11. RECONNECTION AND TAMPERING CHARGES

11.01 – Reconnection and Collection Charges

A charge of \$15.00 shall be made when the Company makes a collection visit to the customer or the premises and/or to restore service when service has been suspended or discontinued for any of the reasons cited in Sections 10.(3), excepting 10.(3)d, and 10.(4) of these Standard Terms and Conditions. Recurring reconnection charges in any 12-month period shall be charged at the approved regular rates for Customer service otherwise performed by Gas Company but not less than \$30.00.

A charge of \$200.00 may be made when service has been terminated for any of the reasons cited in Sections 10.(3), excepting 10.(3)d, and 10.(4), and which required the installation of a curb box for said termination.

11.02 – Tampering Charge

In the event it is established that a Company's meters or other equipment on the Customer's premises have been tampered with, and such tampering results in incorrect measurement of the service supplied as determined by the Company, the cost for such gas service, based upon the Company's estimate from available data and not registered by the Company's meter, shall be paid by the beneficiary of such service. The beneficiary shall be any person who benefits from such tampering. The actual cost of investigation, inspection and determination of such tampering, and other costs, such as but not limited to the installation of protective equipment, legal fees, and other costs relating to the administrative, civil or criminal proceedings, shall be billed to the beneficiary of such tampering in the case of non-residential accounts. In the case of residential accounts, all such costs shall be billed to the responsible party. The responsible party shall be the party who

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either tampered with or caused the tampering with a meter or other equipment or knowingly received the benefit to tampering by or caused by another. In the event a residential Customer unknowingly received the benefit of meter or equipment tampering, the Company shall only seek from the benefiting Customer the cost of the service provided but not the cost of investigation.

Under certain conditions, tampering with the Company's facilities may also be punishable by fine and/or imprisonment under New Jersey law.

11.03 – Diversion of Service

Diversion is an unauthorized connection to pipes and/or wiring by which the utility service registers on the tenant Customers' meter although such service is being used by other than the tenant-customer of record without the tenant-customer's knowledge or cooperation. Where a tenant-customer alleges or it is established that service has been diverted outside of such Customers' premises, that tenant-customer shall not be required to pay for such service without that tenant-customer's consent. The definitions, procedures, investigations and determination of N.J.A.C. 14:3-7.8 shall apply.

12. CONTINUITY OF SERVICE

Gas Company will use reasonable diligence to provide a regular and uninterrupted supply of service; but, should the supply be suspended, curtailed, or discontinued by Gas Company for any of the reasons set forth in Section 10 of these Standard Terms and Conditions or should the supply of service be interrupted, curtailed, deficient, defective, or fail, by reason of any act of God, accident, strike, legal process, governmental interference, acts of third parties, or by reason of compliance in good faith with any governmental order or directive, notwithstanding such order or directive subsequently may be held to be invalid, provided such reasons are not the product of the Company's negligence, or willful misconduct, Gas Company shall not be liable for any loss or damage, direct or consequential, resulting from any such suspension, discontinuance, interruption, curtailment, deficiency, defect, or failure.

Additionally, Gas Company may curtail or interrupt service to any Customer or Customers in the event of emergency threatening the integrity of its system or the systems to which it is directly or indirectly connected if, in its sole judgement, such action will prevent or alleviate the emergency condition.

13. LIMITATION OF SERVICE AVAILABILITY

Where the facilities of Gas Company and/or the quantity of gas available are restricted or limited, preference may be given by Gas Company in supplying service to Customers giving consideration to such factors as 1) annual gas use, 2) volume of gas, 3) load factor, 4) end use of gas, 5) capital investment costs, and 6) number of appliances.

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14. CHARACTERISTICS OF SUPPLIED GAS

Type(s) of gas supplied:

1. Natural gas
2. Natural gas mixed with Propane-Air Gas and or Manufactured Gases and or Liquefied Natural Gas
3. In areas where natural gas service is not available, undiluted commercial grade propane gas distributed through Gas Company facilities and having a minimum heating value of 2,400 BTU per cubic foot.

15. GENERAL

15.01 – Inspection of Customer Facilities

Neither by inspection, approval nor non-rejection, nor in any other way does Gas Company give any guarantee or assume any responsibility, expressed or implied, as to the adequacy, safety, or characteristics of any structures, equipment, pipes, appliances, or devices owned, installed, or maintained by Customer or leased by Customer from third parties, except in those instances in which the above equipment or facilities are owned, or leased by Gas Company.

15.02 – Force Majeure

Neither Gas Company, TPS, or Customer shall be liable for damages to the other for any act, omission, or circumstance occasioned by or in consequence of any acts of God, strikes, lockouts, acts of the public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of rulers and people, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, temporary failure of gas supply, temporary failure of firm transportation arrangements, the binding order of any court or governmental authority which has been resisted in good faith by all reasonable legal means, acts of third parties, and any other cause, whether of the kind herein enumerated or otherwise, not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.

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Such cause or contingencies affecting the performance by Gas Company, TPS or Customer, however, shall not relieve it of liability in the event of its concurrent negligence or in the event of its failure to use due diligence to remedy the situation and remove the cause in an adequate manner and with all reasonable dispatch, nor shall such causes or contingencies affecting performance relieve either party from its obligations to make payments of amounts then due hereunder in respect of gas theretofore delivered.

16. GAS CURTAILMENT PLAN

16.01- Purpose

The purpose of this plan is to preserve the ability to continue to provide essential gas services, as defined below, to the broadest base of Customers given limited gas supply and/or delivery capacity.

16.02 - Definition of Essential Gas Users

Essential Gas Users are defined as gas service to individual residential dwellings, multi-family residential dwellings, schools, hospitals, day care centers, nursing homes, dormitories, correctional facilities, twenty-four hour emergency facilities such as municipal police, fire or emergency medical departments and similar facilities which do not have installed alternate fuel equipment and an alternate fuel supply.

16.03 – Actions Required Before Implementation of the Gas Curtailment Plan

The Gas Curtailment Plan will be implemented only after the Company has:

1. Exercised all of its rights to interrupt service to interruptible service classifications – ITS, IS, CS, CSI, as provided for in the Company's Tariff;
2. Availed itself of all cogeneration firm recall gas;
3. Interrupted SIS service, if being provided.

Nothing in the Gas Curtailment Plan shall inhibit the Company from managing and scheduling interruptions in service as covered above in a manner that it determines is appropriate to meet the conditions on its system. However, the Gas Curtailment Plan Action Steps will not go into effect until such time as all options available above have been exercised.

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16.04 – Curtailment Plan Action Steps

1. The Company shall request all transportation Customers and their TPS to maximize deliveries of gas into the Company's system and request excess deliveries be made available to the Company at a compensation price agreed to by the parties.
2. The Company shall reduce gas service to its own facilities to a minimum;
3. The Company shall appeal to firm large industrial and commercial Customers to voluntarily reduce gas consumption;
4. The Company shall appeal to its general population of Customers to reduce gas consumption by lowering thermostats 5° F, closing off unused rooms, reducing non-essential uses of gas – i.e., gas lights, clothes drying;
5. The Company shall declare the existence of a gas curtailment emergency on its system and notify the BPU and other appropriate state agencies;
6. The Company shall seek emergency supplies from pipelines, suppliers and other gas companies;
7. The Company shall curtail service to all firm industrial services greater than 2,000 therms/day other than plant protection;
8. The Company shall curtail service to all firm industrial services less than 2,000 therms/but greater than 500 therms/day other than plant protection;
9. The Company shall curtail non-essential firm commercial usage 500 therms/day or greater;
10. The Company shall curtail remaining non-essential commercial and industrial usage;
11. The Company shall curtail service for industrial plant protection;
12. The Company shall systematically curtail essential uses employing the Company's emergency plan.

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16.05 – Appropriation of End User Transportation Gas

When a gas curtailment emergency is declared (Step 5 in Section 16.04 above), any third-party transportation gas being delivered into the Company's system for end-use Customers shall be appropriated by the Company to serve the priority of service under this curtailment plan. Customers and TPSs whose gas is so appropriated shall be compensated for such gas at its replacement cost but not less than the equivalent price of #2 fuel oil and to the extent the Customer's actual delivered service is curtailed, that Customer shall receive curtailment credits equal to a proration of any fixed monthly service charge and demand charges to correspond to the amount of the curtailed service.

16.06 – Liability Exclusion

The declaration of a gas curtailment emergency shall constitute a force majeure condition under Section 15.02 of these Standard Terms and Conditions. Consequently, the Company shall not be liable for any damages, loss of product or other business losses suffered by Customers as a result of curtailed gas service.

17. UNAUTHORIZED GAS USE

Unauthorized Use includes, but is not limited to, any volume of gas taken by Customer in excess of its maximum daily requirement as set forth in its Service Agreement with Gas Company or the quantity of gas allowed by Gas Company on any day for any reason, including as a result of a curtailment or interruption notice issued by the Company in accordance with its tariff and/or the Board of Public Utilities of the State of New Jersey or any other governmental agency having jurisdiction. A "day" shall be a period of twenty-four (24) consecutive hours, beginning as near as practical to 8 a.m., or as otherwise agreed upon by Customer and Gas Company.

The Company reserves the right to physically curtail the gas service to any Customer if, in the Company's sole judgement, such action is necessary to protect the operation of its system.

If a Customer uses gas after having been notified that gas is not available under their Service Classification, and or if applicable, uses gas in excess of the maximum daily quantity or requirements as established in the Service Agreement then unauthorized gas charges shall apply.

Furthermore, if a TPS fails to deliver gas in the quantities and or imbalance ranges specified in the TPS Service Classification then unauthorized gas charges shall apply to the TPS.

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In addition to the above, the following conditions have been ordered by the BPU specifically related to Interruptible Customers and their suppliers: A Customer who fails to discontinue natural gas use, consistent with the terms and conditions of the relevant interruptible service agreements, and suppliers who fail to deliver natural gas during a critical period/OFO notice, consistent with the terms and conditions of applicable service agreements and TPS Agreements, shall be charged a penalty equal to the charges for Unauthorized Gas Use.

All Unauthorized Usage shall be billed at the higher of \$2.50 per therm or a rate equal to ten times the highest price of the daily ranges which are published in Gas Daily on the table "Daily Price Survey" for delivery in Transco Zone 6 or Texas Eastern Zone M-3. This rate shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of the interstate pipelines which deliver gas into New Jersey. This is in addition to all applicable taxes and charges of the Customer's service class.

Nothing herein shall be construed to prevent the Company from taking all lawful steps to stop the unauthorized use of gas by Customer, including disconnecting Customers service.

Such payment for unauthorized use shall not be deemed as giving Customer or TPS any rights to use such gas.

The Gas Company may, in its sole discretion, permanently discontinue service upon a finding by the Gas Company that the Customer has not complied with the conditions and provisions of the tariff.

TPSs that have subscribed to Standby for their Essential Use Customers are not subject to Unauthorized Use Charges for volumes that are within the limits of their Standby Service but will be billed the Standby Rate determined at month end. Any revenues from Unauthorized Gas Use penalty charges shall be credited to the BGSS.

All Unauthorized Use Charges applicable to transportation services will be billed to and payable by the TPS providing gas supply for such services. In the event a TPS fails to pay these charges, the Customers of that TPS shall be billed directly by the Company for either: 1) their proportionate share, based on the Allocation of Supplies as set forth in the TPS service classification; or 2) their direct share identified through their non-compliance to Company directives to ease or curtail gas use.

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18. NEW JERSEY SALES AND USE TAX

In accordance with P.L. 1997, c. 162 (the “energy tax reform statute”), as amended by P.L. 2016, c. 57 , provision for the New Jersey Sales and Use Tax (“SUT”) has been included in all charges applicable under this tariff by multiplying the charges that would apply before application of the SUT by the factor 1.06625. The energy tax reform statute exempts the following customers from the SUT provision, and when billed to such Customers, the charges otherwise applicable under this tariff shall be reduced by the provision for the SUT included therein:

1. Franchised providers of utility services (gas, electricity, water, waste water and telecommunications services provided by local exchange carriers) within the State of New Jersey.
2. Cogenerators in operation, or which have filed an application for an operating permit or a construction permit and a certificate of operation in order to comply with air quality standards under P.L. 1954, c. 212 (C.26:2C-1 et seq.) with the New Jersey Department of Environmental Protection, on or before March 10, 1997.
3. Special contract Customers for which a Customer-specific tax classification was approved by a written Order of the BPU prior to January 1, 1998.
4. Agencies or instrumentalities of the federal government.
5. International organizations of which the United States of America is a member.

In accordance with P.L. 2004, c. 65 “The Business Retention and Relocation Assistance Act” and subsequent amendment (P.L. 2005, c.374) exempts the following Customers from the SUT provision, and when billed to such Customers, the charges otherwise applicable shall be reduced by the provision for the SUT included therein:

1. A qualified business that employs at least 250 people within an enterprise zone, at least 50 % of whom are directly employed in a manufacturing process, for the exclusive use or consumption of such business within an enterprise zone.
2. A group of two or more persons:
 - a. Each of which is a qualified business that are all located within a single redevelopment area adopted pursuant to the “Local Redevelopment and Housing Law,” P.L.1992, c.79 (C.40A:12A-1 et seq.);

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- b. That collectively employ at least 250 people within an enterprise zone, at least 50% of whom are directly employed in a manufacturing process;
 - c. Are each engaged in a vertically integrated business, evidenced by the manufacture and distribution of a product or family of products that, when taken together, are primarily used, packaged and sold as a single product; and
 - d. Collectively use the energy and utility service for the exclusive use or consumption of each of the persons that comprise a group within an enterprise zone.
3. A business facility located within a county that is designated for the 50% tax exemption under Section 1 of P.L.1993, c.373 (C.54:32B-8.45) provided that the business certifies that it employs at least 50 people at that facility, at least 50% of whom are directly employed in a manufacturing process, and provided that the energy and utility services are consumed exclusively at that facility.

A business that meets the requirements in (1), (2) or (3) above shall not be provided the exemption described in this section until it has complied with such requirements for obtaining the exemption as may be provided pursuant to P.L.1983, c.303 (C.52:27H-60 et seq.) and P.L.1966, c.30 (C.54:32B-1 et seq.) and the Company has received a sales tax exemption letter issued by the New Jersey Department of Treasury, Division of Taxation.

19. NEGOTIATED RATES, TERMS AND CONDITIONS

In accordance with the BPU's Order dated August 18, 2011 in BPU Docket No. GR10100761 ("Order") the Company has developed the following criteria for determining whether it will, in individual circumstances, negotiate rates, terms and conditions of service with Customers that otherwise would not take service under the terms of the service classifications set forth in this tariff. Any individually negotiated rates, terms or conditions agreed to pursuant to this tariff provision are subject to prior approval by the BPU. Negotiated rates, terms and conditions that may be made available are intended to address unique circumstances applicable at the time that the negotiated rates, terms and conditions are agreed to with individual Customers.

Negotiated rates, terms and conditions will be offered by the Company in circumstances in which it determines in its sole reasonable judgment, that such individual rates, terms and conditions are necessary to prevent (i) physical bypass of the Company's distribution system, (ii) economic bypass of the Company's distribution system or, (iii) the loss of load that could otherwise be served at rates that would exceed marginal costs.

Customers seeking negotiated rates, terms and conditions, and claiming that such rates, terms and conditions are necessary to prevent the Customer from physically bypassing the Company's distribution system, must provide the Company with the following:

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- (i) a statement from an interstate pipeline involved in such bypass that the proposed interconnection between Customer and the pipeline is operationally viable, that sufficient capacity is available to serve such Customer, and that the pipeline would serve the Customer if requested;
- (ii) maps or flow diagrams that identify the proposed route of the pipeline needed to serve the Customer from the interconnection with the pipeline and the Customer's site, the size of the connecting pipeline and any other appurtenant facilities required;
- (iii) engineering studies related to the estimated costs to complete construction of facilities interconnecting the pipeline and the Customer;
- (iv) information concerning the status of all reliability and environmental or other permits and approvals from local, state and federal agencies;
- (v) a description of any other benefits that the Customer proposes to provide the Company under a service agreement between the Company and Customer; and
- (vi) such other information as the Company may require.

Customers seeking negotiated rates, terms and conditions for reasons other than to avoid physical bypass must provide the Company (i) such information as the Customer deems relevant to its request, and (ii) such information as the Company may require given the particular circumstances.

In determining whether to offer individually negotiated rates, terms and conditions to a particular Customer, the Company will consider all relevant information provided by the Customer and make a judgment as to whether negotiated rates, terms and conditions are necessary to prevent physical or economic bypass or the loss of load that could otherwise be served at rates that exceed marginal costs. Customers may apply for negotiated rates, terms and conditions by contacting the Company in writing. The Company will respond to any request for negotiated rates, terms and conditions within sixty (60) days of receiving a Customer's written request and all required information.

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SERVICE CLASSIFICATION – RESIDENTIAL DELIVERY SERVICE (RDS)APPLICABLE TO USE OF SERVICE FOR:

All residential purposes in individual residences and in individual flats, individual apartments in multiple family buildings, only where each individual flat or individual apartment is served through its own separate meter and religious institutions where the total rated input capacity of all gas utilization equipment does not exceed 500,000 BTU per hour. The rate is not available for hotels, nor for recognized rooming or boarding houses where the number of rented bedrooms is more than twice the number of bedrooms used by Customer. This rate is not applicable for industrial or commercial use of gas. In residential premises, use for purposes other than residential will be permitted only where such use is incidental to Customer's own residential use. Service for heating and/or cooling of premises will be rendered at this rate. Service to detached outbuildings or outside appliances appurtenant to the residence will be included in this rate provided Customer installs the necessary piping so that the gas used in such facilities may be measured by the meter located at the residence.

Service will be provided if Gas Company's facilities are suitable.

CHARACTER OF SERVICE:

Continuous, however, Customers may either purchase gas supply from a Third Party Supplier ("TPS") or the Company's Rider "A", Basic Gas Supply Service ("BGSS")

*CHARGES PER MONTH:

	<u>Gas Supply from BGSS</u>	<u>Gas Supply from TPS</u>
Service Charge	\$13.06	\$13.06
Distribution Charge per Therm	\$0.4835	\$0.4835
Commodity Charge	Per Rider "A"	Per TPS Agreement

* The charges set forth in this Service Classification include sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. A customer that receives gas supply from a TPS will be charged for commodity according to any agreement between the Customer and the TPS.

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SERVICE CLASSIFICATION – RESIDENTIAL DELIVERY SERVICE (RDS)
(continued)

MINIMUM MONTHLY CHARGE:

Service Charge.

TERM OF PAYMENT:

All bills are due upon presentation.

TERM OF CONTRACT:

One year, and thereafter until terminated by five (5) days written notice.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS

1.

Utilizing a Third Party Supplier

A Customer choosing to contract with a TPS for supply service will be enrolled for this service with the Company by the TPS on their behalf. A Customer will receive a confirmation notice from the Company noting their choice of supplier and that the Customer will have seven (7) calendar days from the date of the confirmation notice to contact the Company and rescind its selection, after which, if not rescinded, the residential Customer's TPS enrollment shall be accepted by the Company. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by the TPS.

2. Switching Suppliers

Customer may switch TPSs or return to the Company's BGSS service at any time subject to the conditions of Customer enrollment. A Customer electing to return to the BGSS service should contact their TPS who will carry out the necessary steps with the Company. The decision and steps necessary to switch TPSs are carried out between the newly selected TPS and the Customer. Customer will not be charged a fee to change its TPS or return to BGSS service.

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SERVICE CLASSIFICATION – RESIDENTIAL DELIVERY SERVICE (RDS)
(continued)

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS (continued)

3. Limitations on the Availability of Transportation Service

Customer's TPS must demonstrate that it possesses Comparable Capacity or Standby Balancing Service sufficient to provide their Customers' Unadjusted Average Daily Delivery Quantity, as defined under the TPS Service Classification, during the months of November through March. If at any time it is determined that TPS does not meet this provision, then TPS's Customers will be returned to BGSS gas supply service.

4. Load Balancing Charge

A Load Balancing Charge of \$0.0552 per therm, which includes taxes, shall be billed to the TPS for all metered quantities of its RDS Customers.

5. Gas Commingling

Service under this Service Classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas with other supplies. Moreover, the Company reserves the right to utilize Customer's gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

6. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for Customers for transporting gas from its source to the Company's interconnection with delivering pipeline suppliers. All such responsibility rests with Customer's TPS. Company shall have no responsibility with respect to such gas before Customer delivers or has delivered on its behalf such gas to Company or after Company redelivers such gas to Customer at the meter at Customer's premises or on account of anything which may be done, happen or arise with respect to such gas before such delivery or after such redelivery. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by TPS.

7. Gas Supply Obligation

In the event that Customer's TPS ceases operations, or for any other reason fails to deliver the Average Daily Delivery Quantity ("ADDQ"), the Company shall provide replacement gas supplies under the BGSS service.

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SERVICE CLASSIFICATION – RESIDENTIAL DELIVERY SERVICE (RDS)

(continued)

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS (continued)

8. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company's system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company's system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas into Company's system on behalf of Customer.

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SERVICE CLASSIFICATION – SMALL GENERAL SERVICE (SGS)

APPLICABLE TO USE OF SERVICE FOR:

Small General Service is available to those Customers whose annual weather normalized usage as determined by the Company is less than 5,000 therms per year and where Gas Company's facilities are suitable and the quantity of gas is available for the service desired. In August of each year the Company shall review each Customer's eligibility based on their annual normalized usage and if in excess of 5,500 therms for two consecutive years will transfer the Customer to General Delivery Service.

CHARACTER OF SERVICE:

Continuous.

*CHARGES PER MONTH:

	<u>Gas Supply from BGSS</u>	<u>Gas Supply from TPS</u>
Service Charge	\$35.19	\$35.19
Distribution Charge per Therm	\$0.4006	\$0.4006
Commodity Charge	Per Rider "A"	Per TPS Agreement

* The charges set forth in this Service Classification include sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. A Customer that receives gas supply from a TPS will be charged for commodity according to any agreement between the Customer and the TPS.

MINIMUM MONTHLY CHARGE:

The Service Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

One year, and thereafter until terminated by five (5) days written notice.

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SERVICE CLASSIFICATION – SMALL GENERAL SERVICE (SGS)
(continued)

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS (TPS)

1. Service Agreement

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a TPS are conditions precedent to receiving gas supply from a TPS.

2. Balancing Charge

Customers will be charged a balancing charge of \$0.0171 per therm, which includes sales tax, in the months of November through March to offset system supply costs utilized to absorb the differences between the TPS delivered Average Daily Delivery Quantities and the actual daily gas supply requirements of the Customers.

3. Commingling

Service under this Service Classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas with other supplies. Moreover, the Company reserves the right to utilize Customer's gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

4. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service Customers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

5. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customers the total monthly requirements for that billing month per an Average Daily Delivery Quantity ("ADDQ") determined as stated in the TPS section of this tariff.

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SERVICE CLASSIFICATION – SMALL GENERAL SERVICE (SGS)

(continued)

6. Utilizing a Third Party Supplier

A Customer choosing to contract with a TPS for supply service will be enrolled for this service with the Company by the TPS on their behalf. A Customer will receive a confirmation notice from the Company notifying them of their enrollment by a TPS and that the Customer should contact the TPS noted on the letter within seven (7) calendar days if they seek to have it rescinded. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by the TPS.

7. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges the Customers shall be billed directly by the Company for their direct portion, if by their non-compliance to Company directives to cease gas use, and/or a prorata share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas Customers will first be credited with standby gas purchased by the TPS on their behalf.

8. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

9. Gas Supply Obligation

In the event that Customer's TPS fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service, except for those whose TPS contracted for Standby Service, limited to Essential Gas User Customers. In the event that a Customer that is not covered by Standby Service seeks to purchase natural gas supplies from the Company, such sales may be made by the Company in its sole discretion under such terms and conditions as the Company may require.

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SERVICE CLASSIFICATION – SMALL GENERAL SERVICE (SGS)
(continued)

10. Limitations on the Availability of TPS Transportation Service

TPS Service is not available to Customers who are defined as “Essential Gas Users” under the curtailment provision as set forth in Section 17 of the Standard Terms and Conditions of this Tariff unless such Customers’ TPS, in an amount sufficient to meet such Customers’ ADDQ and/or DCQ, agrees to contract and pay for Standby Service as defined in the TPS Service Classification or for such Customers’ TPS demonstrates that it possesses Comparable Capacity as defined in the TPS Service Classification.

11. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company’s system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company’s system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas on behalf of transporting Customer.

12. SPECIAL PROVISIONS, APPLICABLE TO VETERANS’ ORGANIZATIONS:

Veterans’ Organization Service: Pursuant to N.J.S.A 48:2-21.41, when natural gas service is delivered to a Customer that is a Veterans’ Organization, serving the needs of veterans of the armed forces, the Customer may apply and be eligible for billing under this Special Provision.

Each Customer shall be eligible for billing under this Special Provision upon submitting an Application for Veterans’ Organization Service under this service classification and by qualifying as a “Veterans’ Organization” as defined by N.J.S.A. 48:2-21.41 defines a Veterans’ Organization that qualifies for this Special Provision as “an organization dedicated to serving the needs of veterans of the armed forces that: is chartered under federal law, qualifies as a tax exempt organization under paragraph (19) of subsection (c) of section 501 of the federal Internal Revenue Code of 1986, 26 U.S.C. s.501(c)(19), or that is organized as a corporation under the ‘New Jersey Nonprofit Corporation Act,’ N.J.S.15A:1-1 et seq.” Under N.J.S.A. 48:2-21.41, a qualified Veterans’ Organization shall be charged the residential rate for service delivered to the property where the Veterans’ Organization primarily operates, if the residential rate is lower than the commercial rate for service at that property.

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SERVICE CLASSIFICATION – SMALL GENERAL SERVICE (SGS)
(continued)

12. SPECIAL PROVISIONS, APPLICABLE TO VETERANS' ORGANIZATIONS (continued):

The Customer shall furnish satisfactory proof of eligibility of service under this Special Provision to the Company. Once proof of eligibility is determined by the Company, service under this Special Provision shall begin with the next billing cycle following receipt of the Application.

The Customer will continue to be billed on this service classification. At least once annually, the Company shall review eligible Customers' charges for service delivered, defined to include Service Charges and Distribution Charges, under this Special Provision for all relevant periods. If these comparable charges for service delivered under the Residential Delivery Service (RDS) classification are lower than the charges under this classification a credit in the amount of the difference shall be applied to the Customer's next bill.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)

APPLICABLE TO USE OF SERVICE FOR:

General Delivery Service is available to those Customers whose annual weather normalized usage as determined by the Company is 5,000 or more therms per year and where Gas Company's facilities are suitable and the quantity of gas is available for the service desired. In August of each year the Company shall review Customer usages and those Customers whose weather normalized usage, as determined by the Company, is less than 4,500 therms for two consecutive years will be transferred to Small General Service.

CHARACTER OF SERVICE:

Continuous, however, customers may either purchase gas supply from a Third Party Supplier ("TPS") or the Company's Rider "A", Basic Gas Supply Service ("BGSS").

*CHARGES PER MONTH:

	<u>Gas Supply from BGSS</u>	<u>Gas Supply from TPS</u>
Service Charge	\$47.98	\$47.98
Demand Charge per DCQ	\$0.960	\$0.960
Distribution Charge per Therm	\$0.2814	\$0.2814
Commodity Charge	Per Rider "A"	Per TPS Agreement

* The charges set forth in this Service Classification include sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. A Customer that receives gas supply from a TPS will be charged for commodity according to any agreement between the Customer and the TPS.

DETERMINATION OF THE DEMAND CHARGE QUANTITY (DCQ)

The DCQ will be determined by the Customer's maximum daily requirements in terms of therm units per day. The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer's premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise DCQ shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April), normalized for weather, divided by the applicable number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer's gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

DETERMINATION OF THE DEMAND CHARGE QUANTITY (DCQ) (continued)

If the Customer's maximum daily usage exceeds the DCQ as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement to the highest level experienced during the previous 12 months.

MINIMUM MONTHLY CHARGE:

The sum of the Service Charge and the Demand Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

One year, and thereafter until terminated by five (5) days written notice.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

SPECIAL PROVISIONS SECTIONS I & II:

I. SPECIAL PROVISIONS, APPLICABLE TO ALL CUSTOMERS RECEIVING SERVICE
UNDER THIS SERVICE CLASSIFICATION

1. Distributed Generation of 12 kW or More and Gas Cooling & Refrigeration of 10 Tons or More

Under separate application Customers who are using gas for distributive generation with a rated capacity of twelve (12) kW or more, and/or gas cooling equipment with a rated capacity of ten (10) tons or more, and where gas consumed is separately metered, will be billed at the above rates, except that the applicable Distribution Charges will be billed at a rate of \$0.0589 per therm commencing with the first meter reading taken in the ordinary course of business in May and concluding with the meter reading taken in the ordinary course of business in October. During all other periods, the Distribution and Commodity Charge per therm stated in this service classification shall apply.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

I. SPECIAL PROVISIONS, APPLICABLE TO ALL CUSTOMERS RECEIVING SERVICE UNDER THIS SERVICE CLASSIFICATION (continued)

2. Economic Development Service (EDS):

Any new Customer employing a minimum of ten (10) employees, who locates in or expands a new or vacant building within the Company's service territory and enters into a GDS service agreement and (2) any existing Customer who expands into a new or vacant building within the Company's service territory and is a party to a GDS service agreement shall be eligible for an EDS discount. For new Customers, this building must be new or have been vacant for a minimum of three (3) months. For existing Customers, the space utilized for operations must expand by more than 5,000 square feet. Gas used subject to the EDS discount for existing Customers will be calculated by the Company and will be based solely on the Customer's incremental usage. This service is offered to any eligible Customer for a period of five (5) years from the date of the initial Service Agreement under this service. The EDS Customers shall receive a fifty (50) percent pre tax discount in this Service Class's Distribution Charge during the period of eligibility.

3. Boiler Limitation

This service classification is not available for new or additional boiler equipment with a rated input in excess of 12.5 million BTU's per hour. The Gas Company may waive this limitation in cases where the Customer enters into a longer term contract or agrees to guarantee a monthly minimum revenue level as may be determined by the Gas Company.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM THIRD PARTY SUPPLIERS (TPS)

1. Service Agreement

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a TPS are conditions precedent to receiving gas supply from a TPS.

2. Balancing Charge

Customers with a DCQ under 500 therms will be charged a balancing charge of \$0.0171 per therm, which includes sales tax, in the months of November through March to offset system supply costs utilized to absorb the differences between the TPS delivered Average Daily Delivery Quantities and the actual daily gas supply requirements of the Customers.

3. Commingling

Service under this Service Classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas with other supplies. Moreover, the Company reserves the right to utilize Customer's gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

4. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service Customers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

5. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customers the total monthly requirements for that billing month. A TPS with Customers having a DCQ under 500 therms and those requiring an AMR not yet installed are required to deliver these customers natural gas requirements per an ADDQ determined as stated in the TPS section of this tariff.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM THIRD PARTY SUPPLIERS (TPS) (continued)

6. Utilizing a Third Party Supplier

A Customer choosing to contract with a TPS for supply service will be enrolled for this service with the Company by the TPS on their behalf. A Customer will receive a confirmation notice from the Company notifying them of their enrollment by a TPS and that the Customer should contact the TPS noted on the letter within seven (7) calendar days if they seek to have it rescinded. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by the TPS.

7. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges the Customers shall be billed directly by the Company for their direct portion, if by their non-compliance to Company directives to cease gas use, and/or a prorata share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas Customers will first be credited with standby gas purchased by the TPS on their behalf.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM THIRD PARTY SUPPLIERS (TPS) (continued)

8. Automatic Meter Reading (AMR) Equipment for Customers with a DCQ of 500 therms or more.

AMR equipment is required for Customers with a DCQ of 500 or more therms, as determined by the Company. Customer shall pay for all costs to install AMR equipment including power, communications and other equipment as specified by the Company and provide access for such equipment. The cost of any Company equipment may be paid by Customer over a one (1) year, or some lesser, period by means of a monthly surcharge designed to recover the cost of the equipment plus interest equal to the Company's overall rate of return as authorized from time to time by the BPU. Payments made by the Customer shall not give the Customers ownership of the equipment which shall remain the sole property of the Company.

9. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

10. Gas Supply Obligation

In the event that Customer's TPS fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service, except for those whose TPS contracted for Standby Service, limited to Essential Gas User Customers. In the event that a Customer that is not covered by Standby Service seeks to purchase natural gas supplies from the Company, such sales may be made by the Company in its sole discretion under such terms and conditions as the Company may require.

11. Limitations on the Availability of TPS Transportation Service

TPS Service is not available to Customers who are defined as "Essential Gas Users" under the curtailment provision as set forth in Section 17 of the Standard Terms and Conditions of this Tariff unless such Customers' TPS, in an amount sufficient to meet such Customers' ADDQ and/or DCQ, agrees to contract and pay for Standby Service as defined in the TPS Service Classification or for such Customers' TPS demonstrates that it possesses Comparable Capacity as defined in the TPS Service Classification.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM THIRD PARTY SUPPLIERS (TPS) (continued)

12. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company's system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company's system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas on behalf of transporting Customer.

III. SPECIAL PROVISIONS, APPLICABLE TO VETERANS' ORGANIZATIONS:

Veterans' Organization Service: Pursuant to N.J.S.A 48:2-21.41, when natural gas service is delivered to a Customer that is a Veterans' Organization, serving the needs of veterans of the armed forces, the Customer may apply and be eligible for billing under this Special Provision.

Each Customer shall be eligible for billing under this Special Provision upon submitting an Application for Veterans' Organization Service under this service classification and by qualifying as a "Veterans' Organization" as defined by N.J.S.A. 48:2-21.41 defines a Veterans' Organization that qualifies for this Special Provision as "an organization dedicated to serving the needs of veterans of the armed forces that: is chartered under federal law, qualifies as a tax exempt organization under paragraph (19) of subsection (c) of section 501 of the federal Internal Revenue Code of 1986, 26 U.S.C. s.501(c)(19), or that is organized as a corporation under the 'New Jersey Nonprofit Corporation Act,' N.J.S.15A:1-1 et seq." Under N.J.S.A. 48:2-21.41, a qualified Veterans' Organization shall be charged the residential rate for service delivered to the property where the Veterans' Organization primarily operates, if the residential rate is lower than the commercial rate for service at that property.

The Customer shall furnish satisfactory proof of eligibility of service under this Special Provision to the Company. Once proof of eligibility is determined by the Company, service under this Special Provision shall begin with the next billing cycle following receipt of the Application.

The Customer will continue to be billed on this service classification. At least once annually, the Company shall review eligible Customers' charges for service delivered, defined to include Service Charges, Demand Charges and Distribution Charges, under this Special Provision for all relevant periods. If these comparable charges for service delivered under the Residential Delivery Service (RDS) classification are lower than the charges under this classification a credit in the amount of the difference shall be applied to the Customer's next bill.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)

APPLICABLE TO USE OF SERVICE FOR:

This Service Classification is available to any non-Residential Customer who wishes to purchase natural gas sales and/or transportation service and have the Company own and maintain facilities at Customer's premises to compress gas into CNG ("CNG Fueling Facilities") for use as fuel for self-propelled motor vehicles ("Vehicular Gas"). This Service Classification also sets forth the terms and conditions under which the Company may sell and/or distribute Vehicular Gas at CNG Fueling Facilities operated by the Company as Public Fueling Stations.

CHARACTER OF SERVICE:

Continuous to Customers signing a Natural Gas Vehicle ("NGV") Service Agreement ("Agreement").

CONDITIONS PRECEDENT:

A Customer must sign an NGV Agreement with the Company to receive continuous service under this Service Classification. Service under such NGV Agreement is for the term of the NGV Agreement and may be continued beyond the term of the NGV Agreement only by the mutual agreement of Company and Customer. Members of the general public who wish only to obtain Vehicular Gas at Public Fueling Stations need not sign an NGV Agreement. Such members of the public have no entitlement to continuous service under this Service Classification. Service under this Service Classification will be separately metered. Customers must indicate in their Agreements whether they will purchase gas supply from Company or from a TPS.

Section 6.01 of the Standard Terms and Conditions of this Tariff sets forth standards that establish the Company's liability for damages. Section 6.01 applies to any claim arising from services provided or facilities constructed, maintained or operated by Company under this Service Classification. Moreover, the specific provisions of Section 6.01 that apply to Customers will apply both to Customers signing an NGV Service Agreement and members of the public who obtain Vehicular Natural Gas under this Service Classification.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

LICENSING, PERMITS AND LEGAL REQUIREMENTS:

Customers installing CNG Fueling Facilities on their premises must meet all applicable licensing, permitting and other legal requirements associated with operating CNG Fueling Facilities or Company may suspend or terminate service to such facilities without further liability.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

MAIN AND SERVICE EXTENSIONS FOR NGV SERVICE, CNG FUELING FACILITIES AND
THE INCREMENTAL COSTS OF CNG-POWERED VEHICLES:

Under this Service Classification, Company may construct and/or install mains, services, automatic meter reading devices, and other facilities necessary to provide sales and transportation service to Customers. Company may also construct and/or install CNG Fueling Facilities located behind Customer's meter. Company may also construct Public Fueling Stations. On a not unduly discriminatory basis, Company may require revenue guarantees sufficient to enable Company to fully recover the costs of all such facilities over a negotiated period as set forth in the NGV Agreement. All negotiated charges under this Service Classification may be revised at the expiration of the term of an NGV Agreement and reflected in any new/replacement NGV Agreement.

Subject to an appropriate revenue guarantee, Company may invest up to ten times the projected annual Distribution Revenues from service provided under this Service Classification in facilities necessary to provide service under this Service Classification. To the extent that Company's investment exceeds ten times projected annual Distribution Revenues, Customer will be assessed a CNG Facilities Charge sufficient to recover Company's excess investment (including its authorized pre-tax return). In lieu of paying a Facilities Charge, Customer may provide a Contribution In Aid of Construction. To the extent that this Section of the NGV Service Classification conflicts with Section 3 of the Standard Terms and Condition of Company's Tariff with respect to service provided under this Service Classification, this Section will control.

I. COMPANY-OWNED AND MAINTAINED CNG FUELING FACILITIES ON CUSTOMERS'
PREMISES

Customer may elect to have Company construct, own, and maintain CNG Fueling Facilities at Customer's Premises ("Customers' Premises Facilities"). Such service does not include the dispensing of CNG into vehicles. Under this option, the dispensing of CNG into vehicles shall be the sole responsibility of the Customer. In addition, Customer may, at its option, either contract and pay separately for electricity needed to operate the CNG Fueling Facility or have the Company contract for such electricity and pass through its actual electricity costs to Customer.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

Rates and Charges Applicable to Customers' Premises Facilities:*

The following rates and charges apply to service under this Service Classification at Customers' Premises Facilities:

1. Distribution Charge - \$0.3612 per therm

2. Fueling Station Charge

A Fixed monthly amount, designed on an individual Customer basis to recover the Company's projected cost of maintaining the Customer's specific CNG Fueling Facility.

3. Facilities Charge

A Fixed monthly amount, designed on an individual Customer basis to recover Company investment in excess of ten times projected annual Distribution Revenues in facilities necessary to provide service under this Service Classification. The Facilities Charge shall be computed by multiplying the Company's investment in excess of ten times projected annual Distribution Revenue (including its authorized pre-tax return) by an appropriate percentage that will be based upon the term of the NGV Agreement.

4. Gas Cost

BGSS-M rate applicable to month of sale for gas sold by Company, not applicable if supplied by a TPS.

5. Taxes and Fees

Motor Fuel and all other taxes and fees or other similar charges applicable to sale and/or transportation of Vehicular Gas. The remittance of any applicable taxes related to such use shall be the sole responsibility of the Company.

*The charges set forth in this section exclude sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any additional taxes, fees or similar charges that are lawfully imposed by the Company. A Customer that receives gas supply from a TPS will be charged for commodity according to the agreement between the Customer and the TPS.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

Sales of Vehicular Natural Gas to Third Parties:

Customer may agree in the Agreement to allow its CNG Fueling Station to be used to sell and dispense CNG to the general public. Such sales will be made at publicly posted prices as determined by the Customer. Distribution Charge revenues from sales to the public shall be credited against any revenue guarantee obligation of Customer.

II. PUBLIC FUELING STATIONS

Company may construct, operate and maintain CNG Fueling Facilities for the purpose of providing Vehicular Gas to the general public.

Rates and Charges Applicable to Company Owned Public Fueling Stations:*

If Company offers service to the general public, the Company shall charge the rates set forth below. The Company shall post such rates at each Public Fueling Facility owned and operated by the Company. The price shall be the Gasoline Gallon Equivalent ("GGE") of a price per therm that includes the following components:

<u>Distribution Charge</u>	\$0.1 per therm
<u>Fueling Station Charge</u>	\$0.3600 per therm
<u>Facilities Charge</u>	\$0.2987 per therm
<u>Gas Cost</u>	BGSS-M rate applicable to the month of sale
<u>Taxes and Fees</u>	Motor fuel and all other taxes and fees or other similar charges applicable to sales of Vehicular Gas. The remittance of any applicable taxes related to such use shall be the sole responsibility of the Company.

*The charges set forth in this section exclude sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any taxes fees or similar charges that are lawfully imposed by the Company.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS ("TPS"):

1. Service Agreement

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a TPS are conditions precedent to receiving gas supply from a TPS.

2. Automatic Meter Reading (AMR) Equipment

Customer shall pay for all costs to install AMR equipment including power, communications and other equipment as specified by the Company and provide access for such equipment. Payments made by the Customer shall not give the Customers ownership of the equipment which shall remain the sole property of the Company.

3. Gas Commingling

Service under this Service Classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas with other supplies. Moreover, the Company reserves the right to utilize Customer's gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

4. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service Customers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

5. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customers the daily requirements.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS ("TPS"): (continued)

6. Utilizing a Third Party Supplier

A Customer choosing to contract with a TPS for supply service will be enrolled for this service with the Company by the TPS on their behalf. A Customer will receive a confirmation notice from the Company notifying them of their enrollment by a TPS and that the Customer should contact the TPS noted on the letter within seven (7) calendar days if they seek to have it rescinded. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by TPS.

7. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and/or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges the Customers shall be billed directly by the Company for their direct portion, if by their non-compliance to Company directives to cease gas use, and/or a prorata share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas Customers will first be credited with standby gas purchased by the TPS on their behalf.

8. Gas Supply Obligation

In the event that Customer's TPS fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service, except for those whose TPS contracted for Standby Service, limited to Essential Gas User Customers. In the event that a Customer that is not covered by Standby Service seeks to purchase natural gas supplies from the Company, such sales may be made by the Company in its sole discretion under such terms and conditions as the Company may require.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS ("TPS"): (continued)

9. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company's system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company's system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas on behalf of transporting Customer.

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SERVICE CLASSIFICATION – LARGE VOLUME DEMAND (LVD)

The signing of a service agreement is a condition precedent to receiving service under this classification. The Service Agreement will include the Customer's Demand Charge Quantity (DCQ).

APPLICABLE TO USE OF SERVICE FOR:

Applicable to Commercial and Industrial Users, with a DQQ of 2,000 or more up to the maximum daily demands as set forth in the Service Agreement, provided that all firm gas service is supplied under this rate, Gas Company's facilities are suitable, and the required quantity of gas is available for the service desired. The consumption of gas in different locations will not be combined for billing purposes.

CHARACTER OF SERVICE:

Continuous Customers may either purchase gas supply from a TPS or the Company's Rider "A", Basic Gas Supply Service ("BGSS").

*CHARGE PER MONTH:

	Tax-Exempt	Taxable
Service Charge	\$303.74	\$323.86
Demand Charge per DCQ	\$1.450	\$1.546
Distribution Charge per Therm	\$0.0459	\$0.0489
Commodity Charge	Per BGSS Rider "A" or TPS Agreement	

*The charges set forth in this Service Classification include sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. A Customer that receives gas supply from a TPS will be charged for commodity according to any agreement between the Customer and the TPS.

DETERMINATION OF THE DEMAND CHARGE QUANTITY ("DCQ"):

The DCQ will be determined by the Customer's maximum daily requirements in terms of therms per day and included in the Service Agreement.

The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer's premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise DCQ shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April), normalized for weather, divided by the applicable

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SERVICE CLASSIFICATION – LARGE VOLUME DEMAND (LVD)
(continued)

DETERMINATION OF THE DEMAND CHARGE QUANTITY (“DCQ”): (continued)

number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer’s gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined.

If the Customer’s maximum daily usage exceeds the contract demand as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement to the highest level experienced during the previous 12 months.

MINIMUM MONTHLY CHARGE:

The sum of the Service Charge and the Demand Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

The term of the contract will be as specified in the individual Service Agreement, however, the term shall not be less than one year. The term of the contract will automatically renew unless the Customer notifies the Company in writing sixty (60) days prior to contract termination. The Customer may switch to a firm transportation service to receive gas supply from a TPS per the provisions of this classification. In the event that a Customer ceases operations completely or moves its operations to a location where the Company does not provide service, Customer shall not be liable for further charges under the Service Agreement upon notification to the Company in writing.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

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SERVICE CLASSIFICATION – LARGE VOLUME DEMAND (LVD)
(continued)

SPECIAL PROVISIONS SECTIONS I & II:

I. SPECIAL PROVISIONS, APPLICABLE TO ALL CUSTOMERS RECEIVING SERVICE UNDER THIS SERVICE CLASSIFICATION

1. Plant Shutdowns

In the event Customer is compelled to shutdown operation of its entire manufacturing or commercial facilities because of a major disaster, major strike, or order of any court or administrative agency having jurisdiction, and said shutdown continues in effect through a full calendar month, Gas Company, upon written request from Customer, may adjust the Minimum Charge for the calendar month. Separate written requests by Customer must be made for each month in which an adjustment of the Minimum Charge is desired and said request shall set forth in detail the exact reasons therefor.

2. Standby Equipment and Fuel

It is the Customer's responsibility to provide for alternate energy facilities needed, if any to provide plant protection service, including cool down periods for refractory, during periods in which gas may be curtailed in accordance with curtailment plan authorized by the State of New Jersey or appropriate Federal Government Agency that are applicable to the Company's operation. In addition, the Gas Company reserves the right to interrupt or suspend service rendered hereunder by Customer if, in the sole judgement of the Company, it is necessary to meet system integrity or to meet other emergency demands under its Curtailment Action Plan as set forth in Section I of this tariff.

3. Facility Charges

The costs of any changes in the facilities of the Gas Company necessary to render this service will be paid for by the Customer.

4. Unauthorized Use

This Service Classification is subject to Unauthorized Gas Use Section of the Standard Terms and Conditions.

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SERVICE CLASSIFICATION – LARGE VOLUME DEMAND (LVD)
(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY
FROM THIRD PARTY SUPPLIERS (TPS)

1. Service Agreement

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a TPS are conditions precedent to receiving gas supply from a TPS.

2. Gas Commingling

Service under this classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

3. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service Customers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

4. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customer's total monthly requirements for that billing month.

5. Utilizing a Third Party Supplier

Customers utilizing a TPS (including brokers and marketers) either as agents or as suppliers of gas into the Company's system, must notify the Company in writing of the TPS that will be used in any particular month. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by TPS. Any Customer or TPS that wishes to deliver gas into the Company's system prior to commencing deliveries must be a qualified under the Company's TPS service classification.

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SERVICE CLASSIFICATION – LARGE VOLUME DEMAND (LVD)

(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM THIRD PARTY SUPPLIERS (TPS) (continued)

6. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges, the Customer shall be billed directly by the Company for its direct portion, if by its non-compliance to Company directives to cease gas use, and/or a prorata share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas Customers will first be credited with standby gas purchased by the TPS on their behalf.

7. Automatic Meter Reading (AMR) Equipment for Customers

In order to utilize this service, (AMR) equipment is required. Customer shall pay for all costs to install (AMR) equipment including power, communications and other equipment as specified by the Company and provide access for such equipment. The cost of any Company equipment may be paid by Customer over a one (1) year or some lesser period by means of a monthly surcharge designed to recover the cost of the equipment plus interest equal to the Company's overall rate of return as authorized from time to time by the New Jersey Board of Public Utilities. Payments made by the Customer shall not give the Customers ownership of the equipment, which shall remain the sole property of the Company.

8. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

9. Gas Supply Obligation

In the event that Customer's TPS fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service, except for those whose TPS contracted for Standby Service, limited to Essential Gas User customers. In the event that a Customer that is not covered by Standby Service seeks to purchase natural gas supplies from the Company, such sales may be made by the Company in its sole discretion under such terms and conditions as the Company may require.

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SERVICE CLASSIFICATION – LARGE VOLUME DEMAND (LVD)

(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY
FROM THIRD PARTY SUPPLIERS (TPS) (continued)10. Limitations on the Availability of Transportation Service

TPS Service is not available to Customers who are defined as “Essential Gas Users” under the curtailment provision as set forth in Section 16 of the Standard Terms and Conditions of this Tariff unless such Customers’ TPS, in an amount sufficient to meet such Customers’ DCQ, agrees to contract and pay for Standby Service as defined in the TPS Service Classification or for such Customers’ TPS demonstrates that it possesses Comparable Capacity as defined in the TPS Service Classification.

11. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company’s system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company’s system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas into Company’s system on behalf of transporting customer.

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Dated XXX3 in Docket No. XXX4

SERVICE CLASSIFICATION – ELECTRIC GENERATION FIRM SERVICE (EGF)

All Customers must sign a Service Agreement. Service will be restricted to the maximum annual and hourly requirements, and the location and equipment specified in the Agreement.

APPLICABLE TO USE OF SERVICE FOR:

Available to customers who utilize natural gas for Qualifying Cogeneration, as defined below, Distributive Generation, Micro Turbine and Fuel Cells at facilities with a rated production of over 500 Kilowatts (kW). Customers have the option of taking service under this Service Classification or negotiating a sales and/or transportation service contract which will be filed with the BPU.

A Qualifying Cogeneration Facility is one that meets the Federal Energy Regulatory Commission (FERC) certification of qualifying status for the sequential production of electrical and/or mechanical energy and useful thermal energy from the same fuel source by a facility as defined in Section 201 of the Regulatory Policies Act of 1978.

CHARACTER OF SERVICE:

Continuous

*CHARGE PER MONTH:

	<u>Tax-Exempt ⁽¹⁾</u>	<u>Taxable ⁽²⁾</u>
Service Charge	\$80.00	\$85.30
Demand Charge per DCQ	\$0.600	\$0.640
Distribution Charge per Therm	\$0.0530	\$0.0565
Commodity Charge	Per Rider "A"	Per Rider "A"

* The charges set forth in this Service Classification include sales and use tax, unless noted tax-exempt and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company.

- (1) Tax-Exempt rates apply to cogeneration facilities that are in compliance with the terms of N.J.S.A. 54:30A-50.
- (2) Taxable rates apply to Customers, unless specifically exempted by law, entering Service Agreements with the Company after 3/10/1997.

Date of Issue: XXX1

Effective: Service Rendered
on and after XXX2

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated XXX3 in Docket No. XXX4

SERVICE CLASSIFICATION – ELECTRIC GENERATION FIRM SERVICE - (EGF)
(continued)

DETERMINATION OF THE DEMAND CHARGE QUANTITY ("DCQ"):

The DCQ will be determined by the Customer's maximum daily requirements in terms of therms per day and included in the Service Agreement.

The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer's premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise DCQ shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April), normalized for weather, divided by the applicable number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer's gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined.

If the Customer's maximum daily usage exceeds the DCQ as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement to the highest level of usage experienced within the past 12 months.

The billing demand quantity for the initial month of gas consumption shall be the rated twenty-four (24) hour input of the connected equipment expressed in equivalent therms.

Demands established during the billing months of May through September, inclusive, will not be used for billing purposes to the extent that such demands exceed previously established billing demands.

MINIMUM MONTHLY CHARGE:

The sum of the Service Charge and the Demand Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

Date of Issue: XXX1

Effective: Service Rendered
on and after XXX2

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated XXX3 in Docket No. XXX4

SERVICE CLASSIFICATION – ELECTRIC GENERATION FIRM SERVICE - (EGF)
(continued)

TERM OF CONTRACT:

The term of the contract will be specified in the Service Agreement, but shall not be less than two years. Successive two-year terms shall be provided unless terminated by written notice prior to 60 days of the contract anniversary date.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS:

1. Maximum Gas Usage and Deliveries

Service will be restricted to the maximum annual and hourly requirements, and the location and equipment specified in the Service Agreement. Upon request by Customer, Company may deliver available quantities of gas in excess of maximum hourly requirement for limited periods. Such deliveries shall not be deemed to constitute a change in the requirements specified in the Service Agreement.

2. Qualifying Facilities and Reporting

Customer must certify that qualifying status has been granted by the FERC and any other agencies required to grant operating status to the facility. The Customer is required to file with the Company all publicly available reports, related to cogeneration operation, that are filed with State and Federal agencies.

3. Metering

Service supplied under this Service Classification shall be separately metered.

4. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

Date of Issue: XXX1

Effective: Service Rendered
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Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated XXX3 in Docket No. XXX4

SERVICE CLASSIFICATION – GAS LIGHT SERVICE (GLS)

This Service Classification is limited to un-metered Gas Lights whose cost of maintenance and repair shall be the responsibility of Customer.

APPLICABLE TO USE OF SERVICE FOR:

Customers who have the gas supply for their outdoor lighting fixtures connected directly to the gas service pipe without being metered.

CHARACTER OF SERVICE:

Continuous.

CHARGE PER MONTH:

The Distribution Charge for this service shall be at the flat rate of \$9.05 per Mantel Equivalent, inclusive of taxes, for each .02 therms of hourly input rating of the lighting fixtures. Input ratings shall be those of the manufacturer of the gas lighting fixtures or as determined by actual test or calculation made by Gas Company. The rate set forth above will be adjusted for the Periodic Basic Gas Supply Service Charge (BGSS-P) of this Tariff as well as all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. Per Therm charges shall be determined by the Company using the following factors times the applicable rates noted above:

Mantel Equivalents = fixture input rating / .02 therms of hourly input

Un Metered Billing Therms = Mantel Equivalents *.02 * 24 hours * 365 / 12

MINIMUM MONTHLY CHARGE:

Flat rate as shown above.

TERM OF PAYMENT:

All bills are due upon presentation. Should a non-residential GLS Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

One year, and thereafter until terminated by five (5) days written notice.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

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Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

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Dated XXX3 in Docket No. XXX4

SERVICE CLASSIFICATION - COGENERATION SERVICE – INTERRUPTIBLE (CSI)
CLOSED TO NEW CUSTOMERS

This Service Classification is only available to qualifying cogeneration facilities served under this classification on or after January 1, 2010, as well as additional facilities added at these Customers existing cogeneration sites after this date.

The signing of a Service Agreement and Federal Energy Regulatory Commission (FERC) certification of qualifying status are conditions precedent to receiving service under this Service Classification.

APPLICABLE TO USE OF SERVICE FOR:

The sequential production of electrical and/or mechanical energy and useful thermal energy from the same fuel source by a Qualifying Facility as defined in Section 201 of the Regulatory Policies Act of 1978.

Customer must certify that qualifying status has been granted by the FERC and will be required to sign a Service Agreement. Service will be restricted to the maximum annual and hourly requirements, and the location and equipment specified in the Agreement.

CHARACTER OF SERVICE:

Interruptible.

Gas will be available at the sole option of the Gas Company when peaking supplies are not required to meet the gas demands of customers served under firm service classifications or other system requirements.

Service may be discontinued or curtailed at the sole option of the Gas Company after not less than three (3) hours notice by telephone or otherwise.

*CHARGE PER MONTH:

	<u>Tax-Exempt</u>	<u>Taxable</u>
Service Charge	\$141.42	\$150.79
Quantity Charge	*	*

*The Quantity Charge shall be the monthly Basic Gas Supply Service Charge ("BGSS-M") plus \$0.0300 per therm pre taxes. In addition, the total monthly charge will be adjusted for all applicable riders or taxes of this tariff.

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520 Green Lane
Union, New Jersey 07083

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SERVICE CLASSIFICATION – COGENERATION SERVICE – INTERRUPTIBLE (CSI)
CLOSED TO NEW CUSTOMERS
(continued)

MINIMUM MONTHLY CHARGE:

Service Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

The term of the contract will be specified in the Service Agreement, but shall not be less than one year. Successive one-year term extensions shall be provided for thereafter, unless terminated by written notice prior to 60 days of the contract anniversary date.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS:

1. Reports

Customer is required to file with the Company all publicly available reports, related to cogeneration operation, that are filed with State and Federal agencies.

2. Metering

Service supplied under this Service Classification shall be separately metered.

3. FERC Status

Customer must certify that qualifying status has been granted by the FERC and will be required to sign a Service Agreement. Service will be restricted to maximum annual and hourly requirements, and the location and equipment specified in the agreement. Upon request by customer, Elizabethtown may deliver available volumes of gas in excess of maximum hourly requirements for limited periods. Such deliveries shall not be deemed to constitute a change in the requirements specified in the Agreement.

Date of Issue: XXX1

Effective: Service Rendered
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520 Green Lane
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SERVICE CLASSIFICATION – COGENERATION SERVICE – INTERRUPTIBLE (CSI)
CLOSED TO NEW CUSTOMERS
(continued)

SPECIAL PROVISIONS: (continued)

4. Standby Equipment and Fuel

It is the Customer's full responsibility to have standby equipment installed and maintained in operating condition and a fuel supply adequate for its operation at all times.

5. Interruption of Service

The Company reserves the right to physically curtail the gas service to any Customer if, in the Company's sole judgment, such action is necessary to protect the operation of its system.

6. Gas Day

A "day" shall be a period of twenty-four (24) consecutive hours, beginning as near as practical to 8 a.m., or as otherwise agreed upon by Customer and Gas Company.

7. Tax Exemption

The cogeneration facility must be in compliance with N.J.S.A. 54:30A-50 in order to be exempt from applicable taxes.

UNAUTHORIZED USE:

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

TREATMENT OF REVENUES:

Eighty (80%) percent of all revenues produced under this Service Classification, exclusive of: Service Charges, and applicable Riders, taxes and the BGSS-M component of the Quantity Charge that shall be credited to the BGSS, after removing applicable taxes, shall be credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

Date of Issue: XXX1

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Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

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SERVICE CLASSIFICATION – INTERRUPTIBLE SERVICE (IS)

The signing of a service agreement is a condition precedent to receiving service under this classification. The Service Agreement will include the Customer's maximum daily requirements.

APPLICABLE TO USE OF SERVICE FOR:

Industrial boiler and commercial boiler use Customers having an alternate fuel capability with a daily demand of not less than 500 therms per day up to a maximum daily demand as set forth in the Service Agreement, providing the Gas Company facilities are suitable and when the Gas Company in its sole discretion deems sufficient gas supplies to be available for this service.

Gas delivered will be separately metered and shall not be used interchangeably with gas supplied under any other Service Classification.

CHARACTER OF SERVICE:

Interruptible

Gas will be available for interruptible service at the sole option of the Gas Company when peaking supplies are not required to meet the gas demands of Customers served under firm service classifications or other system requirements. Service may be discontinued or curtailed at the sole option of the Gas Company after not less than three (3) hours notice by telephone or otherwise. See also Special Provision – Alternative Fuel Requirement.

*CHARGE PER MONTH:

Service Charge	\$628.55
Demand Charge per DCQ	\$0.113
Quantity Charge per Therm	**

*The charges set forth above include sales and use tax, unless noted tax exempt, and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company.

**The Quantity Charge shall be \$0.0843 per therm plus the BGSS-M Charge of Rider "A", plus all other applicable Riders of this Tariff and any additional taxes, or similar charges that are lawfully imposed by the Company. However, it may be adjusted at the sole discretion of the Company each month, upon five (5) days notice to the Board, to a price as described below:

A price equal to the estimated market price expressed in an equivalent rate per therm for No. 2 grade fuel oil using an average BTU content of 136,000 but not less than the floor price nor greater than the ceiling price as described as follows:

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SERVICE CLASSIFICATION – INTERRUPTIBLE SERVICE (IS)

(continued)

CHARGE PER MONTH: (continued)

The floor price, as determined monthly, shall be the BGSS-M and an adjustment for applicable taxes plus applicable Riders of this tariff, plus \$0.016 per therm during the period April through October or \$0.032 per therm during the period November through March and any additional taxes or similar charges that are lawfully imposed by the Company.

The ceiling price shall be \$0.9405 per therm plus the BGSS-M Charge of Rider “A”, plus applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. The ceiling price will be reviewed for possible adjustment if the spot price for Futures Contract Crude Oil – Light Sweet, as published in the Wall Street Journal, exceeds \$130.00 per barrel.

DETERMINATION OF THE DEMAND CHARGE QUANTITY (“DCQ”):

The DCQ will be determined by the Customer’s maximum daily requirements in terms of therms per day and included in the Service Agreement.

The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer’s premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise DCQ shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April), normalized for weather, divided by the applicable number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer’s gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined. If the Customer’s maximum daily usage exceeds the DCQ as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement to the highest level experienced during the previous 12 months.

MINIMUM MONTHLY CHARGE:

The sum of the Service Charge and the Demand Charge.

Date of Issue: XXX1Effective: Service Rendered
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Dated XXX3 in Docket No. XXX4

SERVICE CLASSIFICATION – INTERRUPTIBLE SERVICE (IS)

(continued)

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

Not less than one (1) year, and for successive one (1) year terms thereafter unless terminated by written notice prior to sixty (60) days of the contract anniversary date.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS:

1. Standby Equipment and Fuel

It is the Customer's full responsibility to have standby equipment installed and maintained in operating condition and a fuel supply adequate for its operation at all times. The Customer shall provide the Gas Company with an affidavit certifying the grade and sulphur content of fuel oil that can be utilized in the facilities served under this service classification or a description of the alternate fuel used.

2. Pilot Gas

Any gas consumed for pilot lights shall be billed at the GDS rate schedule. Separate metering shall be used where practicable. Where such metering is not practical, a fixed monthly charge based upon the rated input of the pilot will be billed to the Customer.

3. Emergency Service

If an IS Customer requests gas on an emergency basis when gas service would otherwise be precluded under the terms of this service classification, the Gas Company may in its sole discretion tender gas if it determines that an emergency does exist and the Gas Company has the ability to provide the gas service. Gas consumed under the provision will be priced at a rate per therm equal to the greater of:

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on and after XXX2

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520 Green Lane
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SERVICE CLASSIFICATION – INTERRUPTIBLE SERVICE (IS)
(continued)

SPECIAL PROVISIONS: (continued)

3. Emergency Service (continued)

- a) the incremental cost of gas, as determined by the Gas Company, during the time such service is rendered adjusted for the applicable taxes plus five (5) cents per therm, or
- b) the Distribution Charge of the GDS Service Classification rate plus the BGSS-M charge of Rider "A".

4. Plant Shutdown

In the event Customer is compelled to shut down operation of its manufacturing or commercial facilities because of a major disaster, major strike, or a lawful order of any court or administrative agency having jurisdiction, Gas Company, upon written request from Customer, may not apply or collect from Customer the minimum monthly charge established herein during the period Customer's plant shall remain so shut down, and, upon receipt of such request, Gas Company shall have the right to terminate the contract as of the date when such request is received or at any other time during the period of suspension of said minimum monthly charge.

5. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

6. Alternative Fuel Requirement

As of November 1 of each year, interruptible Customers using No. 2 fuel oil, No. 4 fuel, jet fuel or kerosene are required to have seven (7) days of alternative fuel either on hand or, if a Customer's on-site storage capacity is less than seven (7) days, then full storage capacity plus additional firm contractual supply arrangements to equal seven (7) days. On or before November 1st, Customers shall submit an "Alternative Fuel Certification" indicating they have met the above requirements and the alternative fuel used or will agree to suspend operations during an interruption. Customers who fail to discontinue natural gas use, consistent with the terms and conditions of the relevant interruptible tariff, shall be assessed a charge based on Unauthorized Use.

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on and after XXX2

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

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SERVICE CLASSIFICATION – INTERRUPTIBLE SERVICE (IS)
(continued)

SPECIAL PROVISIONS: (continued)

7. Treatment of Revenues

Eighty (80%) percent of all revenues produced under this Service Classification, exclusive of: Service Charges, Demand Charges, applicable Riders; taxes and the floor price, which shall be credited to the BGSS, after removing applicable taxes shall be credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

Date of Issue: XXX1

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Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)

This service classification is limited to those Customers or their successors and assigns under contract on July 18, 1977.

APPLICABLE TO USE OF SERVICE FOR:

Large volume boiler or turbine fuel with connected load in excess of 35,000 therms per day. Terms of service including pressure, capital repayment, operation condition are separately set forth in individual agreements between the Gas Company and the Customers.

Contracts in effect are with:

Service to Gilbert Generating Station and to Glen Gardner Generating Station per service initially begun with Jersey Central Power & Light Company.

CHARACTER OF SERVICE:

Gas will be available at the sole option of the Gas Company when peaking supplies are not required to meet the gas demands of Customers served under firm service classifications or other system requirements.

The Gas Company reserves the right to interrupt this service upon three (3) hours notice by telephone or otherwise if in its sole discretion continuance of service would adversely impact on its ability to adequately serve other Customers or for other operational reasons.

RATE:

Jersey Central Power and Light Company – not to exceed \$0.0819 per therm plus the BGSS-M Charge, plus the applicable Riders of this Tariff, net of Sales and Use Tax, in effect at the time of rendering service, but not less than the floor price. The floor price, as determined monthly, shall be the BGSS-M plus pre tax rates of \$0.0150 per therm during the period April through October or \$0.0320 per therm during the period November through March, plus applicable Riders of this Tariff, plus an adjustment for any other charges lawfully imposed by the Company.

The rate to be charged will be determined solely by the Company within the range described above.

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520 Green Lane
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Dated XXX3 in Docket No. XXX4

SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)
(continued)

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

One year, and for successive one (1) year terms thereafter unless terminated by written notice prior to sixty (60) days of the contract anniversary date.

SPECIAL PROVISIONS:

1. BTU Adjustment

For purposes of billing, all gas volumes delivered under this service classification shall be converted to therms by multiplying the daily volume at standard conditions of pressure (14.73 psia) and temperature (60°F) by the average daily BTU value of the gas.

2. Emergency Service

Emergency service will be provided upon request if the Gas Company in its sole judgment has the facility capability and the gas supplies to render such service. The rate charged for such service shall be equal to the greater of: a) the incremental cost of gas required by the system at the time the emergency service is rendered plus five cents per therm or b) 145 percent of the “projected purchased gas cost used in determining the current BGSS-M Charge for the purposes of Rider A; plus an adjustment for applicable taxes or similar charges. Excess revenues derived from this provision (exclusive of any adjustments) will be applied to the BGSS Charge as recovered gas costs.

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)
(continued)

SPECIAL PROVISIONS: (continued)

3. Special Purchases

Gas purchased specifically for Service to Gilbert Generating Station and to Glen Gardner Generating Station shall be sold to the Customer(s) incrementally subject to the following conditions as agreed to in writing by all parties and to be in effect for the entire transaction period as specified below:

- a) Type of Service
- b) Duration of Agreement
- c) If the rate agreed upon is to be based upon an oil parity, the following shall be specified in the agreement:
 - (1) Type of oil to be used for parity purposes
 - (2) The source from which oil prices will be taken and the method by which the oil parity rate will be computed
 - (3) The appropriate adjustments to be made to the oil parity rate
 - (4) The frequency with which the oil parity will be recomputed
- d) The rate when an oil parity rate is not used
- e) Special contract provisions

The BGSS Charge of this tariff shall not apply to the services provided under this provision. Similarly, all volumes shall be excluded from the calculations associated with the clause.

4. Transportation of Customer Gas

Gas purchased by the Customer and made available for Transportation through the Company system will be delivered to Customer subject to the terms and conditions of a Service Agreement signed by all parties.

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on and after XXX2

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)
(continued)

SPECIAL PROVISIONS: (continued)

4. Transportation of Customer Gas (continued)

The Service Agreement shall specify the following:

- a) Type of Service
- b) Duration of Agreement
- c) Charges associated with the Service
- d) Special contract provisions

5. Storage Service

- a) Firm Storage

Availability of Storage Service will be announced by the Company by February 1 of each year. The Customer may subscribe for Firm Storage Service by March 1 of each year. If oversubscribed, the available level of service will be offered pro rata, based on the Customer's actual usage during the 12 months ended December 31. Firm Storage Service will be available for a contract year running May 1 through April 30.

The Storage Service will be available at a 100 day withdrawal rate or a 150 day withdrawal rate. Injections into storage may be made between May 1 and October 31 at a daily rate not to exceed 1/180 of the contracted storage capacity. Withdrawals may be made between November 1 and April 30 at a daily rate not to exceed contract amount as set forth in the Service Agreement. All storage gas must be taken out by April 30. The Company may at times relax these operating conditions if it determines such can be done without adversely affecting service to its sales Customers.

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Union, New Jersey 07083

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)
(continued)

SPECIAL PROVISIONS: (continued)

5. Storage Service (continued)

The charges for Firm Storage Service are as follows:

Customer Accounting Charge	\$69.55	per month
Injection Charge	\$0.086	per Dth
Withdrawal Charge	None	

Storage Demand Charge (Monthly Charge for 12 Months)

100 day withdrawal rate	\$0.152	per Dth of contracted storage capacity
150 day withdrawal rate	\$0.116	per Dth of contracted storage capacity

The Company and Customer will enter into a Service Agreement specifying the maximum daily delivery amount and total storage capacity amount. The Customer may not obtain a maximum daily delivery amount in excess of 50% of their maximum daily demand for gas and in no event greater than the maximum daily delivery amount in their Transportation Service Agreement.

b) Limited Storage Service

For the period May through October the Company may offer a limited Storage Service. The charges for such service shall be as follows:

Customer Accounting Charge	\$69.55	per month
Injection Charge	\$0.086	per Dth
Withdrawal Charge		None
Storage Demand Charge	\$0.041	per Dth of contracted storage capacity

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520 Green Lane
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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)

(continued)

SPECIAL PROVISIONS: (continued)

b) Limited Storage Service (continued)

The Company and Customer will enter into a Service Agreement specifying the maximum daily delivery amount and the total storage capacity amount. The Service Agreement will also describe when and how injection and withdrawals can be made. The Customer may not obtain storage capacity for more than 50% of their most recent historical gas consumption for the period of May to October, however that level of consumption may be adjusted upward if the Customer were using alternate fuel instead of gas.

6. Treatment of Revenues

All revenues produced under this Service Classification, exclusive of; Service Charges, and applicable Riders, taxes, and revenues resulting from service under Special Provisions 2, will be apportioned as follows:

a) Sales made under the Rate provision of this service classification:

All remaining revenues in excess of the floor price of gas, after removing applicable taxes, shall be subject to revenue sharing – 80% credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

b) Sales made under Special Provision 3 of this service classification:

All remaining revenues in excess of the costs associated with the special gas purchase shall be subject to revenue sharing – 80% credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

c) Services provided under Special Provision 4 of this service classification:

All remaining revenues in excess of any incremental administrative costs incurred in providing this service shall be subject to revenue sharing – 80% credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

d) Services provided under Special Provision 5 of this service classification:

All remaining revenues in excess of the Customer Accounting Charge shall be subject to revenue sharing – 80% credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

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on and after XXX2

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

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Dated XXX3 in Docket No. XXX4

SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)
(continued)

SPECIAL PROVISIONS: (continued)

7. Contract Review

To the extent that any new contracts with terms in excess of three (3) years are entered into under Special Provision 3, 4 and/or 5 of this service classification or any existing contracts under Special Provision 3, 4 and/or 5 with terms in excess of three (3) years are amended, the Company is required to submit such contracts or amendments to the Staff of the Board of Public Utilities for review thirty days prior to the effective date of such contract or amendment.

8. Societal Benefits Charge

The rates set forth above will be adjusted for the Societal Benefits Charge of this Tariff, Rider "D".

9. Applicable Taxes

The charges in this Rate Schedule will include provision for the New Jersey Sales and Use Tax. When billed to Customers exempt from one or more of these taxes, such charges will be reduced by the relevant amount of such taxes included therein.

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SERVICE CLASSIFICATION – SUPPLEMENTAL INTERRUPTIBLE SERVICE (SIS)

This service classification is for a limited term. The signing of a service agreement by the Customer with the Gas Company is a condition precedent to receiving service under this service classification.

APPLICABLE TO USE OF SERVICE FOR:

Customers under service classification EGF, CSI, LVD, IS or ITS up to a maximum daily demand as set forth in their existing service agreement, or as set forth in the service agreement under this service classification, providing that Gas Company facilities are suitable and gas supplies can be secured for this service.

CHARACTER OF SERVICE:

Gas will be made available for this service only to the extent that such gas supplies can be incrementally purchased or produced.

The Gas Company reserves the right to interrupt this service upon three (3) hours notice by telephone or otherwise if in its sole discretion continuance of service would adversely impact on its ability to adequately serve other Customers or for other operational reasons.

RATE:

1. Service Charge

Upon initial request of SIS service, Customer will be charged an amount equal to the monthly service charge of the Customer's existing rate. This charge will be reassessed for subsequent initial requests made after June 30 of any year. In addition, a \$50.00 daily charge will be assessed, pre-taxes, for each day SIS is utilized.

2. Quantity Charge

The rate per therm for gas used shall be set within a range computed to be (a) the incremental cost of purchasing or producing said gas plus all applicable taxes plus \$0.0755 per therm and (b) the effective IS rate.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make a payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

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SERVICE CLASSIFICATION – SUPPLEMENTAL INTERRUPTIBLE SERVICE (SIS)

(continued)

SPECIAL PROVISIONS:

1. Offering of Service

Unless otherwise agreed to in the service agreement:

- a) Any Customer who does not accept gas offered under this rate schedule within the period of time allotted by the Company shall be deemed to have rejected such offer and waived all entitlements to the offered gas.
- b) Customers normally served under the IS service classification will be offered gas under this service classification only when Interruptible Gas Service does not satisfy total Customer requirements. Any gas supplies available under this service classification shall be offered to qualified Customers on a prorated basis utilizing the Daily Demand Requirements as set forth in the service agreements as the criteria for proration, subject to the operating capabilities and system requirements of the Company.

2. Basic Gas Supply Service Charge

Gas purchased for sale under this service classification shall not be included as part of the gas costs recoverable through the BGSS Charge.

3. Treatment of Revenues

The revenue (exclusive of any service charges and applicable riders, taxes and other similar charges) on a per therm basis produced under this service classification that exceeds the per therm cost of the incrementally purchased or produced gas including applicable taxes and other similar charges shall be subject to the revenue sharing formula associated with the Customer's regular service classification.

4. Obligation to Take Requested Service

If the Customer requests service be rendered under this service classification and if such gas when offered is not used by the Customer, the Customer will be subject to being charged a per therm rate equivalent to the difference between the average gas costs as shown in the then current BGSS Charge and the actual gas cost for all therms unsold by the Gas Company under this service classification during the applicable BGSS Charge period. These revenues will be applied to the BGSS Charge as recovered gas costs. The gas cost and volumes would be applied to the BGSS Charge as purchased gas costs and available volumes.

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SERVICE CLASSIFICATION – SUPPLEMENTAL INTERRUPTIBLE SERVICE (SIS)
(continued)

SPECIAL PROVISIONS: (continued)

5. Pricing Modification

The methodology and pricing set forth in the Rate section of this Service Classification may be modified in the service agreement, if agreed to by the Customer and the Company, in order to accommodate market conditions or special Customer requirements (including special requirements if the Customer commits to use gas for a suitable cogeneration facility).

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a third party are conditions precedent to receiving service under this Service Classification.

APPLICABLE TO USE OF SERVICE FOR:

Customers eligible for service under Service Classifications LVD, IS, or CSI and having clear title to gas that is made available for ITS on the Company's distribution system, except that such Customers need not comply with the alternate fuel requirement of those Service Classifications to receive service hereunder. However, the Customer must comply with the Alternate Fuel Requirement under this Service Classification.

CHARACTER OF SERVICE:

Interruptible Transportation Service will be available when system capacity is not required to meet the demands of Customers served under all other Service Classifications or other system requirements, including, but not limited to, conditions that may be imposed on the Company by its suppliers. The availability of this service, and all determinations and interpretations hereunder, shall be at the sole judgment of the Company. Service may be discontinued or curtailed at the sole option of the Company after not less than three (3) hours notice by telephone or otherwise.

*CHARGE PER MONTH:

	<u>Tax-Exempt</u>	<u>Taxable</u>
Service Charge	\$589.50	\$628.55
Demand Charge per DCQ	\$0.400	\$0.427
Distribution Charge per Therm	**	**

*The charges set forth above include sales and use tax, unless noted tax exempt, and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company.

**The ceiling for the Distribution Charge shall be \$0.1233 per therm or \$0.1156 per therm, for tax-exempt Customers, but may be reduced, upon five (5) days notice to the Board to a floor of \$0.0262 per therm or \$0.0246 for tax exempt Customers, if the Company determines that, without a rate reduction, competitive pressures may result in the loss of load or the Customer. Rates for Customers without alternate fuel capability will be set monthly without reference to a ceiling or floor price. The above rates will be further adjusted to include all other charges set forth in the applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company.

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520 Green Lane
Union, New Jersey 07083

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(continued)

DETERMINATION OF THE DEMAND CHARGE QUANTITY (DCQ):

DCQ will be determined by the Customer's maximum daily requirements in terms of therms per day and included in the Service Agreement.

The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer's premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise DCQ shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April), normalized for weather, divided by the applicable number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer's gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined.

If the Customer's maximum daily usage exceeds the DCQ as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement to the highest level experienced during the previous 12 months.

MINIMUM MONTHLY CHARGE:

The sum of the service charge and the demand charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(continued)

TERM OF CONTRACT:

The term of the contract will be as specified in the individual Service Agreement; however, the term shall not be less than one year. The term of the contract will automatically renew unless the Customer notifies the Company in writing sixty (60) days prior to contract termination. In the event that a Customer ceases operations completely or moves its operations to a location where the Company does not provide service, Customer shall not be liable for further charges under the Service Agreement upon notification to the Company in writing.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS:

1. Gas Commingling

Service under this classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas with other supplies. Moreover, the Company reserves the right to utilize Customer's gas, when necessary, in accordance with the applicable provisions of this Tariff.

2. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service Customers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

3. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customers the total monthly requirements for that billing month.

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(continued)

SPECIAL PROVISIONS: (continued)

4. Utilizing a Third Party Supplier

Customers utilizing brokers, marketers or other third party suppliers (collectively Third Party Suppliers, "TPS") either as agents or as suppliers of gas into the Company's system, must notify the Company in a manner acceptable to the Company of the TPS that will be used in any particular month. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by TPS. Any Customer or TPS that wishes to deliver gas into the Company's system prior to commencing deliveries must be a qualified TPS under the Company's TPS service classification.

5. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges the Customers shall be billed directly by the Company for their direct portion, if by their non-compliance to Company directives to cease gas use, and/or a 92efille share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas Customers will first be credited with standby gas purchased by the TPS on their behalf.

6. Automatic Meter Reading (AMR) Equipment for s

In order to utilize this service, AMR equipment is required. Customer shall pay for all costs to install AMR equipment including power, communications and other equipment as specified by the Company and provide access for such equipment. The cost of any Company equipment may be paid by Customer over a one (1) year, or some lesser, period by means of a monthly surcharge designed to recover the cost of the equipment plus interest equal to the Company's overall rate of return as authorized from time to time by the New Jersey Board of Public Utilities. Payments made by the Customer shall not give the Customers ownership of the equipment which shall remain the sole property of the Company.

7. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)

(continued)

SPECIAL PROVISIONS: (continued)8. Treatment of Revenues

Revenues under this Service Classification, exclusive of applicable taxes shall be accounted for as follows: All service charge revenues derived from IS, CSI and LVD Customers shall be retained by the Company.

All demand charge revenues derived from LVD Customers shall be retained by the Company. The first \$0.080 per therm of all demand charge revenues from IS Customers shall be retained by the Company. All remaining demand revenues derived from IS Customers shall be credited 80% to the OSMC in accordance with the Board's Order in Docket No. GO99030122 and 20% to the Company. All demand revenues derived from CSI Customers shall be credited 80% to the OSMC in accordance with the Board's Order in Docket No. GO99030122 and 20% to the Company.

All distribution charge revenues from LVD Customers shall be retained by the Company. All remaining distribution charge revenues from IS and CSI Customers shall be credited 80% to the OSMC in accordance with the Board's Order in Docket No. GO99030122 and 20% to the Company.

Revenues derived from the application of Riders shall be accounted for in accordance with the respective Riders. Revenues derived from the payment of imbalance charges, imbalance cash outs, or unauthorized use charges shall be credited to the BGSS Charge.

9. Gas Supply Obligation

In the event that Customer's TPS fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service.

10. Limitations on the Availability of TPS Transportation Service

TPS Service is not available to Customers who are defined as "Essential Gas Users" under the curtailment provision as set forth in Section 16 of the Standard Terms and Conditions of this Tariff unless such Customers' TPS, in an amount sufficient to meet such Customers' DCQ, demonstrates that it possesses Comparable Capacity as defined in the TPS Service Classification. In addition, the TPS can serve such ITS Customers if they can demonstrate to the Company's satisfaction that they possess sufficient alternate fuel capability to meet their energy requirements for a period not less than fourteen (14) consecutive days.

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(continued)

SPECIAL PROVISIONS: (continued)

11. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company's system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company's system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas on behalf of transporting Customer.

12. Availability of IS, LVD or CSI Service

ITS Customers who wish to do so may be made eligible to purchase sales service under the IS, LVD or CSI Service Classification also by designating the appropriate sales Service Classification in their ITS Service Agreements. Customer must meet the eligibility criteria applied to the designated sales Service Classification in order to obtain sales service. Customers may not designate more than one sales Service Classification. Customers that elect to purchase IS, LVD or CSI service may nominate sales or transportation service, but not both sales and transportation service, in any month. Customers who elect sales service under this provision shall remain subject to the Service and Demand Charges and the terms and conditions of this transportation Service Classification and in addition shall be liable for the Distribution and Rider Charges of the elected sales service.

13. Alternative Fuel Requirement

As of November 1 of each year, interruptible Customers using No. 2 fuel oil, No. 4 fuel, jet fuel or kerosene are required to have seven (7) days of alternative fuel either on hand or, if a Customer's on-site storage capacity is less than seven (7) days, then full storage capacity plus additional firm contractual supply arrangements to equal seven (7) days. On or before November 1st, Customers shall submit an "Alternative Fuel Certification" indicating they have met the above requirements and the alternative fuel used or will agree to suspend operations during an interruption. Customers who fail to discontinue natural gas use, consistent with the terms and conditions of the relevant interruptible tariff, shall be assessed a charge based on Unauthorized Use. Also see, Special Provision, Limitation of the Availability of TPS Transportation Service.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE

The provisions of this Service Classification shall apply to brokers, marketers, Customers intending to act as their own gas supplier, and other (collectively, TPSs) of natural gas who wish to either act as agents for Transportation Customers or deliver natural gas supplies to Company's City Gate for Transportation Customers. TPSs wishing to sell and/or deliver gas on the Company's system will be required to sign a Service Agreement in which they will agree to be bound by the terms and conditions of this Service Classification as well as other applicable terms and conditions of the Company's Tariff. By entering into a Service Agreement, TPS certifies that it is in compliance with all current applicable provisions of law, including N.J.S.A. 48:3-7.3. and will take steps to remain in compliance with all future applicable provisions and all other requirements mandated by the Board.

TERM OF CONTRACT:

The term of the contract shall be one (1) year and from month to month thereafter unless terminated on thirty (30) days written notice.

CREDITWORTHINESS:

Company shall not be required to permit any TPS who fails to meet Company's standards for creditworthiness to sell or deliver gas on its system. Company may require that TPS provide the following information:

a) Current audited financial statements (to include a balance sheet, income statement and statement of cash flow), annual reports, 10-K reports or other filings with regulatory agencies, a list of all corporate affiliates, parent companies and subsidiaries and any reports from credit agencies which are available. If audited financial statements are not available, then TPS also should provide an attestation by its chief financial officer that the information shown in the unaudited statements submitted is true, correct and a fair representation of Buyer's financial condition.

b) A bank reference and at least three trade references.

c) A written attestation that TPS is not operating under any chapter of the bankruptcy laws and is not subject to liquidation or debt reduction procedures under state laws, such as an assignment for the benefit of creditors, or any informal creditor's committee agreement. An exception can be made for a TPS who is a debtor-in-possession operating under Chapter XI of the Federal Bankruptcy Act but only with adequate assurances that any charges from the Company will be paid promptly as a cost of administration.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE

(continued)

CREDITWORTHINESS: (continued)

d) A written attestation that TPS is not subject to the uncertainty of pending litigation or regulatory proceedings in state or federal courts which could cause a substantial deterioration in its financial condition or a condition of insolvency.

e) A written attestation from TPS that no significant collection lawsuits or judgments are outstanding which would seriously reflect upon the business entity's ability to remain solvent.

If TPS has an ongoing business relationship with Company, no uncontested delinquent balances should be outstanding for natural gas sales, storage, transportation services or imbalances previously billed by Company, and TPS must have paid its account during the past according to the established terms, and not made deductions or withheld payment for claims not authorized by contract.

TPS shall furnish Company at least annually, and at such other time as is requested by Company, updated credit information for the purpose of enabling Company to perform an updated credit appraisal. In addition, Company reserves the right to request such information at any time if Company is not reasonably satisfied with TPS's creditworthiness or ability to pay based on information available to Company at that time.

Company shall not be required to permit and shall have the right to suspend permission to sell or deliver gas on its system to any TPS who is or has become insolvent, fails to demonstrate creditworthiness, fails to timely provide information to Company as requested, or fails to demonstrate ongoing creditworthiness as a result of credit information obtained; provided, however, TPS may continue to sell/deliver gas on the Company's system if TPS elects one of the following options:

- (i) Payment in advance for up to three (3) months of TPS's obligations to Company.
- (ii) A standby irrevocable letter of credit in form and substance satisfactory to Company in a face amount up to three (3) months of TPS's obligations to Company. The letter of credit must be drawn upon a bank acceptable to Company.
- (iii) A guaranty in form and substance satisfactory to Company, executed by a person that Company deems creditworthy, of TPS's performance of its obligations to Company.
- (iv) Such other form of security as TPS may agree to provide and as may be acceptable to Company.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE

(continued)

CREDITWORTHINESS: (continued)

In the event Third Party Supplier fails to immediately prepay the required three (3) months of revenue or furnish security, Company may, without waiving any rights or remedies it may have, and subject to any necessary authorizations, suspend Third Party Supplier until security is received.

The insolvency of a TPS shall be evidenced by the filing by TPS, or any parent entity thereof, of a voluntary petition in bankruptcy or the entry of a decree or order by a court having jurisdiction adjudging the Third Party Supplier, or any parent entity thereof, bankrupt or insolvent, or approving as properly filed a petition seeking reorganization, arrangement, adjustment or composition of the TPS, or any parent entity thereof, under the Federal Bankruptcy Act or any other applicable federal or state law, or appointing a receiver, liquidator, assignee, trustee, sequestrator, (or similar official) of the TPS or any parent entity thereof or of any substantial part of its property, or the ordering of the winding-up or liquidation of its affairs.

NOMINATIONS FOR SERVICE:

A TPS shall provide to the Company in writing, or by other means as determined by the Company, at least 10 working days prior to the beginning of the calendar month an estimate of its deliveries into the Company's system for the month. These nominations must, in the aggregate, match the nominations of all Customers that are required to submit nominations to Company and to whom the Third Party Supplier will be delivering during the month plus the ADDQ that the TPS is obligated to deliver to the Company's system. Failure to provide nominations may result in suspension of service to Customers of offending TPS.

Company will notify TPS of its ADDQ obligation for each day of the next succeeding month in writing to be delivered by facsimile or by other means as determined by the Company no later than the fifteenth (15th) day of the month immediately preceding the month in which TPS will be obligated to deliver the ADDQ. If Third Party Supplier does not agree with Company's determination of TPS's ADDQ, it must notify Company in writing to be delivered by facsimile no later than 5:00 p.m. Eastern Standard Time on the seventeenth (17th) of the month immediately preceding the gas flow month. Company and TPS will reconcile any differences no later than 5:00 p.m. Eastern Standard Time on the twentieth (20th) of the month.

In addition, TPS must identify interstate pipeline, shipper names and interstate pipeline shipper contract number(s) on which deliveries will be made at least twenty-four (24) hours prior to the flow of gas. Failure to comply with the Company's nominating procedures may result in curtailment of third party gas deliveries or additional monthly cash-outs. The Company reserves the right to specify which pipeline a TPS will deliver gas as a percentage of the TPS total monthly deliveries.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

DETERMINATION OF AVERAGE DAILY DELIVERY QUANTITY (“ADDQ”):

The individual ADDQ for all RDS, SGS, GDS Customers with a DCQ under 500 therms, and NGV Customers shall be calculated as follows:

1. Unadjusted ADDQ – Customer’s weather normalized usage for each of the most recent billing periods, covering an annual period, prorated to calendar months, divided by the total number of days in each billing month. This quotient will be the Customer’s Initial ADDQ. For new Customers, Customer’s Initial ADDQ will be estimated by Company.
2. ADDQ Adjustment – At the end of each billing period, Company will calculate the difference between Customer’s actual usage and actual deliveries for the billing period, taking into account any adjustments from prior months, and will adjust the Initial ADDQ for the next succeeding month by that difference divided by the total number of days in the month.
3. Adjusted ADDQ – The sum of items 1 and 2 will be adjusted by 1.5% for Company use and unaccounted for gas to determine the individual customers Adjusted ADDQ.

Company may adjust Customer’s individual ADDQ at any time due to changes in Customer’s gas equipment or pattern of usage.

The TPS’s ADDQ shall be the total of the individual Adjusted ADDQs of all customers it serves that require an ADDQ delivery.

PIPELINE IMBALANCES:

Company and TPS recognize that Company may be subjected to imbalance charges from its interstate pipeline suppliers as a result of TPS’s failure to deliver confirmed quantities of gas. Company and TPS shall use their best efforts to avoid such imbalance penalties. However, in the event that Company is assessed penalties as a result of TPS’s actions or omissions, TPS shall reimburse Company for such penalties as may be attributable to TPS’s actions or omissions.

INDEMNIFICATION:

As between the Company and TPS, TPS warrants that it has clear title to any gas delivered into the Company’s system, and TPS shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company’s system for redelivery to Customer. TPS agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries on behalf of a transporting customer.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE

(continued)

ALLOCATION OF SUPPLIES:

If a TPS is delivering gas to Customers under more than one Service Classification, such as RDS, GDS, LVD and/or ITS, and does not provide the supply allocations, then gas received by the Company in that month from the Third Party Supplier shall be allocated as follows:

1. First, to the ADDQ of RDS customers
2. Second, to the ADDQ of SGS, GDS and NGV customers
3. Third, to the GDS customers not subject to ADDQ and LVD customers
4. Last, to ITS and special contract customers

However, a TPS may specify individual supply allocations for its GDS customers not subject to the ADDQ, LVD, ITS and special contract Customers no later than one (1) business day following the date the TPS receives final month end measurement data for these customers from the Company.

DAILY AND MONTHLY CONTRACT BALANCING:

All balancing charges shall be charged to the TPS and are in addition to any other charges under this Service Classification. The Distribution Charge in the Charge Per Month of the Customers Service Classification is based upon actual consumption not TPS deliveries.

a) Daily Imbalance Charge:

The Company shall, within the existing limitations of its system, provide for balancing between gas requirements and actual gas deliveries, net of an adjustment for Company Use and Unaccounted for Gas, received by the Company for the account of the Customers served by the TPS that day. The Company shall not be obligated to provide gas service during an hourly, daily or monthly period in excess of the levels specified in the Service Classifications under which Customers of the TPS are served.

During the months of November through April, the TPS will be required to balance daily deliveries and daily takes of transported gas by the customers it serves on any day when the average temperature at Newark Airport is forecast to be 27°F or less. However, the Company reserves the right to waive this requirement. The Company reserves the right during the months of November through April to require daily balancing on any other day in which the Company, in the exercise of its reasonable judgment, determines that such balancing is necessary for operational reasons. The Company will provide the TPS in all instances with at least twenty-four (24) hours advance notice that daily balancing will be imposed daily.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

DAILY AND MONTHLY CONTRACT BALANCING: (continued)

a) Daily Imbalance Charge (continued):

In the event that daily balancing is imposed in accordance with this section, TPS shall be assessed the following charges for daily imbalances:

	Imbalance *	Charge **
	0% to 5%	\$0.00 per therm
	5% to 10%	\$0.11 per therm for imbalances in excess of 5%
Underdeliveries	> 10%	\$0.53 per therm for imbalances in excess of 10%
Overdeliveries	> 10%	\$0.11 per therm for imbalances in excess of 10%

* The Company reserves the right to limit daily imbalances to plus or minus 5% of the actual quantity received. If the Company limits daily imbalances to plus or minus 5%, all underdeliveries in excess of 5% shall be considered Unauthorized Use and shall be subject to the Unauthorized Use charges specified in Section I, Item 17.

**The Company may suspend overdelivery charges if it determines such overdeliveries would be beneficial to the systems operation.

All TPSs will automatically be placed in a non-discriminatory daily balancing pool. The Company will aggregate the deliveries and receipts of gas of all TPS customers participating in the pool for the purpose of determining whether imbalance charges will apply. In the event that charges are nonetheless assessed to certain TPSs, such charges will be no greater than the charges that otherwise would have been assessed if the Company did not have a daily balancing pool. TPSs trading imbalances will nonetheless have to set their own prices or methods by which over or under balances will be traded among individual TPSs.

b) Monthly Imbalance Cash-Out Charge:

At the conclusion of every month, the Company will cash out imbalances between TPS's deliveries and their Customers consumption made up of actual and or estimated volumes as follows:

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

DAILY AND MONTHLY CONTRACT BALANCING: (continued)

b) Monthly Imbalance Cash-Out Charge: (continued)

<u>Imbalance</u>	<u>Overdeliveries</u>	<u>Underdeliveries</u>
0% to 5%	The Company's WACOG, defined as, the weighted average commodity cost of gas exclusive of peaking supplies as estimated by the Company for the month.	The monthly floor price for Interruptible Service tariff, less any Company margin embedded in the floor price.
>5% to 10%	90% of the Company's lowest cost supply for the month.	Higher of the: 1) The rate for the 0%-5% imbalance plus two (2) cents per therm <u>-or-</u> 2) The average of the month's four weekly prices published in <u>Natural Gas Week</u> for "Major Market Prices – New York City Gate" plus two (2) cents per therm.
>10%	75% of the Company's lowest cost supply for the month.	Higher of the: 1) The rate for the 0%-5% imbalance plus two (2) cents per therm times 125% <u>-or-</u> 2) The month's highest weekly price published in <u>Natural Gas Week</u> for "Major Market Prices – New York City Gate" plus two (2) cents per therm.

The offering of gas service above the 5% allowed imbalance for the month is at the sole discretion of the Company. If it determines that it cannot continue to provide such service or that it must limit such service, it will notify TPSs served under this Service Classification. The use of service above the level allowed by the Company after notification shall constitute Unauthorized Use and shall be subject to the Unauthorized Use charges specified in Section I, Item 17.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

ADJUSTMENT FOR COMPANY USE AND UNACCOUNTED FOR GAS:

A 1.5% adjustment for Company use and unaccounted for gas shall be made to the quantity of gas received from the TPS to serve its Customers.

STANDBY BALANCING SERVICE:

A TPS cannot contract for a greater level of Standby than its Essential Gas User Customers (“EGU”) peak ADDQ month or Demand Charge Quantity (“DCQ”) as applicable for their RDS, GDS or LVD Customers. A TPS who does not use Comparable Capacity for their EGU natural gas requirements, must contract for Standby Service to serve these customers to assure continued gas service when their own gas supply is interrupted or underdelivered for any reason. This service is available for a minimum term of three (3) years and is payable even if EGU Customers are no longer served by the TPS per the Customers last DCQ. The charge for this service will consist of a demand charge of \$0.537 per therm of DCQ to be paid each month of the year whether or not Standby Service is used, and a commodity charge equal to: in the months October through April the greater of the Company’s monthly weighted average cost of gas plus three (3) cents per therm, or the average of the month’s four weekly prices published in Natural Gas Week for “Major Market Prices – New York City Gate,” and in the months May through September the lesser of the Company’s monthly weighted average cost of gas, or the average of the month’s four weekly prices published in Natural Gas Week for “Major Market Prices – New York City Gate” plus two (2) cents per therm, as applied to any gas service rendered. All standby service charges shall be in addition to the rates otherwise charged under this Service Classification.

All standby revenues, exclusive of taxes and other similar charges and the three (3) cent per therm commodity surcharge in the months of October through April, shall be credited to the BGSS.

DELIVERED QUANTITIES:

Quantities billed to the end-use Customers shall be considered actual quantities delivered, whether based on actual or estimated meter readings.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

SPECIAL PROVISIONS:

In addition to the preceding terms and conditions of this Service Classification, the following terms and conditions shall apply to all TPSs providing service to Customers receiving service from Company under Service Classifications RDS, GDS, LVD and ITS. If, and to the extent that, any portion of the following is in conflict with previous terms of this Service Classification, the terms that follow shall govern.

1.

Enrollment of RDS, SGS, GDS and NGV Customers

TPS must enroll RDS, SGS, GDS and NGV Customers in accordance with the Company electronic enrollment procedures. Customer consent is assumed if the TPS provides the Company with the Customer's account number and service address and any other information that may be required by the Company, RDS customers will receive a confirmation notice from the Company noting their choice of supplier and that the RDS customer will have seven (7) calendar days from the date of the confirmation notice to contact the Company and rescind its selection, after which, if not rescinded, the RDS customer's TPS enrollment shall be accepted by the Company. TPS supply service will commence for all enrollments received by the 10th of a month, inclusive of those RDS customers that are not rescinded, on the customer's next month's cycle meter reading date. TPS shall indemnify and hold Company harmless from any costs incurred by Company as a result of TPS's erroneous or improper enrollment of Customers.

The Company must comply with all Customer instructions verbal or written to rescind or change service with a TPS. TPS must initiate all transactions required by the Company to rescind service on the day such instructions are received by the TPS from the Company or Customer. A Customer returning to sales service will be effective on the Customer's first billing cycle meter read date following the date on which the Company has changed the TPS's ADDQ requirement. A Customer will be switched to another TPS effective on the cycle read date following the reassignment of the Customer's ADDQ for gas nominations.

2. Requirements for RDS and Essential Gas Use Customers

Any TPS seeking to serve such Customers must demonstrate that it possesses Comparable Capacity or Standby in a quantity sufficient to serve Customers' Unadjusted ADDQ or DCQ requirements during the months of November through March.

"Comparable Capacity" is a firm non-recallable service at Elizabethtown's city gate(s). The Company reserves the right to limit the service to 70% on Transcontinental Gas Pipe Line Corporation's ("Transco") system and the remaining 30% on Texas Eastern Transmission Corporation's ("Tetco") system.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE

(continued)

SPECIAL PROVISIONS: (continued)2. Requirements for RDS and Essential Gas Use Customers (continued)

In order to demonstrate Comparable Capacity, TPS shall be required to provide, at the time the Customer is enrolled, an affidavit signed by an officer stating that Comparable Capacity is being provided for the November through March period. This affidavit must be refiled annually. The Company reserves the right to request TPS to submit copies of its Comparable Capacity contracts supporting its affidavits in the event that a TPS fails to deliver.

3. Capacity Assignment

TPS serving RDS Customers may, if they choose, accept an assignment of base load, long haul interstate pipeline capacity from Company in a quantity equal to the amount of base load, long haul capacity used by the Company to serve the Customer's anticipated design day demand. 70% of such capacity will consist of capacity on Transcontinental Gas Pipe Line Corporation and 30% of such capacity will consist of capacity on Texas Eastern Transmission Corporation. Such capacity will be assigned for a one year term on a basis prorated to the underlying contracts at the same maximum rates paid by the Company. Such capacity will be immediately recallable in the event that TPS fails to deliver the RDS Customer's ADDQ or no longer serves such RDS Customers. A TPS wishing to accept assignment of Company's interstate pipeline capacity must notify Company at the time that Customer is enrolled in RDS service.

To the extent that TPS wishes to take assignment of interstate pipeline capacity in addition to its RDS Customer's portion of base load, long haul capacity, it shall notify the Company in writing. To the extent that the Company, in its sole discretion, determines that it has additional capacity available for release, it shall notify any TPSs that have advised the Company that they wish to take assignment of such capacity prior to making such capacity available to third parties. Company reserves the right to release any interstate pipeline capacity to the highest bidder or on a non-discriminatory basis. The Company shall be permitted to retain 15% of all revenues derived from the release of pipeline capacity, with all remaining revenue to be credited to the BGSS Charge.

To the extent that Company releases capacity to TPS, TPS is responsible for utilizing the assigned capacity consistent with the terms and conditions of the interstate pipelines' tariffs. TPS is responsible for payment of all upstream pipeline charges associated with the assigned firm transportation capacity, including but not limited to demand and commodity charges, shrinkage, GRI charges, cash outs, transition cost, pipeline overrun charges, penalties assessed to Company, actual cost adjustments and all other applicable charges. These charges will be billed directly to the TPS by Transco and Tetco.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

SPECIAL PROVISIONS: (continued)

3. Capacity Assignment (continued)

Capacity assignments will be effective for a one year period beginning on each annual period. Company reserves the right to recall capacity in the event and to the extent that TPS fails to deliver the sufficient volume to serve its customers on any day or days. Increases in assigned capacity will only be entertained by Company to become effective for annual periods.

If, and to the extent that, the TPS fails to deliver the required volume, and such failure is not excused as a result of a pipeline force majeure event that prevents the TPS from delivering the required volume, the TPS will be assessed an Unauthorized Use charge as specified in Section I, Item 18 for each therm that the TPS has failed to deliver and be subject to a recall of the interstate pipeline capacity that has been released by Company.

Assigned capacity may be reassigned by the TPS subject to recall by Company. The original TPS shall remain subject to all operational orders and recall provisions invoked or exercised by Company. If the TPS fails to pay any interstate pipeline for capacity released or assigned by Company, and Company is required to pay the pipeline for such capacity, TPS shall be liable to Company for any amounts Company is required to pay interstate pipeline for such capacity, as well as incidental and consequential damages and the costs of any reasonable collection efforts. Failure to pay Company within twenty (20) days of billing may result in suspension of service.

4. RDS Load Balancing Charge

A Load Balancing Charge of \$0.0552 per therm, which includes sales tax, shall be billed to the TPS for all metered quantities for RDS customers it serves. Amounts due from TPS shall be paid in full within 20 days of the billing date. Any disputed amounts will be resolved by the TPS and Company and adjustments if any will be reflected on future billings. Failure to pay this charge in full within the time specified above will result in all RDS Customers of the TPS being returned to BGSS supply service.

5. Treatment of Revenues

All revenues produced under this Service Classification derived from penalties, imbalances and Load Balancing charges shall be credited to the BGSS.

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RIDER "A"

BASIC GAS SUPPLY SERVICE CHARGE ("BGSS")

This Rider sets forth the method of determining the BGSS which shall be calculated to four (4) decimal places on a per therm basis established in accordance with the Board Order in Docket No. GX01050304 dated January 6, 2003. The BGSS charge is either BGSS-Monthly ("BGSS-M") or BGSS-Periodic ("BGSS-P") and will be applied to a Customer's Service Classification as follows:

1. The BGSS-M shall be applicable to all GDS, NGV, LVD, and EGF customers receiving gas supply from the Company effective on the first of each month as determined below.
2. The BGSS-P shall be applicable to all RDS, SGS, and GLS customers receiving gas supply from the Company.

The BGSS Charge, as defined herein, is designed to recover the cost to the Company of purchased gas or fuel used as a substitute for or supplemental to purchased gas including the cost of storing or transporting said gases or fuel, the cost of financial instruments employed to stabilize gas costs, other charges or credits as may result from the operation of other tariff provisions, and taxes and other similar charges in connection with the purchase and sale of gas.

BGSS per therm rates:

<u>Effective Date</u>	<u>BGSS-M per therm</u>	<u>BGSS-P Per therm</u>
April 1, 2018	\$0.4667	\$0.4540
May 1, 2018	\$0.4809	\$0.4540
June 1, 2018	\$0.4867	\$0.4540
July 1, 2018	\$0.5000	\$0.4540
August 1, 2018	\$0.4810	\$0.4540
September 1, 2018	\$0.4890	\$0.4540
October 1, 2018	\$0.4920	\$0.4237
November 1, 2018	\$0.5139	\$0.4237
December 1, 2018	\$0.6814	\$0.4237
January 1, 2019	\$0.5639	\$0.4237
February 1, 2019	\$0.4882	\$0.4691
March 1, 2019	\$0.4778	\$0.4691
April 1, 2019	\$0.4622	\$0.4691

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RIDER "A"

BASIC GAS SUPPLY SERVICE CHARGE ("BGSS")
(continued)

I. The BGSS-P Commodity Charge shall be determined as follows:

The BGSS-P Commodity Charge shall consist of a Gas Cost Component ("GCC"), a Capacity Cost Component ("CCC"), a Prior Period Adjustment ("PPA") and a Tax Factor ("TF") as follows:

$$\text{BGSS-P} = (\text{GCC-P} + \text{CCC-P} + \text{PPA-P}) \times (\text{TF})$$

Where:

GCC-P rate per therm shall be sum of the weighted average price, including any applicable transaction costs, based on the projected monthly quantities to be utilized in the remaining period of the BGSS Year ("Period"), of the following categories of gas:

- a) Flowing gas, which will be equal to the arithmetic average of (i) the weighted-average, based on monthly sales, of the remaining New York Mercantile Exchange ("NYMEX") monthly prices for the Period as recorded on the close of trading for the forward contract month and (ii) the weighted average of the estimated Inside FERC prices for the respective locations where the Company purchases its gas for the remainder of the Period, as adjusted for the variable cost of transportation and fuel to the Company's city gate delivery points;
- b) Any gas supplies for the remainder of the Period whose price was previously set by hedges or other financial instruments, adjusted for the variable cost of transportation and fuel to the Company's city gate delivery points;
- c) The supplies of gas projected to be withdrawn from storage for the remainder of the Period, adjusted for the variable cost of transportation and fuel to the Company's city gate delivery points.

CCC-P shall be established each year in the Company's annual BGSS-P filing and shall consist of the Company's total estimated annual fixed pipeline costs, fixed supplier costs, and fixed storage costs, divided by the Company's projected annual BGSS firm gas sales.

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RIDER "A"

BASIC GAS SUPPLY SERVICE CHARGE ("BGSS")
(continued)

PPA-P shall be the Company's actual cumulative (over) or under recovery of gas costs associated with the operation of the BGSS divided by the projected BGSS-P firm gas sales for the remainder of the Period. In the initial transition to the BGSS-P, the per therm rate derived from the Company's estimated BGSS under or (over) recovery balance at May 31, 2003 with applicable interest thereon divided by the Company's projected BGSS firm sales for the period ending May 31, 2004, shall be the PPA-P. The over under recovery of gas costs shall be the cost of gas, as previously defined, less:

1. Supplier or Pipeline refunds;
2. Gas cost recoveries from the implementation of the BGSS-P;
3. Gas cost recoveries from the implementation of the BGSS-M;
4. Other gas cost recoveries or credits to the BGSS derived from sales or services as set forth in the applicable service classifications of the tariff;
5. Interest on the cumulative (over) under recovery of cost from the preceding BGSS Year ending September 30 but only when the interest is a credit. Interest being calculated on the cumulative (over) under recovery for each month of the prior period on the average of the beginning and ending monthly balance at a rate equivalent to the Company's allowed overall rate of return.

TF shall be the factors to adjust the calculated rate for appropriate taxes and other similar charges.

The BGSS-P shall be in effect until changed by succeeding BGSS-P rate filings.

The Company shall have the discretion to implement up to two (2) self-implementing BGSS-P rate changes, one to be implemented December 1 and the other to be implemented February 1 upon written notice to the Staff of the Board of Public Utilities and the Division of Rate Counsel of the approximate amount of that increase based on current market conditions by the first of the month preceding the self-implementation dates, November 1 and January 1 respectively. Each requested rate change shall not be for an increase of greater than five percent (5%) of the average rate based on a typical 100 therm per month residential total bill. The notice shall contain the information necessary to derive the components of the BGSS-P as set forth above. The Public Notice for the annual filing shall include the specific rate change sought to be implemented on October 1, a paragraph indicating that the rate is subject to self-implementing rate changes on December 1 and February 1 subject to the aforementioned 5% cap and an estimate of the impact

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RIDER "A"

BASIC GAS SUPPLY SERVICE CHARGE ("BGSS")
(continued)

from the two (2) possible five percent (5%) increases on a 100 therm residential bill. Upon establishing the initial BGSS-P, one self-implementing rate change to the BGSS-P for an increase not greater than five percent (5%) of the average rate based on a typical 100 therm per month residential total bill shall be permitted effective March 1, 2003 upon written notice made to the BPU and RC by February 1, 2003.

In accordance with the Board Order in Docket No. GX01050304 dated January 6, 2003 the Company shall have the discretion to return any over recovered balances to customers through a current bill credit or BGSS-P rate reduction upon five (5) days notice to the BPU and RC.

II. The BGSS-M Commodity Charge shall be determined as follows:

The BGSS-M Commodity Charge shall consist of a Gas Cost Component ("GCC"), a Capacity Cost Component ("CCC"), a Prior Period Adjustment ("PPA") and a Tax Factor ("TF") as follows:

$$\text{BGSS-M} = (\text{GCC-M} + \text{CCC-M} + \text{PPA-M}) \times (\text{TF})$$

Where:

GCC-M rate per therm shall be the arithmetic average of (i) the NYMEX Henry Hub gas contracts closing price for the last trading day prior to each respective month and (ii) the weighted-average of the estimated Inside FERC prices for the respective locations where purchases of gas for the ensuing month are projected to be made, as adjusted for the variable cost of fuel and transportation to the city gate delivery points of the Company.

CCC-M shall be the same as the CCC-P rate per therm as established each year in the Company's annual BGSS-P filing.

PPA-M rate per therm in the initial transition to the BGSS-M shall be the estimated BGSS under or (over) recovery balance at May 31, 2003 with applicable interest thereon divided by the projected BGSS firm sales for the period ending May 31, 2004. This rate shall continue in effect on a monthly basis until the deferred balance, which initially shall be set equal to the PPA-M times the projected BGSS-M firm sales for the period ending May 31, 2004, becomes positive as an over recovery at which time the PPA-M shall cease to be a component of the BGSS-M starting in the subsequent month, and any over recovery in the deferred balance shall be credited to the BGSS-P.

TF shall be the factors to adjust the calculated rate for appropriate taxes and other similar charges.

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RIDER "A"

BASIC GAS SUPPLY SERVICE CHARGE ("BGSS")
(continued)

The BGSS-M will be filed two (2) business days after the monthly close of the NYMEX Henry Hub gas contracts and shall be in effect for the entirety of the subsequent month and thereafter until changed by succeeding BGSS-M rate filings. The BGSS-M price shall be posted on the Company's WEB site within two (2) to four (4) days of the rate being filed with the BPU.

The Company shall make an annual BGSS filing on or before June 1 of each year. The filing shall provide for a review of the actual costs and recoveries for the previous period ending April 30 and projections of costs and recoveries through September 30. The filing shall also propose a new BGSS-P rate to be implemented on October 1. The proposed BGSS-P rate shall be based upon the projected cost of purchased gas and storage utilization to serve projected demand for gas service for the period October 1 through September 30 and an adjustment to recover or credit prior period under or over recovered gas costs as projected to exist on the preceding September 30. The Company shall provide the basis for its projected costs and the NYMEX projection of monthly gas prices for the projected period. In its annual filing the Company shall calculate the CCC-P component, as defined above, of the BGSS-P rate. Adjustments, if any, resulting from the Board's review of this filing shall be made following a Board Order.

The charges applicable under this Rider include provision for the New Jersey Sales and Use Tax, and when billed to customers exempt from this tax shall be reduced by the amount of such tax included therein.

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RIDER "B"

WEATHER NORMALIZATION CLAUSE ("WNC")

Applicable to all customers in service classifications RDS, SGS and GDS.

November 1, 2018 through May 31, 2019 \$0.0194 per therm

June 1 through September 30 of any year \$0.0000 per therm

The charges applicable under this Rider include provision for the New Jersey Sales and Use Tax, and when billed to customers exempt from this tax shall be reduced by the amount of such tax included therein. In the winter months, October through May, a weather normalization charge shall be applied to the rate quoted in this Tariff under the service classifications shown above, except as may be otherwise provided for in the individual service classification. The weather normalization charge applied in each winter period shall be based on the differences between actual and normal weather during the preceding winter period.

METHOD OF DETERMINING WEATHER NORMALIZATION CHARGE:

The weather normalization charge shall be determined as follows:

I. Definition of Terms as Used Herein

1. Degree Days (DD) - the difference between 65°F and the twenty-four point average temperature for the day, as determined from the records of the National Oceanic and Atmospheric Administration (NOAA) at its weather observation station located at Newark International Airport, when such average falls below 65°F. A day is defined as a period corresponding with the Company's gas sendout day of 10 am to 10 am.

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RIDER "B"

WEATHER NORMALIZATION CLAUSE ("WNC")
(continued)

METHOD OF DETERMINING WEATHER NORMALIZATION CHARGE: (continued)

I. Definition of Terms as Used Herein (continued)

2. Actual Calendar Month Degree Days - the accumulation of the actual Degree Days for each day of a calendar month.
3. Normal Calendar Month Degree Days - the level of calendar month degree days to which test year sales volumes were normalized in the base rate proceeding that established the current base rates for the service classifications to which this clause applies. The normal calendar month Degree Days used in this clause may be updated in base rate cases. The normal degree days for the defined winter months are as follows:

<u>Month</u>	<u>Normal Degree Days</u>	<u>Leap Year Normal Degree Days</u>
October	225	225
November	523	523
December	807	807
January	1,012	1,012
February	823	847
March	685	677
April	338	327
May	<u>105</u>	<u>101</u>
Total	4,518	4,519

4. Winter Period - shall be the eight consecutive sales and calendar months from October of one calendar year through May of the following calendar year.
5. Degree Day Dead Band - shall be one-half ($\frac{1}{2}\%$) percent of the monthly Normal Calendar Degree Days for the Winter Period.

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RIDER "B"

WEATHER NORMALIZATION CLAUSE ("WNC") (continued)

METHOD OF DETERMINING WEATHER NORMALIZATION CHARGE: (continued)

I. Definition of Terms as Used Herein (continued)

6. Degree Day Consumption Factor ("DDCF") - the variable component (use per degree day) of the gas sendout for each month of the winter period normalized for weather and adjusted for lost and unaccounted for gas. The DDCF shall be updated annually in the Company's WNC reconciliation filing annualizing to reflect the change in number of customers that has occurred since the base rate proceeding that established the initial degree day consumption factor in base rate cases. The base number of customers used to establish the normalized use in therms per Customer and the calculated DDCF approved in the Company's most recent base rate case are as follows:

<u>Month</u>	<u>Base Number of Customers</u>	<u>Therms per Degree Day</u>
October	295,597	52,151
November	296,718	62,901
December	297,887	69,320
January	298,542	68,280
February	298,992	67,961
March	299,338	63,793
April	299,221	47,887
May	298,773	55,337

7. Margin Revenue Factor - the weighted average of the Distribution Charges as quoted in the individual service classes to which this clause applies net of applicable taxes and other similar charges and any other revenue charge not retained by the Company that these rates may contain in the future. The weighted average shall be determined by multiplying the margin revenue component of the Distribution Charges from each service class to which this clause applies by each class's percentage of total consumption of all the classes to which this clause applies for the winter period and summing this result for all the classes to which this clause applies. The Margin Revenue Factor shall be redetermined each time base rates are adjusted. The current Margin Revenue Factor is \$0.3870 per therm.

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RIDER "B"

WEATHER NORMALIZATION CLAUSE ("WNC")
(continued)

METHOD OF DETERMINING WEATHER NORMALIZATION CHARGE (continued)

I. Definition of Terms as Used Herein (continued)

8. Annual Period: shall be the 12 consecutive months from October 1 of one calendar year through September 30 of the following calendar year.
9. Average 13 month common equity balance: shall be the common equity balance at the beginning of the Annual Period (i.e. October 1) and the month ending balances for each of the twelve months in the Annual Period divided by thirteen (13).

II. Determination of the Weather Normalization Rate

At the end of the Winter Period during the Annual Period, a calculation shall be made that determines for all months of the Winter Period the level by which margin revenues differed from what would have resulted if normal weather (as determined by reference to the Degree Day Dead Band) occurred.

The monthly calculation is made by multiplying the Degree Day Consumption Factor by the difference between Normal Calendar Month Degree Days as adjusted for the monthly Degree Day Dead Band, and Actual Calendar Month Degree Days and, in turn, multiplying the result by the Margin Revenue Factor. To the extent the Actual Calendar Month Degree Days exceeds Normal Calendar Month Degree Days as adjusted for the Degree Day Dead Band, an excess of margin revenues exist. To the extent Actual Calendar Month Degree Days were less than Normal Calendar Month Degree Days as adjusted for the Degree Day Dead Band, a deficiency of marginal revenue exists. In addition, the weather normalization clause shall not operate to permit the Company to recover any portion of a margin revenue deficiency that will cause the Company to earn in excess of 9.6% for the Annual Period; any portion which is not recovered shall not be deferred. For purposes of this section, the Company's rate of return on common equity shall be calculated by dividing the Company's regulated jurisdictional net income for the Annual Period by the Company's average 13-month common equity balance for such Annual Period, all as reflected in the Company's monthly reports to the BPU. The Company's regulated jurisdictional net income shall be calculated by subtracting from total net income (1) margins

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RIDER "B"

WEATHER NORMALIZATION CLAUSE ("WNC")
(continued)

METHOD OF DETERMINING WEATHER NORMALIZATION CHARGE (continued)

II. Determination of the Weather Normalization Rate (continued)

retained by the Company from non-firm sales and transportation services, net of associated taxes, (2) margins retained in the provision of sales in accordance with the Board Order pertaining to Docket No. GR90121391J and GM90090949, net of associated taxes and (3) net income derived from unregulated activities conducted by Elizabethtown.

The Company's average thirteen-month common equity balance for any Annual Period shall be the Company's average total common equity less the Company's average common equity investment in unregulated subsidiaries.

The balance of margin revenue excess or deficiency at September 30 of the Annual Period shall be divided by the estimated applicable sales from the classes subject to this clause for the Winter Period over which this charge will be in effect, multiplied by a factor to adjust for increases in taxes and other similar charges. The product of this calculation shall be the Weather Normalization Charge. However, the Weather Normalization Charge will at no time exceed three (3%) percent of the then applicable Residential Distribution Service rate plus the BGSS. To the extent that the effect of this rate cap precludes the Company from fully recovering the margin deficiency for the Annual Period, the unrecovered balance will be added to or subtracted from the margin deficiency or margin excess used to calculate the weather normalization charge for the next Winter Period. The Weather Normalization Charge, so calculated, will be in effect for the Winter Period immediately following the Annual Period used in such calculation.

III. Tracking the Operation of the Weather Normalization Clause

The revenues billed, or credits applied, net of taxes and other similar charges, through the application of the Weather Normalization Rate shall be accumulated for each month when this rate is in effect and applied against the margin revenue excess or deficiency from the immediately preceding Winter Period and any cumulative balances remaining from prior Winter Periods.

The annual filing for the adjustment to the weather normalization rate shall be concurrent with the annual filing for the Rider "D" Societal Benefits Charge.

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RIDER "C"

ON-SYSTEM MARGIN SHARING CREDIT ("OSMC")

Applicable to all Firm Service Classifications that pay the BGSS of Rider A and RDS customers that receive gas supply from a TPS in accordance with the Board's Order in Docket No. GO99030122.

The OSMC is subject to change to reflect the Company's actual recovery of such margins and shall be adjusted annually in its BGSS filing.

(\$0.0007) per therm

The charges applicable under this Rider include provision for the New Jersey Sales and Use Tax, and when billed to customers exempt from this tax shall be reduced by the amount of such tax included therein.

Determination of the OSMC

On or about July 31 of each year, the Company shall file with the Board an OSMC rate filing based on the credits generated from on-system margin sharing during the previous OSMC year July 1 through June 30.

The OSMC shall be calculated by taking the current year's credits, plus the prior year's OSMC over or under recovery balance and dividing the resulting sum by the annual forecasted volumes for the service classifications set forth above. The resulting rate shall be adjusted for all applicable taxes and other similar charges.

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")

Applicable to all tariff Service Classifications except those Customers under special contracts that explicitly do not permit the Company to apply increased charges as filed and approved by the BPU and those customers exempted pursuant to the Long-Term Capacity Agreement Pilot Program ("LCAPP"), P.L. 2011, c.9, codified as N.J.S.A. 48:3-60.1. See the LCAPP Exemption Procedures at the end of this Rider.

The SBC is designed to recover the components listed below and any other new programs which the Board determines should be recovered through the Societal Benefits Charge.

	<u>SBC Rate Components:</u>	<u>Per Therm</u>
I.	New Jersey Clean Energy Program ("CEP")	\$0.0215
II.	Remediation Adjustment Charge ("RAC")	(\$0.0128)
III.	<u>Universal Service Fund and Lifeline:</u>	
	1. Universal Service Fund ("USF")	\$0.0049
	2. Lifeline	<u>\$0.0054</u>
	TOTAL	\$0.0190

The charges applicable under this Rider include provision for the New Jersey Sales and Use Tax, and when billed to customers exempt from this tax shall be reduced by the amount of such tax included therein.

I. New Jersey Clean Energy Program Component ("CEP")

The Comprehensive Resource Analysis ("CRA") name was changed to the Clean Energy Program - CEP per Board Order dated January 22, 2003 in Docket No. EX99050347 *et.al*. The CEP is a mechanism that will (1) establish a rate to recover the costs of the Core and Standard Offer Programs in the Company's CEP Plan which was approved by the BPU in Docket No. GE92020104, and (2) compensate the Company for the revenue erosion resulting from conservation savings created by the Standard Offer Program. The annual recovery period for the CEP is from October 1 through September 30. The CEP recovers program costs and revenue erosion incurred during the previous CEP year ended June 30.

1. CEP program costs include the costs of core programs, standard offer payments and any administrative costs not recovered directly from standard offer providers.

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")
(continued)

I. New Jersey Clean Energy Program Component ("CEP") (continued)

2. The Standard Offer Program will reduce the volumes of gas sold by the Company and will reduce revenues corresponding to volumes of gas saved. This revenue loss will occur because the rates set in the Company's base rate case do not reflect a decrease in revenues resulting from program measures which will be implemented during the period in which the Company's CEP Plan is in effect. Consequently, the Company will not recover those fixed costs in base rates corresponding to the volumes of gas saved by the Standard Offer Program.
3. The CEP rate shall be determined as follows:
 - (a) The Company will project all program costs not recoverable directly from standard offer providers and revenue erosion, based upon current, approved rates, both of which elements are not currently collected through base rates for the annual period ("current annual period").
 - (b) The Company will include with the above projection, a statement of the prior annual period of any (over-) or under-recoveries, including interest at the rate applicable to the RAC component of the SBC. This statement will include estimated data for those months that occur after the date of filing but which correspond to the prior annual period. The CEP may be adjusted for material differences between estimates and actual results in the prior annual period.
 - (c) The sum of the program costs and recoveries for the CEP year ending June 30 plus the projected spending for the succeeding twelve month period, including interest calculated at a rate equal to that applied to the RAC component of the SBC, will be divided by the estimated sales and transportation throughput to all Customers subject to the SBC during the succeeding October 1 through September 30 period.

The formula for calculating the CEP rate is as follows:

$$\frac{PC + RE + [RB * (1+i)]}{AV}$$

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")
(continued)

I. New Jersey Clean Energy Program Component ("CEP") (continued)

3. The CEP rate shall be determined as follows: (continued)

(c) where:

PC = all projected program costs not recoverable directly from standard offer providers

RE = cumulative annual margin revenue erosion from the date of effectiveness of the Plan until the time that new base rates take effect. Margin revenue erosion is determined by multiplying the actual measured annual decrease in firm sales attributable to implementation of certain CEP programs per Board Order EX99050347 *et.al.* and the DSM legacy standard offer programs by the net margin revenue associated with that decrease in each affected service classification.

RB = prior period recovery balance, the net of actual costs and recoveries.

i = interest rate applicable to recovery balance

AV = projected annual quantity for sales and transportation throughput to all Customers subject to the SBC.

4. There will be a reconciliation of over- or under-recovery of actual program costs not recovered directly from standard offer providers and revenue erosion, based upon approved rates in effect during the prior annual period, with the revenues collected through the CEP by maintaining an account showing the cumulative balance of the (over-) or under-recoveries. Any prior annual period balance will be included, with interest, along with current annual period projected costs and amortized over the current annual recovery period. Interest is calculated on the cumulative (over-) or under-recovery of the prior annual period on the average beginning and ending monthly balance at a rate equivalent to the rate applied to the RAC component of the SBC.

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")
(continued)

I. New Jersey Clean Energy Program Component ("CEP") (continued)

5. The annual filing for the adjustment on or about October 1 of each year shall be made on or about July 31 of each year and shall be based on actual figures and experiences then available with estimates of remaining requirements.

II. Remediation Adjustment Clause Component ("RAC")

The RAC is a mechanism that will establish a rate to recover remediation costs, as defined herein. On or about July 31 of each year, the Company shall file with the Board a RAC rate component as part of the SBC based on remediation costs and third party expenses/claims in the preceding remediation years.

The RAC will be determined as follows:

A. Definition of Terms Used Herein

1. Remediation Costs - all investigation, testing, land acquisition if appropriate, remediation and/or litigation costs/expenses or other liabilities excluding personal injury claims and specifically relating to former gas manufacturing facility sites, disposal sites, or sites to which material may have migrated, as a result of the earlier operation or decommissioning of gas manufacturing facilities.
2. Interest Rate - for carrying costs and deferred tax benefit calculation shall be the rate paid on seven year constant maturities treasuries as shown in the Federal Reserve Statistical Release on or closest to August 31st of each year plus 60 basis points.
3. Carrying Cost - the Interest Rate applied to the unamortized balance of remediation costs.
4. Recovery Year - each October 1 to September 30 year and is the time period over which the amortized expenses incurred during the Remediation Year shall be recovered from Customers.
5. Remediation Year - each July 1 to June 30 year and is the time period over which the Remediation Costs and recoveries are incurred.

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RIDER "D"
SOCIETAL BENEFITS CHARGE ("SBC")
(continued)

II. Remediation Adjustment Clause Component ("RAC")

A. Definition of Terms Used Herein (continued)

6. Third Party Claims - all claims brought by the Company against any entity, including insurance companies, from which recoveries may be received and will be charged through the RAC factor as follows:
- a. Fifty percent of the reasonable transaction costs and expenses in pursuing Third Party Claims shall be included as Remediation Costs and shall be recovered as part of the RAC. The remaining 50% shall be deferred.
 - b. In the event that the Company is successful in obtaining a reimbursement from any Third Party, the Company shall be permitted to retain the deferred 50% as specified in 5a. The balance of the reimbursement, if any, shall be applied against the Remediation Costs starting in the year it is received and will be amortized over seven years.
 - c. The Company is not required to account for transaction costs and expenses in pursuing third party claims on a claim-by-claim basis.
7. Deferred Tax Benefit (DTB) - the unamortized portion of actual remediation costs multiplied by the Company's effective statutory federal and state income tax rate, and the Interest Rate.

$$DTB_{n,yr} = ARC_n * [(7-X)/7] * IR_{yr} * TR_{yr}$$

$DTB_{n,yr}$ = Deferred Tax Benefit in recovery year (yr) to be subtracted from one seventh the amount of the remediation costs incurred in remediation year (n).

ARC_n = Actual Remediation Costs incurred in remediation year (n).

X = Number of years that the ARC incurred in year n have been subject to amortization (X = 1,2,3,4,5,6)

IR_{yr} = Interest Rate

TR_{yr} = Effective combined Federal and State income tax rate.

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")
(continued)

II. Remediation Adjustment Clause Component ("RAC")

A. Definition of Terms Used Herein (continued)

8. Sale of Property shall be calculated by taking the proceeds over book value of any sale of a former manufacturing gas plant site, less all reasonable expenses associated with selling the site, and subtracting the total costs that were incurred in cleaning up the site and amortized through rates. The proceeds associated with the total costs that were incurred in cleaning up the site will be included as a credit to the remediation costs incurred in the year of the sale. The remainder shall be equally shared between the Company and Customers.

B. Determination of the Remediation Adjustment

At the end of the remediation year, the Company shall file with the Board (1) copies of all bills and receipts relating to the amount of any remediation costs incurred in the preceding remediation year(s) for which it seeks to begin recovery; (2) similar material and information to support any expenses and/or recoveries resulting from Third Party claims; (3) a computation of the carrying cost on the unamortized balance of remediation cost; (4) a projection of remediation costs for the following remediation year.

The RAC factor shall be calculated by taking one seventh of the Actual Remediation Costs, plus applicable Third Party Claims and Sale of Property allocations incurred each year, until fully amortized, less the Deferred Tax Benefit plus the prior years' RAC over or under-recovery plus appropriate carrying costs. This amount is then divided by all applicable forecasted quantities to all Service Classifications for the upcoming recovery year.

The total annual charge to the Company's ratepayers for remediation costs during any recovery year shall not exceed five (5%) percent of the Company's total revenues from sales, transportation and storage services during the preceding Remediation Year. If this limitation results in the Company recovering less than the amount that would otherwise be recovered in a particular Recovery Year then the Company will continue to accumulate carrying costs which will be recovered by the Company from its Customers in a subsequent RAC proceeding.

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")

(continued)

II. Remediation Adjustment Clause Component ("RAC") (continued)C. Tracking the Operation of the Remediation Adjustment Clause

The revenues billed, net of taxes and other similar charges through the application of the Remediation Adjustment factor shall be accumulated for each month and be applied against the total amortized Remediation Costs calculated for that year. Any over or under collection at the end of the Recovery Year will be included in the determination of the following year's RAC factor.

III. Universal Service Fund ("USF") and Lifeline Components

An interim USF program was approved by the BPU in Docket No. EX00020091 dated November 21, 2001. A permanent USF program and Lifeline charge was approved by the BPU in Docket No. EX00020091 dated April 30, 2003. The Orders authorized the Company to collect costs associated with the program through the SBC. The USF and Lifeline rate components of the SBC will be determined as follows:

A. Definition of Terms

1. Program Costs includes all costs incurred in connection with the implementation of Board ordered services, inclusive of carrying costs.
2. Program Year is the period October 1 to September 30 as approved by the BPU in Docket No. EX00020091 dated June 22, 2005.

B. Determination of the USF and Lifeline Components

The USF and Lifeline Components will be determined and issued by the Board and shall remain in effect until changed. The USF true up between credits given customers and amounts recovered will be made annually in accordance with the Board's directives.

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")
(continued)

III. Universal Service Fund ("USF") and Lifeline Components (continued)

C. Carrying Costs

Per Board Order dated October 21, 2008 in Docket No. ER08060455, the interest rate on USF under and over recoveries shall be the interest rate based on a two-year constant maturity Treasuries as published in the Federal Reserve Statistical Release on the first day of each month (or the closest day thereafter on which rates are published), plus sixty basis points, but shall not exceed the overall rate of return for each utility as authorized by the Board. The calculation shall be based on the net of tax beginning and end average monthly balance, accruing simple interest with an annual roll-in at the end of each reconciliation period.

IV. LCAPP Exemption Procedures

The following procedures to obtain the LCAPP exemption from the SBC charge shall apply:

A customer seeking an SBC rate exemption for all or part of its usage must submit an Annual Certification form, provided by the Company, declaring and certifying, for any applicable meter, the percentage of natural gas purchased and used for the generation of electricity sold for resale during the previous calendar year. For facilities with less than twelve months of history, estimates supported by engineering and operational plans may be used.

A. Annual Procedures

In December of each year the Company will mail an Annual Certification form to customers currently receiving the exemption, addressed to the customer's designated representative, to be returned to the Company's designated representative by the following January 15th.

The certified percentage will be used to determine the SBC rate to be charged for the twelve (12) month period beginning February 1st, for example:

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")
(continued)

IV. LCAPP Exemption Procedures (continued)

A. Annual Procedures (continued)

If the full SBC rate to be charged equaled \$0.0400 per therm pre tax and other similar charges and the certified percentage was seventy-five percent (75%) then the rate charged and applied to the metered volume would be calculated as: $\$0.0400 * (1.00 - .75) = \$0.0100$ per therm before any applicable taxes and other similar charges.

If the customer fails to return the form by January 15th then the full SBC rate will be assessed on all of the customer's natural gas usage until a completed Annual Certification form is received. Any exemption will become effective after the customer's next subsequent meter reading.

Notwithstanding the foregoing, the Company will provide customers that it reasonably believes may be eligible for the exemption with a certification form for the period of January 28, 2011 through January 31, 2012 on which the customer may certify the percentage of natural gas purchased and used for the generation of electricity sold for resale during the calendar year 2010. Any adjustments to the customer's bill associated with this exemption period shall be billed or credited to the customer in the billing period following the adjustment determination.

B. Interim Period Procedures

Customers may obtain the exemption at any time during a year by obtaining and submitting to the Company's designated representative a completed Annual Certification form. The certified percentage will be used to determine the exemption which will become effective after the next subsequent meter reading. Customers will be required to re-certify for the subsequent period beginning February 1 in accordance with the Annual Procedures.

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RIDER "E"

ENERGY EFFICIENCY PROGRAM ("EEP")

Applicable to all Customers except those Customers under special contracts as filed and approved by the BPU and those customers exempted pursuant to the Long-Term Capacity Agreement Pilot Program ("LCAPP"), P.L. 2011 c.9, codified as N.J.S.A. 48:3-60.1. See the LCAPP Exemption Procedures at the end of the SBC, Rider "D."

The EEP shall be collected on a per therm basis and shall remain in effect until changed by order of the BPU. The applicable EEP rate is as follows:

\$0.0020 per therm

The rate applicable under this Rider includes provision for the New Jersey Sales and Use Tax, and when billed to customers exempt from this tax shall be reduced by the amount of such tax included therein.

In the "Global Warming Act," N.J.S.A.26-2C-45. or "RGGI Legislation" the State Legislature determined that global warming is a pervasive and dangerous threat that should be addressed through the establishment of a statewide greenhouse gas emissions reduction program. On May 8, 2008, the Board issued an Order (the "RGGI Order") pursuant to N.J.S.A. 48:3-98.1(c). The RGGI Order allowed electric and gas public utilities to offer energy efficiency and conservation programs on a regulated basis. The Company's energy efficiency programs were first authorized pursuant to Board orders issued in Docket Nos. EO09010056 and GO09010060. They were subsequently extended pursuant to Board orders issued in GO10070446, GO11070399, GO12100946, GO15050504 and GR16070618. The Company's current energy efficiency programs are effective through December 31, 2018 and described below.

The EEP enables the Company to recover all costs associated with the following energy efficiency programs approved by the Board order dated April 21, 2017 in BPU Docket Nos. GR16070618 and GO15050504:

1. Residential gas HVAC and hot water heater incentive programs;
2. Residential home energy assessment program;
3. Residential home weatherization for income qualified customers program;
4. Commercial steam trap survey and repair program; and
5. Enhanced customer education and outreach initiatives designed to encourage customers to conserve energy and lower their gas bills.

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RIDER "E"

ENERGY EFFICIENCY PROGRAM ("EEP")
(continued)

Determination of the EEP

On or about July 31 of each year, the Company shall file with the Board an EEP rate filing based on the costs and recoveries incurred during the previous EEP year ending June 30th as well as estimates, if applicable, through the upcoming calendar year to develop the EEP rate to be effective October 1st as follows:

The EEP monthly recoverable expenditure amounts shall be derived from taking the average of the cumulative beginning and end of month expenditures associated with the EEP investments less accumulated amortization and accumulated deferred income tax credits times the after tax weighted average cost of capital grossed up for the Company's revenue factor, as directed in the Board's August 21, 2013 Order in Docket No. GO12100946, plus monthly amortization using a four year amortization period.

The EEP rate shall be calculated by summing the (i) prior year's EEP over or under recovery balance, plus (ii) current year monthly recoverable expenditure amounts, less (iii) current year recoveries, plus (iv) current year carrying costs based on the monthly average over or under recovered balances, at a rate equal to the rate obtained on the Company's weighted average of its commercial paper and bank credit lines, if both sources have been utilized, not to exceed the weighted average cost of capital after tax as described above, plus (v) an estimated amount to recover the upcoming year's recoverable expenditures amount and dividing the resulting sum by the annual forecasted per therm quantities for the applicable Customers set forth above. The resulting rate shall be adjusted for all applicable taxes. The EEP rate shall be self-implementing on a refundable basis as directed by the BPU.

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RATE SUMMARIES

Per Therm

	<u>RDS</u> <u>(sales)</u>	<u>RDS</u> <u>(transportation)</u>
Service Charge	13.06	13.06
Distribution Charges	0.4835	0.4835

Riders:

A	BGSS	BGSS-P	per TPS
B	WNC*	WNC*	WNC*
C	OSMC	(0.0007)	(0.0007)
D	SBC	0.0190	0.0190
E	EEP	0.0020	0.0020

* The WNC will apply to Customers during the months of October through May.

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

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RATE SUMMARIES
(continued)

Per Therm

	SGS (sales)	SGS (transportation)¹
Service Charge	35.19	35.19

Distribution Charges	0.4006	0.4006

Riders:

A	BGSS	BGSS-P	Per TPS
B	WNC	WNC*	WNC*
C	OSMC	(0.0007)	na
D	SBC	0.0190	0.0190

E	EEP	0.0020	0.0020

¹ Balancing Charge of \$0.0171 per therm applies to Customers November to March with a DCQ under 500 therms.

* The WNC will apply to Customers during the months of October through May.

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

" na " rider not applicable

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RATE SUMMARIES
(continued)

Per Therm

	<u>GDS</u> <u>(sales)</u>	<u>GDS</u> <u>(transportation)¹</u>	<u>GDS SP #1</u> <u>May – October</u>
Service Charge	47.98	47.98	47.98
Demand Charge, per DCQ	0.960	0.960	0.960
Distribution Charges	0.2814	0.2814	0.0589

Riders:

A	Commodity Charge	BGSS-M	per TPS	BGSS-M
B	WNC	WNC*	WNC*	na
C	OSMC	(0.0007)	na	na
D	SBC	0.0190	0.0190	0.0190
E	EEP	0.0020	0.0020	0.0020

¹ Balancing Charge of \$0.0171 per therm applies to Customers November to March with a DCQ under 500 therms.

*The WNC will apply to Customers during the months of October through May.

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

" na " rider not applicable

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RATE SUMMARIES
(continued)

	LVD (exempt)	LVD (taxable)
Per Therm		
Service Charge	303.74	323.86
Demand Charge, per DCQ	1.450	1.546
Distribution Charges	0.0459	0.0489

Riders:

A	BGSS	BGSS-M or TPS	BGSS-M or TPS
B	WNC	na	na
C	OSMC *		(0.0007)
D	SBC		0.0190
E	EEP		0.0020

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

" na " rider not applicable

* Not applicable to Customer receiving gas supply from a TPS

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RATE SUMMARIES
(continued)

Per Therm	IS <u>(ceiling)</u>	ITS Exempt <u>(ceiling)</u>	ITS taxable <u>(ceiling)</u>
Service Charge	628.55	589.50	628.55
Demand Charge, per DCQ	0.113	0.400	0.427
Distribution Charges	0.9405	0.1156	0.1233
<u>Riders:</u>			
A Commodity Charge	BGSS-M	per TPS	per TPS
B WNC	na	na	na
C OSMC	na	na	na
D SBC	0.0190	0.0179	0.0190
E EEP	0.0020	0.0019	0.0020

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

" na " rider not applicable

Date of Issue: XXX1

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on and after XXX2

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Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated XXX3 in Docket No. XXX4

RATE SUMMARIES
(continued)

Per Therm	EGF <u>(exempt)</u>	EGF <u>(taxable)</u>
Service Charge	80.00	85.30
Demand Charge, per DCQ	0.600	0.640
Distribution Charges	0.0530	0.0565
<u>Riders:</u>		
A BGSS	BGSS-M	BGSS-M
B WNC	na	na
C OSMC	(0.0007)	(0.0007)
D SBC	0.0179	0.0190
E EEP	0.0019	0.0020

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

"na" rider not applicable

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STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF :
ELIZABETHTOWN GAS COMPANY FOR :
APPROVAL OF INCREASED BASE TARIFF :
RATES AND CHARGES FOR GAS SERVICE, : BPU DOCKET NO. _____
CHANGES TO DEPRECIATION RATES AND :
OTHER TARIFF REVISIONS :

CASE SUMMARY, PETITION, NOTICE AND EXHIBITS

Volume 4 of 4

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April 18, 2019

Cont.

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ELIZABETHTOWN GAS COMPANY

TARIFF FOR GAS SERVICE

B.P.U. NO. 1617

2019 Rate Case

ELIZABETHTOWN GAS COMPANY

B. P. U. NO. ~~16—GAS~~17 – GAS

ELIZABETHTOWN GAS COMPANY

TARIFF FOR GAS SERVICE

Date of Issue: ~~July 10, 2018~~XXX1

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520 Green Lane
Union, New Jersey 07083

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TYPES OF SERVICES

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Residential Customers	Residential Delivery Service	RDS	~~36~~ 35
Commercial, Industrial, Multi-Family, Governmental, Religious Institutions, Hospitals and Nursing Home Customers using less than 5,000 therms per year as determined in the classification	Small General Service	SGS	~~40~~ 39
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TYPES OF SERVICES

Applicable to:Service ClassificationsSheet No.~~Commercial and Industrial Service~~~~Firm Transportation Service~~~~FTS~~~~84~~

Industrial Customers

Interruptible Transportation
Service

ITS

~~89~~87Brokers, Marketers, Third Party
Suppliers

Third Party Suppliers Service

TPS

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TERRITORY SERVED
WHOLLY WITHIN THE STATE OF NEW JERSEY

ELIZABETHTOWN DIVISIONNORTHWEST DIVISIONMiddlesex County

1. Carteret
2. Edison (part)
3. Metuchen
4. Perth Amboy
5. Woodbridge
- Avenel
- Colonia
- Fords
- Iselin
- Keasbey
- Port Reading
- Sewaren

Union County

1. Clark
2. Cranford
3. Elizabeth
4. Fanwood
5. Garwood
6. Hillside
7. Kenilworth
8. Linden
9. Mountainside
10. Rahway
11. Roselle
12. Roselle Park
13. Scotch Plains
14. Union
15. Westfield
16. Winfield
17. Winfield Park

Hunterdon County (Southern District)

1. Alexandria
2. Bethlehem
3. Bloomsbury
4. Califon
5. Clinton (Town)
6. Clinton (Twp.)/ Annandale
7. Delaware
8. East Amwell/ Ringoes
9. Flemington
10. Franklin
11. Frenchtown
12. Glen Gardner
13. Hampton
14. High Bridge
15. Holland
16. Kingwood (Twp.)
17. Lambertville
18. Lebanon (Bor.)
19. Lebanon (Twp.)/Stockton
20. Milford (Bor.)
21. Raritan
22. Readington (part)
23. Stockton
24. Union
25. West Amwell

Mercer County (Southern District)

1. Hopewell (Bor.)
2. Hopewell (Twp. Part)
3. Lawrence
4. Pennington

Morris County (Central District)

1. Mount Olive (Twp. Part) / Budd Lake
2. Washington (Twp. Part) / Long Valley

Sussex County

(Northern District)

1. Andover (Bor.)
2. Andover (Twp.)
3. Branchville
4. Frankford
5. Franklin (Bor.)
6. Fredon
7. Green
8. Hamburg
9. Hampton
10. Hardyston
11. Lafayette
12. Newton
13. Ogdensburg
14. Sparta
15. Sussex
16. Vernon
17. Wantage

Warren County

(Central District)

1. Allamuchy
2. Alpha
3. Belvidere
4. Franklin
5. Greenwich
6. Hackettstown
7. Harmony
8. Independence
9. Lopatcong
10. Mansfield
11. Oxford
12. Phillipsburg
13. Pohatcong
14. Washington (Bor.)
15. Washington (Twp.)
16. White

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STANDARD TERMS AND CONDITIONS1. GENERAL1.01 - Applicability

These Standard Terms and Conditions, filed as part of the Tariff of Elizabethtown Gas Company (hereinafter referred to as “Gas Company” or “Company”), set forth the terms and conditions under which service is rendered and will be supplied. They govern all classes of service to the extent applicable and are made a part of all agreements for the supply of gas service unless specifically modified by the terms of a particular service classification or by special terms written in and made a part of a contract for service.

Failure by the Gas Company to enforce any provisions, terms, or conditions set forth in this Tariff shall not be deemed a waiver thereof.

Per the New Jersey Administrative Code (“N.J.A.C.”) 14:3 (“Chapter”) Section 14:3-1.3(i) Tariffs states: If there is any inconsistency with this Chapter and a tariff, these rules shall govern, except if the tariff provides for more favorable treatment of ~~customer~~Customers than does this Chapter, in which case the tariff shall govern.

1.02 – Termination or Revision of Tariff

This Tariff is subject to the orders of the Board of Public Utilities of the State of New Jersey (hereinafter referred to as “Board” or “BPU”), effective as of this date or as may be promulgated and become legally effective in the future.

Gas Company reserves the right at all times and in any manner permitted by law and the applicable rules and regulations of the Board to terminate, change or modify by revision, amendment, supplement, or otherwise, this Tariff or any part thereof, or any revision, amendment or supplement thereto. All contracts for service are accepted subject to the above reservations.

1.03 – Agents

No representative or agent of Gas Company has the authority to modify, alter, or waive any provision contained in this Tariff or to bind Gas Company by any promise or representation thereto.

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1.04 – Application of Tariff

Receipt of gas service from Gas Company makes the receiver a “Customer”, as defined in Section 2.01 hereof. However, Gas Company will not be required to continue to render service unless, if upon request of Gas Company, (a) Customer makes, or has made, an application for service in accordance with the Standard Terms and Conditions set forth herein and (b) such application is accepted by Gas Company in accordance with the terms of said Standard Terms and Conditions.

Service furnished by Gas Company prior to its acceptance of Customer’s application shall, nevertheless, be charged for at the rates contained in the applicable service classification. The applicable service classification, in a case where more than one service classification might apply and Customer has failed to make a selection, shall be that service classification which in the sole judgement of Gas Company is most advantageous to Customer. (See Section 2.03)

1.05 – Inspection of Tariff

The tariff is available to all ~~customer~~Customers for public inspection in each office where applications for service may be made. The Tariff is also available for review or copying at the Company’s website at www.Elizabethtowngas.com.

2. OBTAINING SERVICE

2.01 – Application for Service

An application for service may be made at any commercial office of Gas Company, either in person, by mail, by telephone, or by any other means made available by the Company. A written application form or agreement may be required from any person, firm, organization, partnership, corporation, or otherwise, applying for or using gas service (hereinafter referred to as “Customer”). If the Company requires a written application, the application may be subsequently submitted to the Customer for signature. There will be a \$15.00 administration charge to establish service to a new ~~customer~~Customer or re-establish service to an existing ~~customer~~Customer.

Applicant(s) may be required by the Gas Company to supply proof of identity and prior address. Any such requirement to provide proof of identity or prior address shall be in accordance with the provisions of N.J.A.C. 14:3-3.2 as may be amended or superseded.

Separate application may be required in each case where gas service is applied to the same person, firm, organization, partnership, corporation, or otherwise, at two or more non-contiguous properties. For purposes of applying these rates, service at each non-contiguous location shall be considered as service to a separate ~~customer~~Customer.

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Customer shall state, at the time of making application for service, the conditions under which service will be required. Customer may be required to sign an agreement covering special circumstances necessary for the supply of service in accordance with Customer's requirements. In the case in which the Customer signs a main and/or service extension agreement and subsequently does not install any of the indicated equipment within a reasonable time, not to exceed one year, or purchase the requested quantities of gas, the Company reserves the right to charge the ~~customer~~Customer for the full cost of providing the service and main, as applicable.

Gas Company reserves the right to place limitations on the amount and character of gas service it will supply; to refuse service to new Customers or to existing Customers for additional load, if unable to obtain the necessary equipment and facilities to supply such service; to reject applications for service or additional service where such service is not available or where such service might affect the supply of gas to other Customers; or for other good and sufficient reasons.

When an existing Commercial or Industrial Customer initiates a service disconnection and is no longer being charged for service by the Company and later seeks to re-instate service, the scheduling of a turn-on or installation of a meter will be on a first available basis as determined by the Company.

2.02 – Form of Application

Standard applications or agreements to supply gas service shall be in accordance with the particular service classification. Agreements for longer term than that specified in the service classification may be required where large or special investment is necessary to supply service, where special facilities are required to serve a Customer, or where the hourly capacity of the Gas Company's facilities required to serve the ~~customer~~Customer's demand, in the opinion of the Gas Company, may be out of proportion to the monthly or annual use of gas service for occasional, intermittent, or low load factor purposes. Gas Company reserves the right to require contributions towards the investment required for such service and to establish such minimum charges and facilities charges as may be equitable under the circumstances involved.

2.03 – Selection of Rate

Gas Company will assist in the selection of the available rate which is most desirable from the standpoint of Customer. However, the responsibility for making the selection shall, at all times, rest with Customer. Any advice given by Gas Company will be based on Customer's statements.

Customer may request Gas Company to change the service classification under which they are billed. However, Gas Company shall not be obligated to make such a change more than once in 12 calendar months even though Customer may qualify for service under more than one service classification.

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2.04 – Deposit and Guarantee

Where an applicant's credit is not established, where the credit of a Customer with Gas Company has become impaired, or where Gas Company deems it necessary for other reasons, a deposit or other guarantee satisfactory to Gas Company may be required as security for the payment of future and final bills for gas service and other charges resulting from the rendering of gas service before Gas Company will commence or continue to render service. Service shall not be discontinued for failure to make such deposit, unless said deposit had been included on prior bills, or notices to the ~~customer~~Customer. All requests for deposits shall be in accordance with N.J.A.C. 14:3-3.4.

All deposits shall bear simple interest at the rate equal to the average yield on new six-month Treasury Bills for the twelve month period ending each September 30 and shall be paid by the utility on all deposits held by it. Said rate shall become effective on January 1 of the following year. The Board shall perform the annual calculation to determine the applicable interest rate and shall notify the Gas Company of said rate.

Interest accrued from deposits for Residential Service accounts shall be credited to Customer's bill, unless the Customer requests a separate check, at least once during a 12-month period for such service rendered or to be rendered. Customers not purchasing gas under the Residential Service classification will be refunded interest accrued from their service deposit at the time that the deposit is refunded to the Customer. A deposit shall bear interest until it is returned or applied to an outstanding balance.

Gas Company shall review a residential ~~customer~~Customer's account at least once every year and non-residential ~~customer~~Customer's account at least once every two years and if such review indicates that a ~~customer~~Customer has established good credit, the Gas Company will apply the deposit to the outstanding balance on the ~~customer~~Customers' account, unless the Customer requests a separate check.

Gas Company reserves the right to apply a deposit, plus accrued interest on said deposit, against unpaid bills for service or other charges resulting from the rendering of gas service. If such action is taken and the ~~customer~~Customer continues to receive gas service the Customer shall be required to restore the deposit to the original amount or such other reasonable amount as Gas Company may determine. If the account is closed only the remaining balance will be refunded.

Gas Company shall have a reasonable time in which to read meters and to ascertain that all the obligations of Customer have been fully performed before being required to refund any deposit, in accordance with N.J.A.C. 14:3-3.5.

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2.05 – Planning Area Certification for Extensions

The Gas Company, prior to accepting application for new or upgraded gas service, will determine the planning area in which service is being requested. Such planning areas are as designated by the New Jersey State Planning Commission in accordance with N.J.A.C. 5:85-1.4.

A deposit or contribution in aid of construction may be required towards the Cost of installing an Extension, as set forth in Section 3 of these Standard Terms and Conditions.

2.06 – Permits

The Gas Company shall obtain or cause to be obtained all easements, licenses or permits necessary to enable the Gas Company or its agents access to connect its mains to the Customer's equipment. This shall be construed to mean all permits and certificates, municipal or otherwise, required by law or the Gas Company's rules. The Gas Company shall not be obliged to furnish service unless and until such permits, instruments, consents and certificates shall have been delivered to the Company. The Company reserves the right to require that Customer obtain or cause to be obtained all easements, licenses, or permits necessary to enable the Company or its agents access to connect its mains to the Customer's equipment.

The Customer may be responsible for payment of the amount by which such easements, licenses or permit fees exceeds \$15.00. Payment shall be made prior to the Company filing for said documents.

By making application for service, Customer grants to Gas Company a right-of-way for its lines and other facilities, across, over, under or along the property owned or controlled by Customer, to the extent that the same is necessary to enable Gas Company to render service to premises.

2.07 – Temporary Service

Where service is to be used for a limited period, the use of the service shall be classified as temporary and Customer shall be required to assume the actual cost of the facilities required to furnish service and also their connection and removal, which shall not be less than twice the minimum charge per month for residential service. The minimum period for billing of gas consumption shall be one (1) month. Temporary service will be furnished only where Gas Company's facilities are suitable and quantity of gas is available without in any way interfering with other Customers of Gas Company.

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2.08 – Authorization to Turn On Gas to the Meter

Only duly authorized employees or agents of Gas Company shall be permitted to turn on gas.

3. EXTENSIONS OF MAINS AND/OR SERVICE LINES

3.01 – ~~Definitions and~~ General Provisions

The provisions and definitions within N.J.A.C. 14:3-8.1, et seq., shall be applicable.

The construction of main extensions will be subject to the regulations at N.J.A.C. 14:3-8.1, et seq. The Company may construct and will own, and maintain distribution mains located on streets, highways, and right of way, used or usable as a part of its distribution system. The making of a deposit or contribution by the customerCustomer, shall not give the customerCustomer any interest in the facilities, the ownership being vested exclusively in the Company.

The Company may require up-front contributions, or deposits, pursuant to N.J.A.C. 14:3-8.1, et seq. These charges shall be increased for any tax consequences to the Company. If the Company accepts an application for an extension, the Company may furnish and place, at no cost to the customerCustomer, of up to 200 feet of normal residential facilities.

Deposits that are received from customerCustomers pursuant to the Extensions of Mains and Services shall be refunded without interest in accordance with the applicable formula contained in N.J.A.C. 14:3-8.10- and N.J.A.C. 14:3-8.11. In no event shall the Company refund more than the total deposit amount received from the Customer. Any deposit amount not refunded within ten (10) years from the date service was initiated, shall remain with the Company and shall constitute a contribution in aid of construction.

3.02 Main and Service Extensions Requested by Customers

1) Residential

The Company will shall extend its gas mains and services to serve an individual residential customerCustomer at no charge where the Extension Cost does not exceed ten (10) times the annual Distribution Revenue. The Distribution Revenue shall be the incremental initial or actual total annual billings, as determined by the Gas Company, derived from the Applicant's and/or existing Customer's applicable Service Classification, inclusive of Sales and Use Tax, minus the Basic Gas Supply Service, inclusive of Sales and Use Tax. The Company may require a deposit equal to the Extension Cost in excess of ten (10) times the annual Distribution Revenue and shall include any tax consequences to the Company.

The following definitions shall apply when referring to Extensions:

Applicant For An Extension—means a person that has applied to the appropriate regulated entity, as defined in the N.J.A.C. 14:3-1.1 for construction of an Extension, as defined at N.J.A.C. 14:3-8.2 hereinafter referred to as Applicant.

Distribution Revenue—means the total revenue, plus related Sales and Use Tax, collected by a regulated entity from a Customer, minus, for a gas public utility as defined at N.J.A.C. 14:4-1.2, the Basic Gas Supply Service charges, plus related Sales and Use Tax on the Basic Gas Supply Service, assessed in accordance with the gas public utility's tariff. As applied to Extensions and/or upgrades, the Distribution Revenue shall be the incremental initial or actual total annual billings,

~~as determined by the Gas Company, derived from the Applicant's and/or existing Customer's applicable Service Classification minus the Basic Gas Supply Service.~~

~~Extension—means the construction or installation of plant and/or facilities to convey service from existing or new plant and/or facilities to one or more new Customers, and also means the plant and/or facilities themselves. This term includes all plant and/or facilities for transmission and/or distribution, whether located overhead or underground, on a public street or right of way, or on a private property or private right of way, including the wire, poles or supports, cable, pipe, conduit or other means of conveying service from existing plant and/or facilities to each unit or structure to be served. For gas service, an Extension begins at the existing infrastructure, using system design standards as determined by the Gas Company, and ends at the meter, whose placement and location is determined solely by the Gas Company, and includes the meter as well as any upgrades to the existing infrastructure to serve one or more new and/or existing Customers.~~

~~Cost—means, with respect to the cost of construction of an Extension, actual and/or unitized expenses incurred for materials and labor (including both internal and external labor) employed in the design, purchase, construction, and/or installation of the Extension, including overhead directly attributable to the work, as well as overrides or loading factors such as those for mapping and design. The term does not include expenses for clerical, dispatching, supervision, or general office functions. Costs shall be determined by the Gas Company and shall include all Costs inclusive of items such as upgrades to the existing infrastructure as well as tax gross ups, inclusive of the applicable bonus depreciation credits per the Tax Reform Act of 1986, for contributions in aid of construction.~~

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2) - Non-Residential

The Company will extend its gas mains and services to an individual firm commercial or industrial Customer and may require a deposit equal to the Extension Costs, increased by any tax consequences to the Company. In lieu of a deposit for Extension Costs, the Company and the Customer may agree upon a satisfactory revenue guarantee.

3) - Extension of Service to New Developments

The Company may require a deposit for an extension subject to this Section, in an amount no greater than the Extension Cost required to serve the development. The deposit shall be increased by any tax consequences to the Company.

~~The Gas Company will construct, own, and maintain gas mains, services, meters and other appurtenances located before the premise side of the meter. Payments of monthly charges, deposits and/or a contribution in aid of construction shall not give the Applicant, existing Customer and/or depositor any interest in the facilities, the ownership being vested exclusively with the Gas Company.~~

3.03 - Service Connection Location

Service connections will be measured at right angles from the nearest curb line to the Applicant's building, at the point of service entrance designated by the Company. Meters and regulators will be furnished and installed by the Company. The costs of meters and regulators (including the installation) may be waived by the Company.

The Applicant shall consult the Company as to the exact point at which the service pipe will enter the building before installing interior gas piping or starting any other work dependent upon the location of the service pipe. The Company will determine the location of the service pipe depending upon physical constraints in the street and other practical considerations.

~~Upon receipt of an application for service, the Company, in its sole discretion, will determine if a deposit or contribution in aid of construction is required based on the Applicant and/or existing Customer's location, service requirements, investment allowances and Costs. The allowances will be determined based on the equipment the Applicant and/or existing Customer represents will be~~

~~installed as well as the intended hours of operation. The Costs will be based upon normal conditions and service offerings. Such Costs may be increased for unusual Customer requirements or unforeseen conditions, such as excessive rock or other unknown conditions found during excavation. In such cases, the Gas Company may require an additional deposit and/or contribution in aid of construction.~~

~~The deposit amount shall be subject to refund, if applicable, as outlined below, except that refunds shall be a function of the Distribution Revenue generated over a pre-determined base. In addition, a contribution in aid of construction may be required for Company approved Customer requests and/or required services above standard services such as those described in Sections 5.03 and 7.02 of this tariff or requests to place a meter at a location other than that designated by the Gas Company. In lieu of a deposit and/or contribution in aid of construction, the parties may agree upon a revenue guarantee.~~

3.02—Charges for Extensions

1)——Residential, Firm Commercial or Firm Industrial Extensions

~~The Gas Company will install Extensions to serve individual permanent Applicants and/or existing Customers free of charge where the Cost of such Extensions does not exceed ten (10) times the estimated annual Distribution Revenue to be realized from such Extensions. Deposits shall be calculated as the difference between the Extension Costs and the initial Distribution Revenue times ten (10). However, the Company will waive the required deposit if it is less than \$500.~~

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~~The required deposit shall be delivered to the Gas Company and remain, without interest, in the possession of Gas Company until such time as the actual Distribution Revenue from the particular Extension in an annual period, as measured from the month service begins for residential Customers and the month in which the deposit was received for all other Customers, exceeds the higher of the initial estimated and/or subsequent years highest actual Distribution Revenue. At such time any such excess shall be refunded to the depositor, on a ten (10) to one (1) basis times the tax gross up factor used when the deposit was taken. Refunds made in succeeding years will be computed as above until such time as accumulated refunds are equal to, but not in excess of the sum deposited. All deposits not returned to the Customer within a period of ten (10) years shall remain the property of Gas Company with no further obligation of refund.~~

~~2) — Land Development Extensions~~

~~Where applications for Extensions into newly developed tracts of land are made by individuals, partnerships, or corporations interested in the development and sale of land and or building of structures but not as ultimate occupants, the Gas Company may require a deposit from the Applicant covering the entire Cost of installing the Extensions necessary to serve the tracts and/or structures.~~

~~Such Extension deposits are to be returned to the depositor, without interest, if during a ten (10) year period from the date of the original deposit, when and as new structures abutting on such Extensions are completed. Completion shall mean either the facilities gas equipment is installed and in full use for the foreseeable future, and/or the dwellings are occupied by bona fide owners or responsible tenants who have entered into an agreement for use of service. Upon such completion, there shall be returned to the depositor an amount equal to ten (10) times the estimated annual or actual Distribution Revenue for each of the dwellings as described above times the tax gross up factor used when the deposit was taken. In subsequent years the refund shall be based on the higher of the initial estimated and/or subsequent years highest actual Distribution Revenue on a combined basis for each unit computed as above on a ten (10) to one (1) basis times the tax gross up factor used when the deposit was taken. In no event shall more than the original deposit be returned to the depositor. All deposits not returned to the Applicant within the ten (10) year period shall remain the property of Gas Company with no further obligation of refund.~~

~~3) — Interruptible and Alternate Fuel Extensions~~

~~The Gas Company reserves the right to require any interruptible or alternate fuel Customer to contribute an amount equal to the entire cost of any new or upgraded facilities required to supply service. The Gas Company is under no obligation to refund any of the contribution but reserves the right in its sole judgment to do so where economics and revenue conditions warrant said action.~~

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4. SERVICE CONNECTIONS

4.01 – General

Subject to the provisions of the Extensions of Mains and/or Service Lines section of this tariff, gas service will normally be supplied to each premise through a single service pipe, except where, in the judgment of Gas Company, it is deemed desirable to install more than one service pipe. The Gas Company may also choose to install multiple meters on one service pipe providing service to several premises. If more than one service is installed for the convenience of the Customer, each location will be considered as a separate Customer. In addition, at its expense and option, the Company may include a “customer valve” on the premise side of the meter on new, existing and/or re-established existing services. The ownership of the valve will be transferred to the Customer upon gas flowing through the valve.

4.02 – Change in Existing Installations

Any change in the location of the existing service pipe or meter set requested by Customer and approved by Gas Company shall be made at the expense of Customer. The Gas Company reserves the right to change the location of an existing service pipe or meter set to a placement and location determined solely by the Gas Company upon giving the Customer ten (10) days notice, unless it is done as part of an unforeseen repair or an upgrade to the main. The Gas Company shall bear all costs related to such changes including re-connecting pipes to the premise side of the meter and appurtenances related to any meter reading devices.

A Customer who qualifies pursuant to 49 CFR Section 192 and/or has a service line that is 2” or less and has a system minimum pressure of ten (10) pounds per square inch gauge or more may request installation of an Excess Flow Valve (EFV). If a Customer does not qualify for an EFV the Company will offer to install a Curb Stop. The Customer will be required to pay all EFV or Curb Stop installation costs associated with such installation before the Company begins work if:

- a) the Company has not scheduled the Customer’s premises for a service line replacement or a new service line or,
- b) the Customer requests the installation prior to the Company’s scheduled installation time.

5. METERS AND ASSOCIATED EQUIPMENT

5.01 – General

Subject to the provisions of the Extensions of Mains and/or Service Lines section of this tariff, the Gas Company will furnish, install and maintain meters for each premise and/or service. In addition where appropriate, when a Customer has two or more service classifications, the Customer will have separate meters.

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Where more than one meter is installed in a premise, the readings of all such meters supplying a Customer under the same service classification may be combined for billing purposes. The Customer may be charged a monthly service charge for each meter even if said meters are combined for billing purposes.

5.02 - Customer's Responsibility

Customer shall provide and maintain, without charge to Gas Company, a suitable space for the metering and associated equipment. Such space shall be as near as practicable to the point of entrance of the service pipe, adequately ventilated, dry, free from corrosive vapors, not subject to extreme temperatures, free from appreciable vibrations or any other conditions that may impact the meter as well as being readily accessible to authorized employees or agents of Gas Company. In apartment houses, office buildings, townhouses or condominiums with multiple service, all meters shall, whenever possible, be grouped together. Adequate passageway, maintained free of obstacles and unsafe and hazardous conditions, shall be provided at all times.

Customer shall not tamper with or remove meters or other equipment or permit access thereto, except by authorized employees or agents of Gas Company.

With the exception of the "customer valve" on the premise side of the meter, when installed (see Section 4.01), all equipment furnished by the Gas Company shall remain its property and may be replaced whenever deemed necessary by the Gas Company or as required by the Board and may be removed by Gas Company at any time after discontinuance of service.

In case of loss or damage from the act or negligence of Customer or the Customer's agents, employees and or contractors, or of failure to return property supplied by Gas Company, Customer shall pay to Gas Company the value of such property.

5.03 – Automatic Meter Reading Equipment (AMR)

The Company in its sole discretion may install, at its expense, an AMR device to monitor a ~~C~~ustomer's gas consumption. However, when gas is to be delivered at a pressure in excess of the Company's standard gauge pressure noted in Section 7.02, or such equipment is required by the service classification under which the ~~customer~~Customer will receive service, the Company shall determine any necessary equipment inclusive of compensating and AMR devices to be installed at the ~~customer~~Customer's expense. When such devices require attachment to telephone and/or electric utilities, the Customer shall provide and pay for suitable connections unless the Company elects to make such connections. When an AMR device is requested by the Customer, the AMR device and any necessary appurtenances shall be installed at the Customer's expense if the installation is deemed feasible by the Company. Where feasible, the Company will make data from the AMR device or other equipment available to the Customer upon the signing of a ~~S~~ervice Agreement.

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Payments made by the Customer shall not give the Customer ownership of the equipment. All equipment remains the sole property of the Company. Installation of an AMR does not relieve the ~~customer~~Customer of the obligations of Sections 5.02 or 9.

6. CUSTOMER'S INSTALLATION

6.01 – General

No material change in the size, total capacity, or method of operation of Customer's equipment shall be made without previous written notice to the Gas Company and subsequent approval by the Gas Company.

The Gas Company will assume no responsibility for the condition of Customer's gas installation or for accidents, fires, or failures which may occur as the result of the condition of such gas installation.

Neither by inspection or non-rejection, nor in any other way, does the Gas Company give any warranty, expressed or implied, as to the adequacy, safety, or other characteristics of any structure, equipment, wires, pipes, appliances, or devices used by the ~~customer~~Customer.

Gas Company shall not be liable for damages to the Customer's equipment or injuries sustained by Customer due to the condition or character of Customer's facilities and equipment. The Gas Company will not be responsible for the use, care or handling of the gas delivered to Customer after same passes beyond the point at which the Company's service facilities connect to the ~~customer~~Customer's facility. Gas Company also shall not be liable for any claim for damage resulting from the supply, use, care or handling of the gas or from the presence or operation of the Company's structures, equipment, pipes or devices except for direct damages resulting from the Gas Company's negligence, recklessness or willful misconduct. The Gas Company will not be liable for special or consequential damages.

6.02 – Equipment, Piping and Installation

Customer appliances, piping and installations shall be made and maintained in accordance with the standards and specifications set forth in American National Standard, National Fuel Gas Code, ANSI Z223.1, and such other regulations as may be promulgated from time to time by any governmental agency having jurisdiction over the Customer's installation.

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6.03 – Back Pressure and Suction

When the nature of Customer's gas equipment is such that it may cause back pressure or suction in the piping system, meters, or other associated equipment of Gas Company, suitable protective devices, subject to inspection and approval by Gas Company, shall be furnished, installed, and maintained by Customer.

6.04 – Adequacy and Safety of Installation

Gas Company shall not be required to supply gas service until Customer's installation has been approved by the authorities, if any, having jurisdiction, and Gas Company further reserves the right to withhold its service or to discontinue its service whenever such installation, or part thereof, is deemed by Gas Company to be unsafe, inadequate or unsuitable for receiving service, to interfere with or impair the continuity or quality of service to Customer or others, or for other good and sufficient reason.

7. METER READINGS AND BILLING

7.01 – General

Gas Company will select the type and make of metering equipment and may, from time to time, change or alter such equipment. It shall be the obligation of Gas Company to supply meters that will accurately and adequately furnish records for billing purposes. Bills will be based upon registration of Gas Company meters, except as otherwise provided for herein.

At such time as Gas Company may deem proper or as the Board may require, Gas Company will test its meters in accordance with the standards and bases prescribed by the Board. The performance of a test outside of these standards is at the Company's option. Any ~~customer~~Customer requesting such a meter test more than once in a twelve (12) month period shall be charged all related costs to test the equipment, inclusive but not limited to time and material costs with overhead factors for the second and subsequent tests. In the event of a dispute the Gas Company's meter will be presumed to be correct, subject to test results in accordance with N.J.A.C. 14:3-4.5 and 14:3-4.6.

7.02 – Correction for Pressure and/or Temperature

For purposes of measurement, a cubic foot of gas is that volume occupying one cubic foot (12" x 12" x 12") at the Company's standard gauge pressure of five (5) inches water column and at a temperature of 60°F.

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In any case where Gas Company measures or the Customer has requested that the gas delivered is at a pressure greater than five (5) inches of water column or at temperatures other than 60° F, the cubic feet of gas registered by the meter shall be subject to correction for billing purposes by the application of proper correction factors or by the use of pressure and/or temperature compensating devices, see 5.03.

7.03 – Therm Conversion Factor

Meter readings of Customers shall be converted from cubic feet to therms by applying a therm conversion factor. A therm is defined as a unit of heat energy equal to 100,000 British Thermal Units (B.T.U.'s). For billing purposes, the ~~customer~~Customer's gas usage in cubic feet will be converted to therms using a therm conversion factor representing the actual weighted average BTU value per 100 cubic feet of gas that was delivered into the Company's system in the second preceding calendar month as adjusted to a dry basis as reported each month to the Board in accordance with N.J.A.C. 14:6-3.2. This therm conversion factor expressed to precision of at least three decimal places, shall be applied in calculating bills on a service rendered basis. The Gas Company may at its option, upon 30 day notice to Board and the New Jersey Division of Rate Counsel ("Rate Counsel or RC"), modify the calendar period used in determining the BTU factor, if it is modified toward or at a period closer to that of the Customer billing periods. In that event, the Company's reports to the Board concerning the BTU value of gas delivered into the Company's system shall contain sufficient detail to allow the Board to review the Company's calculation of therm conversion factors.

7.04 – Billing Period

Unless otherwise specified, the charges in this Tariff are stated on a "monthly" basis. The term "month" for billing purposes, shall mean a period of thirty (30) days.

Bills for service furnished will normally be rendered monthly. However, the Company reserves the right to bill bi-monthly. Gas Company also expressly reserves the right to render to any Customer bills based on meter reading periods which may be shorter than a month. Such bills will be prorated as provided in Section 7.05 hereof and are due as provided in Section 7.10 hereof.

7.05 – Proration of Monthly Charges

Except for temporary service accounts, the monthly charges for all initial bills, all final bills, and all bills for periods longer than five (5) days more, or shorter than five (5) days less, than the regular monthly billing period shall be prorated on the basis of a thirty-day month or the actual number of days in the billing period. For temporary service accounts, the minimum billing period for billing purposes shall be one month.

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7.06 – Estimated Bills and Discontinuance of Service for Excessive Estimated Reads

Where Gas Company is unable for any reason to read the meter, Gas Company reserves the right to estimate the amount of gas supplied based upon past usage and other information available and submit a bill determined on that basis. Such a bill shall be marked as to the fact that it is an estimated bill. During the summer period (defined here as May 15th through September 15th) the Gas Company may suspend the reading of manually read meters when the Company determines such suspension is necessary to permit the Company to redirect its work force to higher priority projects, provided, however, that the Company may not suspend meter readings for any individual ~~customer~~Customer for four (4) or more consecutive billing periods (monthly accounts) or two (2) or more consecutive billing periods (bimonthly and quarterly accounts). During such time the accounts will be billed based on estimated usage. Adjustment of Customer's estimated use to actual use shall be made when an actual reading is next obtained. Notwithstanding the above, the Gas Company reserves the right to discontinue gas service when a meter reading is not obtained in accordance with N.J.A.C. 14:3-7.2(e)(3) which states "When a utility estimates an account for four consecutive billing periods (monthly accounts), or two consecutive billing periods (bimonthly and quarterly accounts), the utility shall mail a notice marked "Important Notice" to the ~~customer~~Customer on the fifth and seventh months, respectively, explaining that a meter reading must be obtained and said notice shall explain the penalty for failure to complete an actual meter reading. After all reasonable means to obtain a meter reading have been exhausted, including, but not limited to, offering to schedule meter readings for evenings and on weekends, the utility may discontinue service provided at least eight months have passed since the last meter reading was obtained, the Board has been so notified and the ~~customer~~Customer has been properly notified by prior mailing. If service is discontinued and subsequently restored, the utility may charge a reconnection charge equal to the reconnection charge for restoring service after discontinuance for nonpayment."

7.07 – Billing Adjustments Due to Inaccurate Meter Recordings

When it is determined that the Gas Company's meter is inaccurate or defective, the use of gas service shall be determined by a test of the meter, or by registration of the meter set in its place during the period next following, or after due consideration of previous or subsequent properly measured deliveries. Whenever a meter is found to be registering fast by more than 2% an adjustment of charges shall be made in accordance with the provisions of N.J.A.C. 14:3-4.6.

If a meter is found to be registering less than 100% of the service provided, the Gas Company shall not adjust the charges retrospectively and/or require the Customer to repay the amount undercharged except if: 1) the meter was tampered with; 2) the meter failed to register at all; or 3) the circumstances are such that the Customer should reasonably have known that the bill did

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not reflect the actual usage. In rebilling a Customer under such conditions, the Gas Company may, per its determination, utilize previous or subsequent properly measured deliveries, perform a load analysis and/or a degree day analysis to estimate the usage. The Gas Company shall allow the ~~customer~~Customer to make payment over a period of time equal to that during which the undercharges occurred, in accordance with N.J.A.C. 14:3-4.6(f).

Any adjustment to the Customer's account resulting from the terms in this section will be billed or applied to the account as the case may be. If the adjustment results in a credit, such amount may be refunded upon request by the Customer, in lieu of bill credit, in accordance with N.J.A.C. 14:3-4.6, as may be amended or superseded.

7.08 – Separate Billing for Each Installation

The service classifications are based upon the rendering of service through a single delivery and metering point. Service rendered to the same Customer at other points of delivery shall be separately metered and billed, except as provided in Section 5.01 hereof.

7.09 – Sale for Resale of Gas Service and ~~Sub-Metering~~

1. General

Gas service supplied by the Company shall not be resold by Customer to others except where the Customer is another publicly regulated gas utility, where the gas is used for conversion to Compressed Natural Gas ("CNG"), or the ~~customer~~Customer of record is sub-metering in accordance with the conditions set forth below.

2. Sub-Metering

- a. Gas sub-metering is the practice in which a ~~customer~~Customer of record of the Gas Company, through the use of direct metering devices, monitors, evaluates or measures the ~~customer~~Customer of record's own utility consumption or the consumption of a tenant for accounting or conservation purposes.

Gas sub-meters are devices that measure the volume of gas being delivered to particular locations in a system after measurement by a Company owned meter.

- b. If the ~~customer~~Customer of record charges the tenant for the usage incurred by the tenant, the sum of such charge(s) to the tenant shall not exceed the cost incurred by the ~~customer~~Customer of record for providing gas service, including reasonable administrative expenses. Further, the sum of such charge(s) to the tenant shall not exceed the amount the utility would have charged such tenant if the tenant had been served and billed by the Company directly. The reselling of sub-metering gas service for profit is prohibited.

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- c. Gas sub-metering, in accordance with the conditions described hereinabove, is permitted in new or existing buildings or premises where the basic characteristic of use is industrial or commercial. Gas sub-metering is not permitted in existing buildings or premises where the basic characteristic of use is residential except where such buildings or premises are publicly financed or government owned or are charitable in nature or are condominiums or cooperative housing.
- d. The ~~customer~~Customer of record shall contact the Company prior to the installation of any gas sub-metering device, in order to ascertain whether the affected premises is located within a low pressure portion of the Company's supply system and whether or not the installation of a gas check metering device will cause any significant pressure drop to the affected premises.
- e. All gas consuming devices in any unit must be metered through a single gas sub- meter.

7.10 – Payment of Bills

At least 15 days' time for payment shall be allowed after the date a bill is mailed. Bills are payable at any commercial office at Gas Company or at any duly authorized collection agency or by mail or any other means made available by the Company. The Gas Company may discontinue service for nonpayment of bills provided the amount is greater than \$100 and or more than three (3) months delinquent and it gives the ~~customer~~Customer at least 10 days' written notice of its intention to discontinue service. The notice of discontinuance shall not be mailed until the expiration of the said initial 15-day period. However, in cases of fraud, illegal use, or when it is clearly indicated that the ~~customer~~Customer is preparing to leave, immediate payment of accounts may be required. The Gas Company reserves the right to request wire transfer of funds for payment of bills when the Company reasonably determines that payment by wire transfer is required.

A late payment charge equal to one-twelfth of the lower of 18% or the highest rate allowed by law shall be applied to the monthly billing for all non-residential ~~customer~~Customers. However, service to a governmental entity will not be subject to a late payment charge. Per Section 14:3-7.1(e) of the N.J.A.C., the utility shall not apply a late payment charge sooner than twenty five (25) days after a bill is rendered. Therefore, the Company may, beginning on the twenty-sixth (26th) day after rendering a bill, assess late payment charges. The charge will be applied to all amounts previously billed including late payment charges and accounts payable that are not received by Gas Company within the days specified above. The amount of the late payment charge to be added to the unpaid balance shall be calculated by multiplying the unpaid balance by the late charge rate. When payment is received by the Company from a Customer who has an unpaid balance which includes charges for late payment, the Customer's payment shall be applied first to such late payment charges and then the remainder to the unpaid balance.

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7.11 – Reimbursement of Expense for Processing Uncollectible Checks

A charge of \$15.00 will be made to reimburse the Company for the expense of processing ~~customer~~Customer checks which are returned by the Company's bank as uncollectible. A charge of \$8.00 will be made to reimburse the Company for the expense of processing ~~customer~~Customer checks that are re-submitted and again returned by the Company's bank as uncollectible.

7.12 – Beginning and Ending Service

Any Customer starting the use of service without making application for service and enabling Gas Company to read the meter will be held liable for any amount due for service supplied to the premises from the last reading of the meter immediately preceding the Customer's occupancy, as shown by the records of Gas Company.

Customers shall give reasonable notice of intended removal from any premises wherein they are receiving gas service. Customer shall be liable for service taken after notice of termination has been received by the Company until such time as the meter is read and disconnected, not to exceed forty-eight (48) hours. Notice to discontinue service does not relieve a Customer from any minimum or guaranteed payment under any service classification or contract.

7.13 – Budget Plan

Heating Customers billed under Service Classification RDS have the option of paying for their use of total service in equal estimated monthly installments as set forth in the applicable Gas Company's House Heat Budget Plan. The Company may offer a budget plan to all classes of Customers.

8. LEAKAGE

Customer shall immediately give notice to Gas Company of any escape of gas in or about Customer's premises.

9. ACCESS TO PREMISES

Properly identified employees or agents of Gas Company shall have access to Customer's premises at all reasonable times for any and all necessary purposes in connection with the rendering of service or the removal of its property.

10. RIGHT TO SUSPEND, CURTAIL, OR DISCONTINUE SERVICE

Gas Company shall have, upon reasonable notice, when it can be reasonably given, the right to suspend, curtail or discontinue its service for any of the following reasons:

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- (1) For the purpose of making repairs, changes, replacements, or improvements in any part of its system.
- (2) For compliance in good faith with any governmental order or directive, whether federal, state, municipal, or otherwise, notwithstanding such order or directive subsequently may be held to be invalid.
- (3) For any of the following act(s) or omission(s) on the part of Customer:
 - a. Non-payment of a valid bill due for service furnished at the present or any previous locations. However, nonpayment for business service shall not be a reason for discontinuance of residential service.
 - b. Tampering with any facility of Gas Company.
 - c. Fraudulent representation in relation to the use of gas service.
 - d. Customer moving from the premises unless the Customer requests that service be continued.
 - e. Delivering gas service to others without written approval of Gas Company except as permitted under 7.09 – Sale for Resale of Gas Service, Check Metering and Sub-metering.
 - f. Failure to make or increase an advance payment or deposit when requested by Gas Company.
 - g. Refusal to contract for service where such contract is required.
 - h. Connecting and operating equipment in such a manner as to produce disturbing effects on the gas system of Gas Company or on systems of other Customers.
 - i. Failure to comply with any of these Standard Terms and Conditions.
 - j. Where the conditions of Customer's installation or facilities presents a hazard to life or property.
 - k. Failure of Customer to repair any faulty facility of Customer.
 - l. Failure to provide access to the meter to obtain a reading as permitted under 7.06 – Estimated Bills and Discontinuance of Service for Excessive Estimated Reads.

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- (4) For refusal of reasonable access to Customer's premises for necessary purposes in connection with the rendering of service, including meter installation, reading or testing, or the maintenance or removal of the property of Gas Company.

Failure of Gas Company to exercise its rights to suspend, curtail or discontinue service, for any of the above reasons, shall not be deemed a waiver thereof.

Should gas service be terminated for any of the above reasons, the minimum charge for the unexpired portion of the term shall become due and payable immediately, provided, however, that if satisfactory arrangements are subsequently made by Customer for reconnection of the service, the immediate payment of the minimum charge for the unexpired portion of the contract term may be waived or modified as the circumstances indicate would be just and reasonable.

11. RECONNECTION AND TAMPERING CHARGES

11.01 – Reconnection and Collection Charges

A -charge of \$15.00 shall be made when the Company makes a collection visit to the customer or the premises and/or to restore service when service has been suspended or discontinued for any of the reasons cited in Sections 10.(3), excepting 10.(3)d, and 10.(4) of these Standard Terms and Conditions. Recurring reconnection charges in any 12-month period shall be charged at the approved regular rates for ~~customer~~Customer service otherwise performed by Gas Company but not less than \$30.00.

A charge of \$200.00 may be made when service has been terminated for any of the reasons cited in Sections 10.(3), excepting 10.(3)d, and 10.(4), and which required the installation of a curb box for said termination.

11.02 – Tampering Charge

In the event it is established that a Company's meters or other equipment on the ~~customer~~Customer's premises have been tampered with, and such tampering results in incorrect measurement of the service supplied as determined by the Company, the cost for such gas service, based upon the Company's estimate from available data and not registered by the Company's meter, shall be paid by the beneficiary of such service. The beneficiary shall be any person who benefits from such tampering. The actual cost of investigation, inspection and determination of such tampering, and other costs, such as but not limited to the installation of protective equipment, legal fees, and other costs relating to the administrative, civil or criminal proceedings, shall be billed to the beneficiary of such tampering in the case of non-residential accounts. In the case of residential accounts, all such costs shall be billed to the responsible party. The responsible party shall be the party who

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either tampered with or caused the tampering with a meter or other equipment or knowingly received the benefit to tampering by or caused by another. In the event a residential ~~customer~~Customer unknowingly received the benefit of meter or equipment tampering, the Company shall only seek from the benefiting ~~customer~~Customer the cost of the service provided but not the cost of investigation.

Under certain conditions, tampering with the Company's facilities may also be punishable by fine and/or imprisonment under New Jersey law.

11.03 – Diversion of Service

Diversion is an unauthorized connection to pipes and/or wiring by which the utility service registers on the tenant ~~customer~~Customers' meter although such service is being used by other than the tenant-customer of record without the tenant-customer's knowledge or cooperation. Where a tenant-customer alleges or it is established that service has been diverted outside of such ~~customer~~Customers' premises, that tenant-customer shall not be required to pay for such service without that tenant-customer's consent. The definitions, procedures, investigations and determination of N.J.A.C. 14:3-7.8 shall apply.

12. CONTINUITY OF SERVICE

Gas Company will use reasonable diligence to provide a regular and uninterrupted supply of service; but, should the supply be suspended, curtailed, or discontinued by Gas Company for any of the reasons set forth in Section 10 of these Standard Terms and Conditions or should the supply of service be interrupted, curtailed, deficient, defective, or fail, by reason of any act of God, accident, strike, legal process, governmental interference, acts of third parties, or by reason of compliance in good faith with any governmental order or directive, notwithstanding such order or directive subsequently may be held to be invalid, provided such reasons are not the product of the Company's negligence, or willful misconduct, Gas Company shall not be liable for any loss or damage, direct or consequential, resulting from any such suspension, discontinuance, interruption, curtailment, deficiency, defect, or failure.

Additionally, Gas Company may curtail or interrupt service to any ~~customer~~Customer or ~~customer~~Customers in the event of emergency threatening the integrity of its system or the systems to which it is directly or indirectly connected if, in its sole judgement, such action will prevent or alleviate the emergency condition.

13. LIMITATION OF SERVICE AVAILABILITY

Where the facilities of Gas Company and/or the quantity of gas available are restricted or limited, preference may be given by Gas Company in supplying service to ~~customer~~Customers giving consideration to such factors as 1) annual gas use, 2) volume of gas, 3) load factor, 4) end use of gas, 5) capital investment costs, and 6) number of appliances.

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14. CHARACTERISTICS OF SUPPLIED GAS

Type(s) of gas supplied:

1. Natural gas
2. Natural gas mixed with Propane-Air Gas and or Manufactured Gases and or Liquefied Natural Gas
3. In areas where natural gas service is not available, undiluted commercial grade propane gas distributed through Gas Company facilities and having a minimum heating value of 2,400 BTU per cubic foot.

15. GENERAL15.01 – Inspection of Customer Facilities

Neither by inspection, approval nor non-rejection, nor in any other way does Gas Company give any guarantee or assume any responsibility, expressed or implied, as to the adequacy, safety, or characteristics of any structures, equipment, pipes, appliances, or devices owned, installed, or maintained by Customer or leased by Customer from third parties, except in those instances in which the above equipment or facilities are owned, or leased by Gas Company.

15.02 – Force Majeure

Neither Gas Company, ~~Third Party Supplier~~TPS, or Customer shall be liable for damages to the other for any act, omission, or circumstance occasioned by or in consequence of any acts of God, strikes, lockouts, acts of the public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of rulers and people, civil disturbances, explosions, breakage or accident to machinery or lines of pipe, temporary failure of gas supply, temporary failure of firm transportation arrangements, the binding order of any court or governmental authority which has been resisted in good faith by all reasonable legal means, acts of third parties, and any other cause, whether of the kind herein enumerated or otherwise, not within the control of the party claiming suspension and which by the exercise of due diligence such party is unable to prevent or overcome.

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Such cause or contingencies affecting the performance by Gas Company, ~~Third Party Supplier~~TPS or Customer, however, shall not relieve it of liability in the event of its concurrent negligence or in the event of its failure to use due diligence to remedy the situation and remove the cause in an adequate manner and with all reasonable dispatch, nor shall such causes or contingencies affecting performance relieve either party from its obligations to make payments of amounts then due hereunder in respect of gas theretofore delivered.

16. GAS CURTAILMENT PLAN

16.01- Purpose

The purpose of this plan is to preserve the ability to continue to provide essential gas services, as defined below, to the broadest base of ~~customer~~Customers given limited gas supply and/or delivery capacity.

16.02 – Definition of Essential Gas Users

Essential Gas Users are defined as gas service to individual residential dwellings, multi-family residential dwellings, schools, hospitals, day care centers, nursing homes, dormitories, correctional facilities, twenty-four hour emergency facilities such as municipal police, fire or emergency medical departments and similar facilities which do not have installed alternate fuel equipment and an alternate fuel supply.

16.03 – Actions Required Before Implementation of the Gas Curtailment Plan

The Gas Curtailment Plan will be implemented only after the Company has:

1. Exercised all of its rights to interrupt service to interruptible service classifications – ITS, IS, CS, CSI, as provided for in the Company's Tariff;
2. Availed itself of all cogeneration firm recall gas;
3. Interrupted SIS service, if being provided.

Nothing in the Gas Curtailment Plan shall inhibit the Company from managing and scheduling interruptions in service as covered above in a manner that it determines is appropriate to meet the conditions on its system. However, the Gas Curtailment Plan Action Steps will not go into effect until such time as all options available above have been exercised.

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16.04 – Curtailment Plan Action Steps

1. The Company shall request all transportation ~~customer~~Customers and their ~~third-party suppliers~~TPS to maximize deliveries of gas into the Company's system and request excess deliveries be made available to the Company at a compensation price agreed to by the parties.
2. The Company shall reduce gas service to its own facilities to a minimum;
3. The Company shall appeal to firm large industrial and commercial ~~customer~~Customers to voluntarily reduce gas consumption;
4. The Company shall appeal to its general population of ~~customer~~Customers to reduce gas consumption by lowering thermostats 5°F, closing off unused rooms, reducing non-essential uses of gas – i.e., gas lights, clothes drying;
5. The Company shall declare the existence of a gas curtailment emergency on its system and notify the BPU and other appropriate state agencies;
6. The Company shall seek emergency supplies from pipelines, suppliers and other gas companies;
7. The Company shall curtail service to all firm industrial services greater than 2,000 therms/day other than plant protection;
8. The Company shall curtail service to all firm industrial services less than 2,000 therms/but greater than 500 therms/day other than plant protection;
9. The Company shall curtail non-essential firm commercial usage 500 therms/day or greater;
10. The Company shall curtail remaining non-essential commercial and industrial usage;
11. The Company shall curtail service for industrial plant protection;
12. The Company shall systematically curtail essential uses employing the Company's emergency plan.

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16.05 – Appropriation of End User Transportation Gas

When a gas curtailment emergency is declared (Step 5 in Section 16.04 above), any third-party transportation gas being delivered into the Company's system for end-use ~~customer~~Customers shall be appropriated by the Company to serve the priority of service under this curtailment plan. Customers and ~~Third Party Suppliers~~TPSs whose gas is so appropriated shall be compensated for such gas at its replacement cost but not less than the equivalent price of #2 fuel oil and to the extent the ~~customer~~Customer's actual delivered service is curtailed, that ~~customer~~Customer shall receive curtailment credits equal to a proration of any fixed monthly service charge and demand charges to correspond to the amount of the curtailed service.

16.06 – Liability Exclusion

The declaration of a gas curtailment emergency shall constitute a force majeure condition under Section 15.02 of these Standard Terms and Conditions. Consequently, the Company shall not be liable for any damages, loss of product or other business losses suffered by ~~customer~~Customers as a result of curtailed gas service.

17. UNAUTHORIZED GAS USE

Unauthorized Use includes, but is not limited to, any volume of gas taken by Customer in excess of its maximum daily requirement as set forth in its Service Agreement with Gas Company or the quantity of gas allowed by Gas Company on any day for any reason, including as a result of a curtailment or interruption notice issued by the Company in accordance with its tariff and/or the Board of Public Utilities of the State of New Jersey or any other governmental agency having jurisdiction. A "day" shall be a period of twenty-four (24) consecutive hours, beginning as near as practical to 8 a.m., or as otherwise agreed upon by Customer and Gas Company.

The Company reserves the right to physically curtail the gas service to any Customer if, in the Company's sole judgement, such action is necessary to protect the operation of its system.

If a Customer uses gas after having been notified that gas is not available under their Service Classification, and or if applicable, uses gas in excess of the maximum daily quantity or requirements as established in the Service Agreement then unauthorized gas charges shall apply.

Furthermore, if a ~~Third Party Supplier (TPS)~~ fails to deliver gas in the quantities and or imbalance ranges specified in the TPS Service Classification then unauthorized gas charges shall apply to the TPS.

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In addition to the above, the following conditions have been ordered by the BPU specifically related to Interruptible Customers and their suppliers: A Customer who fails to discontinue natural gas use, consistent with the terms and conditions of the relevant interruptible service agreements, and suppliers who fail to deliver natural gas during a critical period/OFO notice, consistent with the terms and conditions of applicable service agreements and TPS Agreements, shall be charged a penalty equal to the charges for Unauthorized Gas Use.

All Unauthorized Usage shall be billed at the higher of \$2.50 per therm or a rate equal to ten times the highest price of the daily ranges which are published in Gas Daily on the table "Daily Price Survey" for delivery in Transco Zone 6 or Texas Eastern Zone M-3. This rate shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of the interstate pipelines which deliver gas into New Jersey. This is in addition to all applicable taxes and charges of the Customer's service class.

Nothing herein shall be construed to prevent the Company from taking all lawful steps to stop the unauthorized use of gas by Customer, including disconnecting Customers service.

Such payment for unauthorized use shall not be deemed as giving Customer or TPS any rights to use such gas.

The Gas Company may, in its sole discretion, permanently discontinue service upon a finding by the Gas Company that the ~~customer~~Customer has not complied with the conditions and provisions of the tariff.

TPSs that have subscribed to Standby for their Essential Use Customers are not subject to Unauthorized Use Charges for volumes that are within the limits of their Standby Service but will be billed the Standby Rate determined at month end. Any revenues from Unauthorized Gas Use penalty charges shall be credited to the BGSS.

All Unauthorized Use Charges applicable to transportation services will be billed to and payable by the TPS providing gas supply for such services. In the event a TPS fails to pay these charges, the ~~customer~~Customers of that TPS shall be billed directly by the Company for either: 1) their proportionate share, based on the Allocation of Supplies as set forth in— the TPS service classification; or 2) their direct share identified through their non-compliance to Company directives to ease or curtail gas use.

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18. NEW JERSEY SALES AND USE TAX

In accordance with P.L. 1997, c. 162 (the “energy tax reform statute”), as amended by P.L. 2016, c. 57, provision for the New Jersey Sales and Use Tax (“SUT”) has been included in all charges applicable under this tariff by multiplying the charges that would apply before application of the SUT by the factor 1.06625. The energy tax reform statute exempts the following customers from the SUT provision, and when billed to such ~~customer~~Customers, the charges otherwise applicable under this tariff shall be reduced by the provision for the SUT included therein:

1. Franchised providers of utility services (gas, electricity, water, waste water and telecommunications services provided by local exchange carriers) within the State of New Jersey.
2. Cogenerators in operation, or which have filed an application for an operating permit or a construction permit and a certificate of operation in order to comply with air quality standards under P.L. 1954, c. 212 (C.26:2C-1 et seq.) with the New Jersey Department of Environmental Protection, on or before March 10, 1997.
3. Special contract ~~customer~~Customers for which a ~~customer~~Customer-specific tax classification was approved by a written Order of the BPU prior to January 1, 1998.
4. Agencies or instrumentalities of the federal government.
5. International organizations of which the United States of America is a member.

In accordance with P.L. 2004, c. 65 “The Business Retention and Relocation Assistance Act” and subsequent amendment (P.L. 2005, c.374) exempts the following ~~customer~~Customers from the SUT provision, and when billed to such ~~customer~~Customers, the charges otherwise applicable shall be reduced by the provision for the SUT included therein:

1. A qualified business that employs at least 250 people within an enterprise zone, at least 50 % of whom are directly employed in a manufacturing process, for the exclusive use or consumption of such business within an enterprise zone.
2. A group of two or more persons:
 - a. Each of which is a qualified business that are all located within a single redevelopment area adopted pursuant to the “Local Redevelopment and Housing Law,” P.L.1992, c.79 (C.40A:12A-1 et seq.);

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- b. That collectively employ at least 250 people within an enterprise zone, at least 50% of whom are directly employed in a manufacturing process;
 - c. Are each engaged in a vertically integrated business, evidenced by the manufacture and distribution of a product or family of products that, when taken together, are primarily used, packaged and sold as a single product; and
 - d. Collectively use the energy and utility service for the exclusive use or consumption of each of the persons that comprise a group within an enterprise zone.
3. A business facility located within a county that is designated for the 50% tax exemption under Section 1 of P.L.1993, c.373 (C.54:32B-8.45) provided that the business certifies that it employs at least 50 people at that facility, at least 50% of whom are directly employed in a manufacturing process, and provided that the energy and utility services are consumed exclusively at that facility.

A business that meets the requirements in (1), (2) or (3) above shall not be provided the exemption described in this section until it has complied with such requirements for obtaining the exemption as may be provided pursuant to P.L.1983, c.303 (C.52:27H-60 et seq.) and P.L.1966, c.30 (C.54:32B-1 et seq.) and the Company has received a sales tax exemption letter issued by the New Jersey Department of Treasury, Division of Taxation.

19. NEGOTIATED RATES, TERMS AND CONDITIONS

In accordance with the BPU's Order dated August 18, 2011 in BPU Docket No. GR10100761 ("Order") the Company has developed the following criteria for determining whether it will, in individual circumstances, negotiate rates, terms and conditions of service with ~~customer~~Customers that otherwise would not take service under the terms of the service classifications set forth in this tariff. Any individually negotiated rates, terms or conditions agreed to pursuant to this tariff provision are subject to prior approval by the BPU. Negotiated rates, terms and conditions that may be made available are intended to address unique circumstances applicable at the time that the negotiated rates, terms and conditions are agreed to with individual ~~customer~~Customers.

Negotiated rates, terms and conditions will be offered by the Company in circumstances in which it determines in its sole reasonable judgment, that such individual rates, terms and conditions are necessary to prevent (i) physical bypass of the Company's distribution system, (ii) economic bypass of the Company's distribution system or, (iii) the loss of load that could otherwise be served at rates that would exceed marginal costs.

Customers seeking negotiated rates, terms and conditions, and claiming that such rates, terms and conditions are necessary to prevent the ~~customer~~Customer from physically bypassing the Company's distribution system, must provide the Company with the following:

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- (i) a statement from an interstate pipeline involved in such bypass that the proposed interconnection between ~~customer~~Customer and the pipeline is operationally viable, that sufficient capacity is available to serve such ~~customer~~Customer, and that the pipeline would serve the ~~customer~~Customer if requested;
- (ii) maps or flow diagrams that identify the proposed route of the pipeline needed to serve the ~~customer~~Customer from the interconnection with the pipeline and the ~~customer~~Customer's site, the size of the connecting pipeline and any other appurtenant facilities required;
- (iii) engineering studies related to the estimated costs to complete construction of facilities interconnecting the pipeline and the ~~customer~~Customer;
- (iv) information concerning the status of all reliability and environmental or other permits and approvals from local, state and federal agencies;
- (v) a description of any other benefits that the ~~customer~~Customer proposes to provide the Company under a service agreement between the Company and ~~e~~Customer; and
- (vi) such other information as the Company may require.

Customers seeking negotiated rates, terms and conditions for reasons other than to avoid physical bypass must provide the Company (i) such information as the ~~customer~~Customer deems relevant to its request, and (ii) such information as the Company may require given the particular circumstances.

In determining whether to offer individually negotiated rates, terms and conditions to a particular ~~customer~~Customer, the Company will consider all relevant information provided by the ~~customer~~Customer and make a judgment as to whether negotiated rates, terms and conditions are necessary to prevent physical or economic bypass or the loss of load that could otherwise be served at rates that exceed marginal costs. Customers may apply for negotiated rates, terms and conditions by contacting the Company in writing. The Company will respond to any request for negotiated rates, terms and conditions within sixty (60) days of receiving a ~~e~~Customer's written request and all required information.

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SERVICE CLASSIFICATION – RESIDENTIAL DELIVERY SERVICE (RDS)APPLICABLE TO USE OF SERVICE FOR:

All residential purposes in individual residences and in individual flats, individual apartments in multiple family buildings, only where each individual flat or individual apartment is served through its own separate meter and religious institutions where the total rated input capacity of all gas utilization equipment does not exceed 500,000 BTU per hour. The rate is not available for hotels, nor for recognized rooming or boarding houses where the number of rented bedrooms is more than twice the number of bedrooms used by Customer. This rate is not applicable for industrial or commercial use of gas. In residential premises, use for purposes other than residential will be permitted only where such use is incidental to Customer's own residential use. Service for heating and/or cooling of premises will be rendered at this rate. Service to detached outbuildings or outside appliances appurtenant to the residence will be included in this rate provided Customer installs the necessary piping so that the gas used in such facilities may be measured by the meter located at the residence.

Service will be provided if Gas Company's facilities are suitable.

CHARACTER OF SERVICE:

Continuous, however, ~~customer~~Customer may either purchase gas supply from a Third Party Supplier ("TPS") or the Company's Rider "A", Basic Gas Supply Service ("BGSS")

*CHARGES PER MONTH:

	<u>Gas Supply from BGSS</u>	<u>Gas Supply from TPS</u>
Service Charge	\$ ~~8.19~~ <u>13.06</u>	\$ ~~8.19~~ <u>13.06</u>
Distribution Charge per Therm	\$ ~~0.3625~~ <u>4835</u>	\$ ~~0.3625~~ <u>4835</u>
Commodity Charge	Per Rider "A"	Per TPS Agreement

* The charges set forth in this Service Classification include sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. A customer that receives gas supply from a TPS will be charged for commodity according to any agreement between the ~~customer~~Customer and the TPS.

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SERVICE CLASSIFICATION – RESIDENTIAL DELIVERY SERVICE (RDS)
(continued)

MINIMUM MONTHLY CHARGE:

Service Charge.

TERM OF PAYMENT:

All bills are due upon presentation.

TERM OF CONTRACT:

One year, and thereafter until terminated by five (5) days written notice.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS

1.

Utilizing a Third Party Supplier

A ~~e~~Customer choosing to contract with a TPS for supply service will be enrolled for this service with the Company by the TPS on their behalf. A ~~customer~~Customer will receive a confirmation notice from the Company noting their choice of supplier and that the ~~customer~~Customer will have seven (7) calendar days from the date of the confirmation notice to contact the Company and rescind its selection, after which, if not rescinded, the residential ~~e~~Customer's TPS enrollment shall be accepted by the Company. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by the TPS.

2. Switching Suppliers

Customer may switch TPSs or return to the Company's BGSS service at any time subject to the conditions of Customer enrollment. A Customer electing to return to the BGSS service should contact their TPS who will carry out the necessary steps with the Company. The decision and steps necessary to switch TPSs are carried out between the newly selected TPS and the Customer. Customer will not be charged a fee to change its TPS or return to BGSS service.

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SERVICE CLASSIFICATION – RESIDENTIAL DELIVERY SERVICE (RDS)

(continued)

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM THIRD PARTY SUPPLIERS (continued)

3. Limitations on the Availability of Transportation Service

Customer's TPS must demonstrate that it possesses Comparable Capacity or Standby Balancing Service sufficient to provide their Customers' Unadjusted Average Daily Delivery Quantity, as defined under the TPS Service Classification, during the months of November through March. If at any time it is determined that TPS does not meet this provision, then TPS's ~~customer~~Customers will be returned to BGSS gas supply service.

4. Load Balancing Charge

A Load Balancing Charge of \$0.0552 per therm, which includes taxes, shall be billed to the TPS for all metered quantities of its RDS ~~customer~~Customers.

5. Gas Commingling

Service under this Service Classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas with other supplies. Moreover, the Company reserves the right to utilize Customer's gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

6. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for Customers for transporting gas from its source to the Company's interconnection with delivering pipeline suppliers. All such responsibility rests with Customer's TPS. Company shall have no responsibility with respect to such gas before Customer delivers or has delivered on its behalf such gas to Company or after Company redelivers such gas to Customer at the meter at Customer's premises or on account of anything which may be done, happen or arise with respect to such gas before such delivery or after such redelivery. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by TPS.

7. Gas Supply Obligation

In the event that Customer's TPS ceases operations, or for any other reason fails to deliver the Average Daily Delivery Quantity ("ADDQ"), the Company shall provide replacement gas supplies under the BGSS service.

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Issued by: ~~Brian MacLean~~Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities

Dated ~~June 22, 2018~~XXX3 in Docket No. ~~GM17121309~~XXX4

SERVICE CLASSIFICATION – RESIDENTIAL DELIVERY SERVICE (RDS)

(continued)

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS (continued)

8. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company's system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company's system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas into Company's system on behalf of Customer.

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520 Green Lane
Union, New Jersey 07083

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Dated ~~June 22, 2018~~XXX3 in Docket No. ~~GM17121309~~XXX4

SERVICE CLASSIFICATION – SMALL GENERAL SERVICE (SGS)APPLICABLE TO USE OF SERVICE FOR:

Small General Service is available to those ~~customer~~Customer whose annual weather normalized usage as determined by the Company is less than 5,000 therms per year and where Gas Company's facilities are suitable and the quantity of gas is available for the service desired. In August of each year the Company shall review each ~~customer~~Customer's eligibility based on their annual normalized usage and if in excess of 5,500 therms for two consecutive years will transfer the ~~customer~~Customer to General Delivery Service.

CHARACTER OF SERVICE:

Continuous.

*CHARGES PER MONTH:

	<u>Gas Supply from BGSS</u>	<u>Gas Supply from TPS</u>
Service Charge	\$ ~~21.92~~ 35.19	\$ ~~21.92~~ 35.19
Distribution Charge per Therm	\$0. ~~3175~~ 4006	\$0. ~~3175~~ 4006
Commodity Charge	Per Rider "A"	Per TPS Agreement

* The charges set forth in this Service Classification include sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. A ~~customer~~Customer that receives gas supply from a TPS will be charged for commodity according to any agreement between the ~~customer~~Customer and the TPS.

MINIMUM MONTHLY CHARGE:

The Service Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

One year, and thereafter until terminated by five (5) days written notice.

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SERVICE CLASSIFICATION – SMALL GENERAL SERVICE (SGS)

(continued)

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM THIRD PARTY SUPPLIERS (TPS)1. Service Agreement

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a TPS are conditions precedent to receiving gas supply from a TPS.

2. Balancing Charge

Customers will be charged a balancing charge of \$0.0171 per therm, which includes sales tax, in the months of November through March to offset system supply costs utilized to absorb the differences between the TPS delivered Average Daily Delivery Quantities and the actual daily gas supply requirements of the ~~customer~~Customers.

3. Commingling

Service under this Service Classification is provided by the Company within its service territory for the ~~Customer~~Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas with other supplies. Moreover, the Company reserves the right to utilize ~~Customer~~Customer's gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

4. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service Customers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

5. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customers the total monthly requirements for that billing month per an Average Daily Delivery Quantity ("ADDQ") determined as stated in the TPS section of this tariff.

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SERVICE CLASSIFICATION – SMALL GENERAL SERVICE (SGS)
(continued)

6. Utilizing a Third Party Supplier

A ~~customer~~Customer choosing to contract with a TPS for supply service will be enrolled for this service with the Company by the TPS on their behalf. A ~~customer~~Customer will receive a confirmation notice from the Company notifying them of their enrollment by a TPS and that the ~~customer~~Customer should contact the TPS noted on the letter within seven (7) calendar days if they seek to have it rescinded. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by the TPS.

7. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges the ~~customer~~Customers shall be billed directly by the Company for their direct portion, if by their non-compliance to Company directives to cease gas use, and/or a prorata share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas ~~customer~~Customers will first be credited with standby gas purchased by the TPS on their behalf.

8. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

9. Gas Supply Obligation

In the event that Customer's ~~Third Party Supplier~~TPS fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service, except for those whose TPS contracted for Standby Service, limited to Essential Gas User ~~customer~~Customers. In the event that a Customer that is not covered by Standby Service seeks to purchase natural gas supplies from the Company, such sales may be made by the Company in its sole discretion under such terms and conditions as the Company may require.

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SERVICE CLASSIFICATION – SMALL GENERAL SERVICE (SGS)

(continued)

10. Limitations on the Availability of TPS Transportation Service

TPS Service is not available to Customers who are defined as “Essential Gas Users” under the curtailment provision as set forth in Section 17 of the Standard Terms and Conditions of this Tariff unless such Customers’ TPS, in an amount sufficient to meet such Customers’ ADDQ and/or DCQ, agrees to contract and pay for Standby Service as defined in the TPS Service Classification or for such Customers’ TPS demonstrates that it possesses Comparable Capacity as defined in the TPS Service Classification.

11. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company’s system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company’s system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas on behalf of transporting ~~customer~~Customer.

~~##~~12. SPECIAL PROVISIONS, APPLICABLE TO VETERANS’ ORGANIZATIONS:

Veterans’ Organization Service: Pursuant to N.J.S.A 48:2-21.41, when natural gas service is delivered to a ~~customer~~Customer that is a Veterans’ Organization, serving the needs of veterans of the armed forces, the ~~customer~~Customer may apply and be eligible for billing under this Special Provision.

Each ~~customer~~Customer shall be eligible for billing under this Special Provision upon submitting an Application for Veterans’ Organization Service under this service classification and by qualifying as a “Veterans’ Organization” as defined by N.J.S.A. 48:2-21.41 defines a Veterans’ Organization that qualifies for this Special Provision as “an organization dedicated to serving the needs of veterans of the armed forces that: is chartered under federal law, qualifies as a tax exempt organization under paragraph (19) of subsection (c) of section 501 of the federal Internal Revenue Code of 1986, 26 U.S.C. s.501(c)(19), or that is organized as a corporation under the ‘New Jersey Nonprofit Corporation Act,’ N.J.S.15A:1-1 et seq.” Under N.J.S.A. 48:2-21.41, a qualified Veterans’ Organization shall be charged the residential rate for service delivered to the property where the Veterans’ Organization primarily operates, if the residential rate is lower than the commercial rate for service at that property.

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on and after ~~March 15,~~
2019XXX2

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520 Green Lane
Union, New Jersey 07083

ELIZABETHTOWN GAS COMPANY
B. P. U. NO. ~~16 – GAS~~17 – GAS

ORIGINAL SHEET NO. 43-4

SERVICE CLASSIFICATION – SMALL GENERAL SERVICE (SGS)
(continued)

~~##12.~~ SPECIAL PROVISIONS, APPLICABLE TO VETERANS' ORGANIZATIONS- (continued):

The ~~customer~~Customer shall furnish satisfactory proof of eligibility of service under this Special Provision to the Company. Once proof of eligibility is determined by the Company, service under this Special Provision shall begin with the next billing cycle following receipt of the Application.

The ~~customer~~Customer will continue to be billed on this service classification. At least once annually, the Company shall review eligible ~~customer~~Customers' charges for service delivered, defined to include Service Charges and Distribution Charges, under this Special Provision for all relevant periods. If these comparable charges for service delivered under the Residential Delivery Service (RDS) classification are lower than the charges under this classification a credit in the amount of the difference shall be applied to the ~~e~~Customer's next bill.

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Dated ~~February 27, 2019~~XXX3 in Docket No. ~~GR19010017~~XXX4

SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)APPLICABLE TO USE OF SERVICE FOR:

General Delivery Service is available to those ~~customer~~Customers whose annual weather normalized usage as determined by the Company is 5,000 or more therms per year and where Gas Company's facilities are suitable and the quantity of gas is available for the service desired. In August of each year the Company shall review ~~customer~~Customer usages and those ~~customer~~Customers whose weather normalized usage, as determined by the Company, is less than 4,500 therms for two consecutive years will be transferred to Small General Service.

CHARACTER OF SERVICE:

Continuous, however, customers may either purchase gas supply from a Third Party Supplier ("TPS") or the Company's Rider "A", Basic Gas Supply Service ("BGSS").

*CHARGES PER MONTH:

	<u>Gas Supply from BGSS</u>	<u>Gas Supply from TPS</u>
Service Charge	\$ ~~28.90~~ 47.98	\$ ~~28.90~~ 47.98
Demand Charge per DCQ	\$0. ~~806~~ 960	\$0. ~~806~~ 960
Distribution Charge per Therm	\$0. ~~4893~~ 2814	\$0. ~~4893~~ 2814
Commodity Charge	Per Rider "A"	Per TPS Agreement

* The charges set forth in this Service Classification include sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. A ~~customer~~Customer that receives gas supply from a TPS will be charged for commodity according to any agreement between the ~~customer~~Customer and the TPS.

DETERMINATION OF THE DEMAND CHARGE QUANTITY (DCQ)

The DCQ will be determined by the Customer's maximum daily requirements in terms of therm units per day. The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer's premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise DCQ shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April), normalized for weather, divided by the applicable number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer's gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined.

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ELIZABETHTOWN GAS COMPANY

B. P. U. NO. ~~16—GAS~~17—GAS

ORIGINAL SHEET NO. 45

SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

DETERMINATION OF THE DEMAND CHARGE QUANTITY (DCQ) (continued)

If the Customer's maximum daily usage exceeds the DCQ as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement to the highest level experienced during the previous 12 months.

MINIMUM MONTHLY CHARGE:

The sum of the Service Charge and the Demand Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

One year, and thereafter until terminated by five (5) days written notice.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

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ELIZABETHTOWN GAS COMPANY

B. P. U. NO. ~~16 – GAS~~17 – GAS

ORIGINAL SHEET NO. 46

SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

SPECIAL PROVISIONS SECTIONS I & II:

I. SPECIAL PROVISIONS, APPLICABLE TO ALL CUSTOMERS RECEIVING SERVICE UNDER THIS SERVICE CLASSIFICATION

~~1. Distributive Generation Under 12 kW and Gas Cooling & Refrigeration, 2 tons to under 10 Tons~~

~~Upon separate application, Customers who have installed a separate meter for distributed generation equipment having a rated capacity under twelve (12) kW and/or gas cooling equipment having a rated capacity of not less than two (2) tons but less than ten (10) tons of refrigeration will be separately metered for such service and will be billed at the above rates, except that the applicable Distribution Charges will be billed at a rate of \$0.1285 per therm in the period extending from Customer's meter reading taken in the ordinary course of business in May through October. Where, in the Gas Company's opinion, it is impractical to provide separate metering, Gas Company may estimate the use of gas for other than distributed generation and water heating during the foregoing period of May to October. During all other periods, the Distribution Charge per therm stated in this service classification shall apply.~~

21. Distributed Generation of 12 kW or More and Gas Cooling & Refrigeration of 10 Tons or More

Under separate application Customers who are using gas for distributive generation with a rated capacity of twelve (12) kW or more, and/or gas cooling equipment with a rated capacity of ten (10) tons or more, and where gas consumed is separately metered, will be billed at the above rates, except that the applicable Distribution Charges will be billed at a rate of \$0.0589 per therm commencing with the first meter reading taken in the ordinary course of business in May and concluding with the meter reading taken in the ordinary course of business in October. During all other periods, the Distribution and Commodity Charge per therm stated in this service classification shall apply.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

I. SPECIAL PROVISIONS, APPLICABLE TO ALL CUSTOMERS RECEIVING SERVICE UNDER THIS SERVICE CLASSIFICATION (continued)

32. Economic Development Service (EDS):

Any new ~~customer~~Customer employing a minimum of ten (10) employees, who locates in or expands a new or vacant building within the Company's service territory and enters into a GDS service agreement and (2) any existing ~~customer~~Customer who expands into a new or vacant building within the Company's service territory and is a party to a GDS service agreement shall be eligible for an EDS discount. For new ~~customer~~Customers, this building must be new or have been vacant for a minimum of three (3) months. For existing ~~customer~~Customers, the space utilized for operations must expand by more than 5,000 square feet. Gas used subject to the EDS discount for existing ~~customer~~Customers will be calculated by the Company and will be based solely on the ~~customer~~Customer's incremental usage. This service is offered to any eligible ~~customer~~Customer for a period of five (5) years from the date of the initial Service Agreement under this service. The EDS Customers shall receive a fifty (50) percent pre tax discount in this Service Class's Distribution Charge during the period of eligibility.

43. Boiler Limitation

This service classification is not available for new or additional boiler equipment with a rated input in excess of 12.5 million BTU's per hour. The Gas Company may waive this limitation in cases where the Customer enters into a longer term contract or agrees to guarantee a monthly minimum revenue level as may be determined by the Gas Company.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM THIRD PARTY SUPPLIERS (TPS)

1. Service Agreement

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a TPS are conditions precedent to receiving gas supply from a TPS.

2. Balancing Charge

Customers with a DCQ under 500 therms will be charged a balancing charge of \$0.0171 per therm, which includes sales tax, in the months of November through March to offset system supply costs utilized to absorb the differences between the TPS delivered Average Daily Delivery Quantities and the actual daily gas supply requirements of the ~~customer~~Customers.

3. Commingling

Service under this Service Classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas with other supplies. Moreover, the Company reserves the right to utilize Customer's gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

4. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service Customers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

5. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customers the total monthly requirements for that billing month. A TPS with Customers having a DCQ under 500 therms and those requiring an AMR not yet installed are required to deliver these customers natural gas requirements per an ADDQ determined as stated in the TPS section of this tariff.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM THIRD PARTY SUPPLIERS (TPS) (continued)

6. Utilizing a Third Party Supplier

A ~~customer~~Customer choosing to contract with a TPS for supply service will be enrolled for this service with the Company by the TPS on their behalf. A ~~C~~customer will receive a confirmation notice from the Company notifying them of their enrollment by a TPS and that the ~~customer~~Customer should contact the TPS noted on the letter within seven (7) calendar days if they seek to have it rescinded. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by the TPS.

7. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges the ~~customer~~Customers shall be billed directly by the Company for their direct portion, if by their non-compliance to Company directives to cease gas use, and/or a prorata share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas ~~customer~~Customers will first be credited with standby gas purchased by the TPS on their behalf.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM THIRD PARTY SUPPLIERS (TPS) (continued)

8. Automatic Meter Reading (AMR) Equipment for Customers with a DCQ of 500 therms or more.

AMR equipment is required for ~~customer~~Customers with a DCQ of 500 or more therms, as determined by the Company. Customer shall pay for all costs to install AMR equipment including power, communications and other equipment as specified by the Company and provide access for such equipment. The cost of any Company equipment may be paid by Customer over a one (1) year, or some lesser, period by means of a monthly surcharge designed to recover the cost of the equipment plus interest equal to the Company's overall rate of return as authorized from time to time by the BPU. Payments made by the Customer shall not give the Customers ownership of the equipment which shall remain the sole property of the Company.

9. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

10. Gas Supply Obligation

In the event that Customer's ~~Third Party Supplier~~TPS fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service, except for those whose TPS contracted for Standby Service, limited to Essential Gas User ~~customer~~Customers. In the event that a Customer that is not covered by Standby Service seeks to purchase natural gas supplies from the Company, such sales may be made by the Company in its sole discretion under such terms and conditions as the Company may require.

11. Limitations on the Availability of TPS Transportation Service

TPS Service is not available to Customers who are defined as "Essential Gas Users" under the curtailment provision as set forth in Section 17 of the Standard Terms and Conditions of this Tariff unless such Customers' TPS, in an amount sufficient to meet such Customers' ADDQ and/or DCQ, agrees to contract and pay for Standby Service as defined in the TPS Service Classification or for such Customers' TPS demonstrates that it possesses Comparable Capacity as defined in the TPS Service Classification.

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SERVICE CLASSIFICATION – GENERAL DELIVERY SERVICE (GDS)
(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM THIRD PARTY SUPPLIERS (TPS) (continued)

12. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company's system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company's system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas on behalf of transporting ~~customer~~Customer.

III. SPECIAL PROVISIONS, APPLICABLE TO VETERANS' ORGANIZATIONS:

Veterans' Organization Service: Pursuant to N.J.S.A 48:2-21.41, when natural gas service is delivered to a ~~e~~Customer that is a Veterans' Organization, serving the needs of veterans of the armed forces, the ~~customer~~Customer may apply and be eligible for billing under this Special Provision.

Each ~~e~~Customer shall be eligible for billing under this Special Provision upon submitting an Application for Veterans' Organization Service under this service classification and by qualifying as a "Veterans' Organization" as defined by N.J.S.A. 48:2-21.41 defines a Veterans' Organization that qualifies for this Special Provision as "an organization dedicated to serving the needs of veterans of the armed forces that: is chartered under federal law, qualifies as a tax exempt organization under paragraph (19) of subsection (c) of section 501 of the federal Internal Revenue Code of 1986, 26 U.S.C. s.501(c)(19), or that is organized as a corporation under the 'New Jersey Nonprofit Corporation Act,' N.J.S.15A:1-1 et seq." Under N.J.S.A. 48:2-21.41, a qualified Veterans' Organization shall be charged the residential rate for service delivered to the property where the Veterans' Organization primarily operates, if the residential rate is lower than the commercial rate for service at that property.

The ~~customer~~Customer shall furnish satisfactory proof of eligibility of service under this Special Provision to the Company. Once proof of eligibility is determined by the Company, service under this Special Provision shall begin with the next billing cycle following receipt of the Application.

The ~~C~~ustomer will continue to be billed on this service classification. At least once annually, the Company shall review eligible ~~C~~customers' charges for service delivered, defined to include Service Charges, Demand Charges and Distribution Charges, under this Special Provision for all relevant periods. If these comparable charges for service delivered under the Residential Delivery Service (RDS) classification are lower than the charges under this classification a credit in the amount of the difference shall be applied to the ~~C~~customer's next bill.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)

APPLICABLE TO USE OF SERVICE FOR:

This Service Classification is available to any non-Residential Customer who wishes to purchase natural gas sales and/or transportation service and have the Company own and maintain facilities at Customer's premises to compress gas into CNG ("CNG Fueling Facilities") for use as fuel for self-propelled motor vehicles ("Vehicular Gas"). This Service Classification also sets forth the terms and conditions under which the Company may sell and/or distribute Vehicular Gas at CNG Fueling Facilities operated by the Company as Public Fueling Stations.

CHARACTER OF SERVICE:

Continuous to Customers signing a Natural Gas Vehicle ("NGV") Service Agreement ("Agreement").

CONDITIONS PRECEDENT:

A Customer must sign an NGV Agreement with the Company to receive continuous service under this Service Classification. Service under such NGV Agreement is for the term of the NGV Agreement and may be continued beyond the term of the NGV Agreement only by the mutual agreement of Company and Customer. Members of the general public who wish only to obtain Vehicular Gas at Public Fueling Stations need not sign an NGV Agreement; ~~however, they must establish an account with the Company.~~ Such members of the public have no entitlement to continuous service under this Service Classification. Service under this Service Classification will be separately metered. Customers must indicate in their Agreements whether they will purchase gas supply from Company or from a ~~Third-Party Supplier ("TPS").~~

Section 6.01 of the Standard Terms and Conditions of this Tariff sets forth standards that establish the Company's liability for damages. Section 6.01 applies to any claim arising from services provided or facilities constructed, maintained or operated by Company under this Service Classification. Moreover, the specific provisions of Section 6.01 that apply to Customers will apply both to Customers signing an NGV Service Agreement and members of the public who obtain Vehicular Natural Gas under this Service Classification.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

LICENSING, PERMITS AND LEGAL REQUIREMENTS:

Customers installing CNG Fueling Facilities on their premises must meet all applicable licensing, permitting and other legal requirements associated with operating CNG Fueling Facilities or Company may suspend or terminate service to such facilities without further liability.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

MAIN AND SERVICE EXTENSIONS FOR NGV SERVICE, CNG FUELING FACILITIES AND THE INCREMENTAL COSTS OF CNG-POWERED VEHICLES:

Under this Service Classification, Company may construct and/or install mains, services, automatic meter reading devices, and other facilities necessary to provide sales and transportation service to Customers. Company may also construct and/or install CNG Fueling Facilities located behind Customer's meter. Company may also construct Public Fueling Stations. On a not unduly discriminatory basis, Company may require revenue guarantees sufficient to enable Company to fully recover the costs of all such facilities over a negotiated period as set forth in the NGV Agreement. All negotiated charges under this Service Classification may be revised at the expiration of the term of an NGV Agreement and reflected in any new/replacement NGV Agreement.

Subject to an appropriate revenue guarantee, Company may invest up to ten times the projected annual Distribution Revenues from service provided under this Service Classification in facilities necessary to provide service under this Service Classification. To the extent that Company's investment exceeds ten times projected annual Distribution Revenues, Customer will be assessed a CNG Facilities Charge sufficient to recover Company's excess investment (including its authorized pre-tax return). In lieu of paying a Facilities Charge, Customer may provide a Contribution In Aid of Construction. To the extent that this Section of the NGV Service Classification conflicts with Section 3 of the Standard Terms and Condition of Company's Tariff with respect to service provided under this Service Classification, this Section will control.

I. COMPANY-OWNED AND MAINTAINED CNG FUELING FACILITIES ON CUSTOMERS' PREMISES

Customer may elect to have Company construct, own, and maintain CNG Fueling Facilities at Customer's Premises ("Customers' Premises Facilities"). Such service does not include the dispensing of CNG into vehicles. Under this option, the dispensing of CNG into vehicles shall be the sole responsibility of the Customer. In addition, Customer may, at its option, either contract and pay separately for electricity needed to operate the CNG Fueling Facility or have the Company contract for such electricity and pass through its actual electricity costs to Customer.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
 (continued)

Rates and Charges Applicable to Customers' Premises Facilities:*

The following rates and charges apply to service under this Service Classification at Customers' Premises Facilities:

1. Distribution Charge - \$0.~~25853612~~ per therm

2. Fueling Station Charge

A Fixed monthly amount, designed on an individual Customer basis to recover the Company's projected cost of maintaining the Customer's specific CNG Fueling Facility.

3. Facilities Charge

A Fixed monthly amount, designed on an individual Customer basis to recover Company investment in excess of ten times projected annual Distribution Revenues in facilities necessary to provide service under this Service Classification. The Facilities Charge shall be computed by multiplying the Company's investment in excess of ten times projected annual Distribution Revenue (including its authorized pre-tax return) by an appropriate percentage that will be based upon the term of the NGV Agreement.

4. Gas Cost

BGSS-M rate applicable to month of sale for gas sold by Company, not applicable if supplied by a ~~Third Party Supplier~~TPS.

5. Taxes and Fees

Motor Fuel and all other taxes and fees or other similar charges applicable to sale and/or transportation of Vehicular Gas. The remittance of any applicable taxes related to such use shall be the sole responsibility of the Company.

*The charges set forth in this section exclude sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any additional taxes, fees or similar charges that are lawfully imposed by the Company. A Customer that receives gas supply from a TPS will be charged for commodity according to the agreement between the ~~customer~~Customer and the TPS.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

Sales of Vehicular Natural Gas to Third Parties:

Customer may agree in the Agreement to allow its CNG Fueling Station to be used to sell and dispense CNG to the general public. Such sales will be made at publicly posted prices as determined by the Customer. Distribution Charge revenues from sales to the public shall be credited against any revenue guarantee obligation of Customer.

II. PUBLIC FUELING STATIONS

Company may construct, operate and maintain CNG Fueling Facilities for the purpose of providing Vehicular Gas to the general public.

Rates and Charges Applicable to Company Owned Public Fueling Stations:*

If Company offers service to the general public, the Company shall charge the rates set forth below. The Company shall post such rates at each Public Fueling Facility owned and operated by the Company. The price shall be the Gasoline Gallon Equivalent ("GGE") of a price per therm that includes the following components:

<u>Distribution Charge</u>	\$0. ~~2585~~ per therm
<u>Fueling Station Charge</u>	\$0.3600 per therm
<u>Facilities Charge</u>	\$0.2987 per therm
<u>Gas Cost</u>	BGSS-M rate applicable to the month of sale
<u>Taxes and Fees</u>	Motor fuel and all other taxes and fees or other similar charges applicable to sales of Vehicular Gas. The remittance of any applicable taxes related to such use shall be the sole responsibility of the Company.

*The charges set forth in this section exclude sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any taxes fees or similar charges that are lawfully imposed by the Company.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS ("TPS"):

1. Service Agreement

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a TPS are conditions precedent to receiving gas supply from a TPS.

2. Automatic Meter Reading (AMR) Equipment

Customer shall pay for all costs to install AMR equipment including power, communications and other equipment as specified by the Company and provide access for such equipment. Payments made by the Customer shall not give the Customers ownership of the equipment which shall remain the sole property of the Company.

3. Gas Commingling

Service under this Service Classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas with other supplies. Moreover, the Company reserves the right to utilize Customer's gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

4. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service Customers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

5. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customers the daily requirements.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS ("TPS"): (continued)

6. Utilizing a Third Party Supplier

A ~~customer~~Customer choosing to contract with a TPS for supply service will be enrolled for this service with the Company by the TPS on their behalf. A ~~customer~~Customer will receive a confirmation notice from the Company notifying them of their enrollment by a TPS and that the ~~customer~~Customer should contact the TPS noted on the letter within seven (7) calendar days if they seek to have it rescinded. ~~Customer~~Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by TPS.

7. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and/or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges the ~~customer~~Customers shall be billed directly by the Company for their direct portion, if by their non-compliance to Company directives to cease gas use, and/or a prorata share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas ~~customer~~Customers will first be credited with standby gas purchased by the TPS on their behalf.

8. Gas Supply Obligation

In the event that Customer's ~~Third Party Supplier~~TPS fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service, except for those whose TPS contracted for Standby Service, limited to Essential Gas User ~~customer~~Customers. In the event that a Customer that is not covered by Standby Service seeks to purchase natural gas supplies from the Company, such sales may be made by the Company in its sole discretion under such terms and conditions as the Company may require.

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SERVICE CLASSIFICATION
COMMERCIAL & INDUSTRIAL NATURAL GAS VEHICLE SERVICE (NGV)
(continued)

SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY FROM
THIRD PARTY SUPPLIERS ("TPS"): (continued)

9. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company's system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company's system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas on behalf of transporting ~~customer~~Customer.

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SERVICE CLASSIFICATION – LARGE VOLUME DEMAND (LVD)

The signing of a service agreement is a condition precedent to receiving service under this classification. The Service Agreement will include the Customer's Demand Charge Quantity (DCQ).

APPLICABLE TO USE OF SERVICE FOR:

Applicable to Commercial and Industrial Users, ~~when daily demand with a DQQ of is not less than 2,000 or more therms per day~~ up to the maximum daily demands as set forth in the Service Agreement, provided that all firm gas service is supplied under this rate, Gas Company's facilities are suitable, and the required quantity of gas is available for the service desired. The consumption of gas in different locations will not be combined for billing purposes.

CHARACTER OF SERVICE:

Continuous, ~~however, Customers may either purchase gas supply from a Third Party Supplier ("TPS") or the Company's Rider "A", Basic Gas Supply Service ("BGSS").~~

*CHARGE PER MONTH:

	<u>Tax-Exempt</u>	<u>Taxable</u>
Service Charge	<u>\$303.74</u>	<u>\$274.04323.86</u>
Demand Charge per DCQ	<u>\$1.450</u>	<u>\$1.0301.546</u>
Distribution Charge per Therm	<u>\$0.0459</u>	<u>\$0.04220489</u>
Commodity Charge	Per <u>BGSS Rider "A"</u> <u>or TPS Agreement</u>	

*The charges set forth in this Service Classification include sales and use tax and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. A ~~customer~~Customer that receives gas supply from a TPS will be charged for commodity according to any agreement between the ~~customer~~Customer and the TPS.

DETERMINATION OF THE DEMAND CHARGE QUANTITY ("DCQ"):

The DCQ will be determined by the Customer's maximum daily requirements in terms of therms per day and included in the Service Agreement.

The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer's premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise DCQ shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April), normalized for weather, divided by the applicable

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SERVICE CLASSIFICATION – LARGE VOLUME DEMAND (LVD)
(continued)

DETERMINATION OF THE DEMAND CHARGE QUANTITY ("DCQ"): (continued)

number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer's gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined.

If the Customer's maximum daily usage exceeds the contract demand as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement to the highest level experienced during the previous 12 months.

MINIMUM MONTHLY CHARGE:

The sum of the Service Charge and the Demand Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

~~The term of the contract will be as specified in the individual Service Agreement, however, the term shall not be less than one year. The term of the contract will automatically renew unless the Customer notifies the Company in writing sixty (60) days prior to contract termination. Not less than two (2) years, and for successive two (2) year terms thereafter unless terminated by written notice prior to sixty (60) days of the contract anniversary date. At the Company's option, the Customer may switch to a firm transportation service to receive gas supply from a TPS per the provisions of this classification within the first two years. In the event that a eCustomer ceases operations completely or moves its operations to a location where the Company does not provide service, Customer shall not be liable for further charges under the Service Agreement upon notification to the Company in writing. However, the customer is obligated to a minimum of two (2) years of service.~~

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

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SERVICE CLASSIFICATION – LARGE VOLUME DEMAND (LVD)
(continued)

SPECIAL PROVISIONS SECTIONS I & II:

I. SPECIAL PROVISIONS, APPLICABLE TO ALL CUSTOMERS RECEIVING SERVICE UNDER THIS SERVICE CLASSIFICATION

1. Plant Shutdowns

In the event Customer is compelled to shutdown operation of its entire manufacturing or commercial facilities because of a major disaster, major strike, or order of any court or administrative agency having jurisdiction, and said shutdown continues in effect through a full calendar month, Gas Company, upon written request from Customer, may adjust the Minimum Charge for the calendar month. Separate written requests by Customer must be made for each month in which an adjustment of the Minimum Charge is desired and said request shall set forth in detail the exact reasons therefor.

2. Standby Equipment and Fuel

It is the Customer's responsibility to provide for alternate energy facilities needed, if any to provide plant protection service, including cool down periods for refractory, during periods in which gas may be curtailed in accordance with curtailment plan authorized by the State of New Jersey or appropriate Federal Government Agency that are applicable to the Company's operation. In addition, the Gas Company reserves the right to interrupt or suspend service rendered hereunder by ~~customer~~Customer if, in the sole judgement of the Company, it is necessary to meet system integrity or to meet other emergency demands under its Curtailment Action Plan as set forth in Section I of this tariff.

3. Facility Charges

The costs of any changes in the facilities of the Gas Company necessary to render this service will be paid for by the Customer.

4. Unauthorized Use

This Service Classification is subject to ~~Section I, Item 17,~~ Unauthorized Gas Use ~~sSection~~ of the Standard Terms and Conditions.

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ELIZABETHTOWN GAS COMPANY
B. P. U. NO. 17 – GAS

ORIGINAL SHEET NO. 62

SERVICE CLASSIFICATION – LARGE VOLUME DEMAND (LVD)
(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY
FROM THIRD PARTY SUPPLIERS (TPS)

1. Service Agreement

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a TPS are conditions precedent to receiving gas supply from a TPS.

2. Gas Commingling

Service under this classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

3. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service customerCustomers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

4. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customer's total monthly requirements for that billing month.

5. Utilizing a Third Party Supplier

Customers utilizing a TPS (including brokers and ,-marketers) or other third party suppliers (collectively Third Party Suppliers ("TPS")) either as agents or as suppliers of gas into the Company's system, must notify the Company in writing of the TPS that will be used in any particular month. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by TPS. Any Customer or TPS that wishes to deliver gas into the Company's system prior to commencing deliveries must be a qualified TPS under the Company's TPS service classification.

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SERVICE CLASSIFICATION – LARGE VOLUME DEMAND (LVD)(continued)II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY
FROM THIRD PARTY SUPPLIERS (TPS) (continued)6. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges, the eCustomers shall be billed directly by the Company for their direct portion, if by their non-compliance to Company directives to cease gas use, and/or a prorata share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas eCustomers will first be credited with standby gas purchased by the TPS on their behalf.

7. Automatic Meter Reading (AMR) Equipment for Customers

In order to utilize this service, (AMR) equipment is required. Customer shall pay for all costs to install (AMR) equipment including power, communications and other equipment as specified by the Company and provide access for such equipment. The cost of any Company equipment may be paid by Customer over a one (1) year or some lesser period by means of a monthly surcharge designed to recover the cost of the equipment plus interest equal to the Company's overall rate of return as authorized from time to time by the New Jersey Board of Public Utilities. Payments made by the Customer shall not give the Customers ownership of the equipment, which shall remain the sole property of the Company.

8. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

9. Gas Supply Obligation

In the event that Customer's TPS fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service, except for those whose TPS contracted for Standby Service, limited to Essential Gas User customers. In the event that a Customer that is not covered by Standby Service seeks to purchase natural gas supplies from the Company, such sales may be made by the Company in its sole discretion under such terms and conditions as the Company may require.

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SERVICE CLASSIFICATION – LARGE VOLUME DEMAND (LVD)

(continued)

II. SPECIAL PROVISIONS, APPLICABLE TO CUSTOMERS RECEIVING GAS SUPPLY
FROM THIRD PARTY SUPPLIERS (TPS) (continued)

10. Limitations on the Availability of Transportation Service

TPS Service is not available to Customers who are defined as “Essential Gas Users” under the curtailment provision as set forth in Section 16 of the Standard Terms and Conditions of this Tariff unless such Customers’ TPS, in an amount sufficient to meet such Customers’ DCQ, agrees to contract and pay for Standby Service as defined in the TPS Service Classification or for such Customers’ TPS demonstrates that it possesses Comparable Capacity as defined in the TPS Service Classification.

11. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company’s system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company’s system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas into Company’s system on behalf of transporting customer.

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SERVICE CLASSIFICATION – ELECTRIC GENERATION FIRM SERVICE (EGF)

All ~~eC~~Customers must sign a Service Agreement. Service will be restricted to the maximum annual and hourly requirements, and the location and equipment specified in the Agreement.

APPLICABLE TO USE OF SERVICE FOR:

Available to customers who utilize natural gas for Qualifying Cogeneration, as defined below, Distributive Generation, Micro Turbine and Fuel Cells at facilities with a rated production of over 500 Kilowatts (kW). Customers have the option of taking service under this Service Classification or negotiating a sales and/or transportation service contract which will be filed with the BPU.

A Qualifying Cogeneration Facility is one that meets the Federal Energy Regulatory Commission (FERC) certification of qualifying status for the sequential production of electrical and/or mechanical energy and useful thermal energy from the same fuel source by a facility as defined in Section 201 of the Regulatory Policies Act of 1978.

CHARACTER OF SERVICE:

Continuous

*CHARGE PER MONTH:

	<u>Tax-Exempt ⁽¹⁾</u>	<u>Taxable ⁽²⁾</u>
Service Charge	~~\$52.27~~ <u>80.00</u>	~~\$55.73~~ <u>85.30</u>
Demand Charge per DCQ	~~\$0.42~~ <u>4600</u>	~~\$0.44~~ <u>9640</u>
Distribution Charge per Therm	~~\$0.94~~ <u>050530</u>	~~\$0.94~~ <u>320565</u>
Commodity Charge	Per Rider "A"	Per Rider "A"

* The charges set forth in this Service Classification include sales and use tax, unless noted tax-exempt and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company.

- (1) Tax-Exempt rates apply to cogeneration facilities that are in compliance with the terms of N.J.S.A. 54:30A-50.
- (2) Taxable rates apply to ~~customer~~Customers, unless specifically exempted by law, entering Service Agreements with the Company after 3/10/1997.

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SERVICE CLASSIFICATION – ELECTRIC GENERATION FIRM SERVICE - (EGF)

(continued)

DETERMINATION OF THE DEMAND CHARGE QUANTITY ("DCQ"):

The DCQ will be determined by the Customer's maximum daily requirements in terms of therms per day and included in the Service Agreement.

The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer's premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise DCQ shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April), normalized for weather, divided by the applicable number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer's gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined.

If the Customer's maximum daily usage exceeds the DCQ as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement to the highest level of usage experienced within the past 12 months.

The billing demand quantity for the initial month of gas consumption shall be the rated twenty-four (24) hour input of the connected equipment expressed in equivalent therms.

Demands established during the billing months of May through September, inclusive, will not be used for billing purposes to the extent that such demands exceed previously established billing demands.

MINIMUM MONTHLY CHARGE:

The sum of the Service Charge and the Demand Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

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SERVICE CLASSIFICATION – ELECTRIC GENERATION FIRM SERVICE - (EGF)
(continued)

TERM OF CONTRACT:

The term of the contract will be specified in the Service Agreement, but shall not be less than two years. Successive two-year terms shall be provided unless terminated by written notice prior to 60 days of the contract anniversary date.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS:1. Maximum Gas Usage and Deliveries

Service will be restricted to the maximum annual and hourly requirements, and the location and equipment specified in the Service Agreement. Upon request by ~~customer~~Customer, Company may deliver available quantities of gas in excess of maximum hourly requirement for limited periods. Such deliveries shall not be deemed to constitute a change in the requirements specified in the Service Agreement.

2. Qualifying Facilities and Reporting

Customer must certify that qualifying status has been granted by the FERC and any other agencies required to grant operating status to the facility. The Customer is required to file with the Company all publicly available reports, related to cogeneration operation, that are filed with State and Federal agencies.

3. Metering

Service supplied under this Service Classification shall be separately metered.

4. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

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520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated ~~June 22, 2018~~XXX3 in Docket No. ~~GM17121309~~XXX4

SERVICE CLASSIFICATION – GAS LIGHT SERVICE (GLS)

This Service Classification is limited to un-metered Gas Lights whose cost of maintenance and repair shall be the responsibility of Customer.

APPLICABLE TO USE OF SERVICE FOR:

Customers who have the gas supply for their outdoor lighting fixtures connected directly to the gas service pipe without being metered.

CHARACTER OF SERVICE:

Continuous.

CHARGE PER MONTH:

The Distribution Charge for this service shall be at the flat rate of \$~~6.479~~05 per Mantel Equivalent, inclusive of taxes, for each .02 therms of hourly input rating of the lighting fixtures. Input ratings shall be those of the manufacturer of the gas lighting fixtures or as determined by actual test or calculation made by Gas Company. The rate set forth above will be adjusted for the Periodic Basic Gas Supply Service Charge (BGSS-P) of this Tariff as well as all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. Per Therm charges shall be determined by the Company using the following factors times the applicable rates noted above:

Mantel Equivalents = fixture input rating / .02 therms of hourly input

Un Metered Billing Therms = Mantel Equivalents *.02 * 24 hours * 365 / 12

MINIMUM MONTHLY CHARGE:

Flat rate as shown above.

TERM OF PAYMENT:

All bills are due upon presentation. Should a non-residential GLS Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

One year, and thereafter until terminated by five (5) days written notice.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

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SERVICE CLASSIFICATION - COGENERATION SERVICE – INTERRUPTIBLE (CSI)
CLOSED TO NEW CUSTOMERS

This Service Classification is only available to qualifying cogeneration facilities served under this classification on or after January 1, 2010, as well as additional facilities added at these ~~customer~~Customers existing cogeneration sites after this date.

The signing of a Service Agreement and Federal Energy Regulatory Commission (FERC) certification of qualifying status are conditions precedent to receiving service under this Service Classification.

APPLICABLE TO USE OF SERVICE FOR:

The sequential production of electrical and/or mechanical energy and useful thermal energy from the same fuel source by a Qualifying Facility as defined in Section 201 of the Regulatory Policies Act of 1978.

Customer must certify that qualifying status has been granted by the FERC and will be required to sign a Service Agreement. Service will be restricted to the maximum annual and hourly requirements, and the location and equipment specified in the Agreement.

CHARACTER OF SERVICE:

Interruptible.

Gas will be available at the sole option of the Gas Company when peaking supplies are not required to meet the gas demands of customers served under firm service classifications or other system requirements.

Service may be discontinued or curtailed at the sole option of the Gas Company after not less than three (3) hours notice by telephone or otherwise.

*CHARGE PER MONTH:

	<u>Tax-Exempt</u>	<u>Taxable</u>
Service Charge	\$ ~~101.20~~ <u>141.42</u>	\$ ~~107.90~~ <u>150.79</u>
Quantity Charge	*	*

*The Quantity Charge shall be the monthly Basic Gas Supply Service Charge ("BGSS-M") plus \$0.0300 per therm pre taxes. In addition, the total monthly charge will be adjusted for all applicable riders or taxes of this tariff.

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SERVICE CLASSIFICATION – COGENERATION SERVICE – INTERRUPTIBLE (CSI)
CLOSED TO NEW CUSTOMERS
(continued)

MINIMUM MONTHLY CHARGE:

Service Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

The term of the contract will be specified in the Service Agreement, but shall not be less than one year. Successive one-year term extensions shall be provided for thereafter, unless terminated by written notice prior to 60 days of the contract anniversary date.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS:1. Reports

Customer is required to file with the Company all publicly available reports, related to cogeneration operation, that are filed with State and Federal agencies.

2. Metering

Service supplied under this Service Classification shall be separately metered.

3. FERC Status

Customer must certify that qualifying status has been granted by the FERC and will be required to sign a Service Agreement. Service will be restricted to maximum annual and hourly requirements, and the location and equipment specified in the agreement. Upon request by customer, Elizabethtown may deliver available volumes of gas in excess of maximum hourly requirements for limited periods. Such deliveries shall not be deemed to constitute a change in the requirements specified in the Agreement.

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SERVICE CLASSIFICATION – COGENERATION SERVICE – INTERRUPTIBLE (CSI)
CLOSED TO NEW CUSTOMERS
(continued)

SPECIAL PROVISIONS: (continued)

4. Standby Equipment and Fuel

It is the Customer's full responsibility to have standby equipment installed and maintained in operating condition and a fuel supply adequate for its operation at all times.

5. Interruption of Service

The Company reserves the right to physically curtail the gas service to any Customer if, in the Company's sole judgment, such action is necessary to protect the operation of its system.

6. Gas Day

A "day" shall be a period of twenty-four (24) consecutive hours, beginning as near as practical to 8 a.m., or as otherwise agreed upon by Customer and Gas Company.

7. Tax Exemption

The cogeneration facility must be in compliance with N.J.S.A. 54:30A-50 in order to be exempt from applicable taxes.

UNAUTHORIZED USE:

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

TREATMENT OF REVENUES:

Eighty (80%) percent of all revenues produced under this Service Classification, exclusive of: Service Charges, and applicable Riders, taxes and the BGSS-M component of the Quantity Charge ~~which that~~ shall be credited to the BGSS, after removing applicable taxes, shall be credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

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SERVICE CLASSIFICATION – INTERRUPTIBLE SERVICE (IS)

The signing of a service agreement is a condition precedent to receiving service under this classification. The Service Agreement will include the Customer's maximum daily requirements.

APPLICABLE TO USE OF SERVICE FOR:

Industrial boiler and commercial boiler use ~~customer~~Customer's having an alternate fuel capability with a daily demand of not less than 500 therms per day up to a maximum daily demand as set forth in the Service Agreement, providing the Gas Company facilities are suitable and when the Gas Company in its sole discretion deems sufficient gas supplies to be available for this service.

Gas delivered will be separately metered and shall not be used interchangeably with gas supplied under any other Service Classification.

CHARACTER OF SERVICE:Interruptible

Gas will be available for interruptible service at the sole option of the Gas Company when peaking supplies are not required to meet the gas demands of ~~customer~~Customer's served under firm service classifications or other system requirements. Service may be discontinued or curtailed at the sole option of the Gas Company after not less than three (3) hours notice by telephone or otherwise. See also Special Provision – Alternative Fuel Requirement.

*CHARGE PER MONTH:

Service Charge	\$ ~~355-206~~ 28.55
Demand Charge per DCQ	\$0. ~~084~~ 113
Quantity Charge per Therm	**

*The charges set forth above include sales and use tax, unless noted tax exempt, and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company.

**The Quantity Charge shall be \$0.~~05460~~843 per therm plus the BGSS-M Charge of Rider "A", plus all other applicable Riders of this Tariff and any additional taxes, or similar charges that are lawfully imposed by the Company. However, it may be adjusted at the sole discretion of the Company each month, upon five (5) days notice to the Board, to a price as described below:

A price equal to the estimated market price expressed in an equivalent rate per therm for No. 2 grade fuel oil using an average BTU content of 136,000 but not less than the floor price nor greater than the ceiling price as described as follows:

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SERVICE CLASSIFICATION – INTERRUPTIBLE SERVICE (IS)

(continued)

CHARGE PER MONTH: (continued)

The floor price, as determined monthly, shall be the BGSS-M and an adjustment for applicable taxes plus applicable Riders of this tariff, plus \$0.016 per therm during the period April through October or \$0.032 per therm during the period November through March and any additional taxes or similar charges that are lawfully imposed by the Company.

The ceiling price shall be \$0.9405 per therm plus the BGSS-M Charge of Rider “A”, plus applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company. The ceiling price will be reviewed for possible adjustment if the spot price for Futures Contract Crude Oil – Light Sweet, as published in the Wall Street Journal, exceeds \$130.00 per barrel.

DETERMINATION OF THE DEMAND CHARGE QUANTITY (“DCQ”):

The DCQ will be determined by the Customer’s maximum daily requirements in terms of therms per day and included in the Service Agreement.

The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer’s premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise DCQ shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April), normalized for weather, divided by the applicable number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer’s gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined. If the Customer’s maximum daily usage exceeds the DCQ as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement to the highest level experienced during the previous 12 months.

MINIMUM MONTHLY CHARGE:

The sum of the Service Charge and the Demand Charge.

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SERVICE CLASSIFICATION – INTERRUPTIBLE SERVICE (IS)

(continued)

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

Not less than one (1) year, and for successive one (1) year terms thereafter unless terminated by written notice prior to sixty (60) days of the contract anniversary date.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS:1. Standby Equipment and Fuel

It is the Customer's full responsibility to have standby equipment installed and maintained in operating condition and a fuel supply adequate for its operation at all times. The Customer shall provide the Gas Company with an affidavit certifying the grade and sulphur content of fuel oil that can be utilized in the facilities served under this service classification or a description of the alternate fuel used.

2. Pilot Gas

Any gas consumed for pilot lights shall be billed at the GDS rate schedule. Separate metering shall be used where practicable. Where such metering is not practical, a fixed monthly charge based upon the rated input of the pilot will be billed to the Customer.

3. Emergency Service

If an IS Customer requests gas on an emergency basis when gas service would otherwise be precluded under the terms of this service classification, the Gas Company may in its sole discretion tender gas if it determines that an emergency does exist and the Gas Company has the ability to provide the gas service. Gas consumed under the provision will be priced at a rate per therm equal to the greater of:

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SERVICE CLASSIFICATION – INTERRUPTIBLE SERVICE (IS)

(continued)

SPECIAL PROVISIONS: (continued)3. Emergency Service (continued)

- a) the incremental cost of gas, as determined by the Gas Company, during the time such service is rendered adjusted for the applicable taxes plus five (5) cents per therm, or
- b) the Distribution Charge of the GDS Service Classification rate plus the BGSS-M charge of Rider "A".

4. Plant Shutdown

In the event Customer is compelled to shut down operation of its manufacturing or commercial facilities because of a major disaster, major strike, or a lawful order of any court or administrative agency having jurisdiction, Gas Company, upon written request from Customer, may not apply or collect from Customer the minimum monthly charge established herein during the period Customer's plant shall remain so shut down, and, upon receipt of such request, Gas Company shall have the right to terminate the contract as of the date when such request is received or at any other time during the period of suspension of said minimum monthly charge.

5. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

6. Alternative Fuel Requirement

As of November 1 of each year, interruptible Customers using No. 2 fuel oil, No. 4 fuel, jet fuel or kerosene are required to have seven (7) days of alternative fuel either on hand or, if a Customer's on-site storage capacity is less than seven (7) days, then full storage capacity plus additional firm contractual supply arrangements to equal seven (7) days. On or before November 1st, Customers shall submit an "Alternative Fuel Certification" indicating they have met the above requirements and the alternative fuel used or will agree to suspend operations during an interruption. Customers who fail to discontinue natural gas use, consistent with the terms and conditions of the relevant interruptible tariff, shall be assessed a charge based on Unauthorized Use.

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SERVICE CLASSIFICATION – INTERRUPTIBLE SERVICE (IS)

(continued)

SPECIAL PROVISIONS: (continued)7. Treatment of Revenues

Eighty (80%) percent of all revenues produced under this Service Classification, exclusive of: Service Charges, Demand Charges, applicable Riders; taxes and the floor price, which shall be credited to the BGSS, after removing applicable taxes shall be credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)

This service classification is limited to those ~~customer~~Customers or their successors and assigns under contract on July 18, 1977.

APPLICABLE TO USE OF SERVICE FOR:

Large volume boiler or turbine fuel with connected load in excess of 35,000 therms per day. Terms of service including pressure, capital repayment, operation condition are separately set forth in individual agreements between the Gas Company and the ~~customer~~Customers.

Contracts in effect are with:

Service to Gilbert Generating Station and to Glen Gardner Generating Station per service initially begun with Jersey Central Power & Light Company.

CHARACTER OF SERVICE:

Gas will be available at the sole option of the Gas Company when peaking supplies are not required to meet the gas demands of ~~customer~~Customers served under firm service classifications or other system requirements.

The Gas Company reserves the right to interrupt this service upon three (3) hours notice by telephone or otherwise if in its sole discretion continuance of service would adversely impact on its ability to adequately serve other Customers or for other operational reasons.

RATE:

Jersey Central Power and Light Company – not to exceed \$0.0819 per therm plus the BGSS-M Charge, plus the applicable Riders of this Tariff, net of Sales and Use Tax, in effect at the time of rendering service, but not less than the floor price. The floor price, as determined monthly, shall be the BGSS-M plus pre tax rates of \$0.0150 per therm during the period April through October or \$0.0320 per therm during the period November through March, plus applicable Riders of this Tariff, plus an adjustment for any other charges lawfully imposed by the Company.

The rate to be charged will be determined solely by the Company within the range described above.

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)

(continued)

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

One year, and for successive one (1) year terms thereafter unless terminated by written notice prior to sixty (60) days of the contract anniversary date.

SPECIAL PROVISIONS:1. BTU Adjustment

For purposes of billing, all gas volumes delivered under this service classification shall be converted to therms by multiplying the daily volume at standard conditions of pressure (14.73 psia) and temperature (60°F) by the average daily BTU value of the gas.

2. Emergency Service

Emergency service will be provided upon request if the Gas Company in its sole judgment has the facility capability and the gas supplies to render such service. The rate charged for such service shall be equal to the greater of: a) the incremental cost of gas required by the system at the time the emergency service is rendered plus five cents per therm or b) 145 percent of the “projected purchased gas cost used in determining the current BGSS-M Charge for the purposes of Rider A; plus an adjustment for applicable taxes or similar charges. Excess revenues derived from this provision (exclusive of any adjustments) will be applied to the BGSS Charge as recovered gas costs.

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)

(continued)

SPECIAL PROVISIONS: (continued)3. Special Purchases

Gas purchased specifically for Service to Gilbert Generating Station and to Glen Gardner Generating Station shall be sold to the ~~customer~~Customer(s) incrementally subject to the following conditions as agreed to in writing by all parties and to be in effect for the entire transaction period as specified below:

- a) Type of Service
- b) Duration of Agreement
- c) If the rate agreed upon is to be based upon an oil parity, the following shall be specified in the agreement:
 - (1) Type of oil to be used for parity purposes
 - (2) The source from which oil prices will be taken and the method by which the oil parity rate will be computed
 - (3) The appropriate adjustments to be made to the oil parity rate
 - (4) The frequency with which the oil parity will be recomputed
- d) The rate when an oil parity rate is not used
- e) Special contract provisions

The BGSS Charge of this tariff shall not apply to the services provided under this provision. Similarly, all volumes shall be excluded from the calculations associated with the clause.

4. Transportation of Customer Gas

Gas purchased by the Customer and made available for Transportation through the Company system will be delivered to Customer subject to the terms and conditions of a Service Agreement signed by all parties.

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)
(continued)

SPECIAL PROVISIONS: (continued)4. Transportation of Customer Gas (continued)

The Service Agreement shall specify the following:

- a) Type of Service
- b) Duration of Agreement
- c) Charges associated with the Service
- d) Special contract provisions

5. Storage Service

- a) Firm Storage

Availability of Storage Service will be announced by the Company by February 1 of each year. The Customer may subscribe for Firm Storage Service by March 1 of each year. If oversubscribed, the available level of service will be offered pro rata, based on the Customer's actual usage during the 12 months ended December 31. Firm Storage Service will be available for a contract year running May 1 through April 30.

The Storage Service will be available at a 100 day withdrawal rate or a 150 day withdrawal rate. Injections into storage may be made between May 1 and October 31 at a daily rate not to exceed 1/180 of the contracted storage capacity. Withdrawals may be made between November 1 and April 30 at a daily rate not to exceed contract amount as set forth in the Service Agreement. All storage gas must be taken out by April 30. The Company may at times relax these operating conditions if it determines such can be done without adversely affecting service to its sales eCustomers.

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)
(continued)

SPECIAL PROVISIONS: (continued)5. Storage Service (continued)

The charges for Firm Storage Service are as follows:

Customer Accounting Charge	\$69.55	per month
Injection Charge	\$0.086	per Dth
Withdrawal Charge	None	

Storage Demand Charge (Monthly Charge for 12 Months)

100 day withdrawal rate	\$0.152	per Dth of contracted storage capacity
150 day withdrawal rate	\$0.116	per Dth of contracted storage capacity

The Company and Customer will enter into a Service Agreement specifying the maximum daily delivery amount and total storage capacity amount. The Customer may not obtain a maximum daily delivery amount in excess of 50% of their maximum daily demand for gas and in no event greater than the maximum daily delivery amount in their Transportation Service Agreement.

b) Limited Storage Service

For the period May through October the Company may offer a limited Storage Service. The charges for such service shall be as follows:

Customer Accounting Charge	\$69.55	per month
Injection Charge	\$0.086	per Dth
Withdrawal Charge		None
Storage Demand Charge	\$0.041	per Dth of contracted storage capacity

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)

(continued)

SPECIAL PROVISIONS: (continued)b) Limited Storage Service (continued)

The Company and Customer will enter into a Service Agreement specifying the maximum daily delivery amount and the total storage capacity amount. The Service Agreement will also describe when and how injection and withdrawals can be made. The Customer may not obtain storage capacity for more than 50% of their most recent historical gas consumption for the period of May to October, however that level of consumption may be adjusted upward if the Customer were using alternate fuel instead of gas.

6. Treatment of Revenues

All revenues produced under this Service Classification, exclusive of; Service Charges, and applicable Riders, taxes, and revenues resulting from service under Special Provisions 2, will be apportioned as follows:

a) Sales made under the Rate provision of this service classification:

All remaining revenues in excess of the floor price of gas, after removing applicable taxes, shall be subject to revenue sharing – 80% credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

b) Sales made under Special Provision 3 of this service classification:

All remaining revenues in excess of the costs associated with the special gas purchase shall be subject to revenue sharing – 80% credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

c) Services provided under Special Provision 4 of this service classification:

All remaining revenues in excess of any incremental administrative costs incurred in providing this service shall be subject to revenue sharing – 80% credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

d) Services provided under Special Provision 5 of this service classification:

All remaining revenues in excess of the Customer Accounting Charge shall be subject to revenue sharing – 80% credited to the OSMC in accordance with the Board's Order in Docket No. GO99030122, 20% retained by the Company.

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SERVICE CLASSIFICATION – CONTRACT SERVICE (CS)
(continued)

SPECIAL PROVISIONS: (continued)

7. Contract Review

To the extent that any new contracts with terms in excess of three (3) years are entered into under Special Provision 3, 4 and/or 5 of this service classification or any existing contracts under Special Provision 3, 4 and/or 5 with terms in excess of three (3) years are amended, the Company is required to submit such contracts or amendments to the Staff of the Board of Public Utilities for review thirty days prior to the effective date of such contract or amendment.

8. Societal Benefits Charge

The rates set forth above will be adjusted for the Societal Benefits Charge of this Tariff, Rider "D".

9. Applicable Taxes

The charges in this Rate Schedule will include provision for the New Jersey Sales and Use Tax. When billed to ~~customer~~Customers exempt from one or more of these taxes, such charges will be reduced by the relevant amount of such taxes included therein.

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SERVICE CLASSIFICATION – SUPPLEMENTAL INTERRUPTIBLE SERVICE (SIS)

This service classification is for a limited term. The signing of a service agreement by the ~~e~~Customer with the Gas Company is a condition precedent to receiving service under this service classification.

APPLICABLE TO USE OF SERVICE FOR:

Customers under service classification EGF, CSI, LVD, IS or ITS up to a maximum daily demand as set forth in their existing service agreement, or as set forth in the service agreement under this service classification, providing that Gas Company facilities are suitable and gas supplies can be secured for this service.

CHARACTER OF SERVICE:

Gas will be made available for this service only to the extent that such gas supplies can be incrementally purchased or produced.

The Gas Company reserves the right to interrupt this service upon three (3) hours notice by telephone or otherwise if in its sole discretion continuance of service would adversely impact on its ability to adequately serve other ~~e~~Customers or for other operational reasons.

RATE:1. Service Charge

Upon initial request of SIS service, ~~customer~~Customer will be charged an amount equal to the monthly service charge of the ~~customer~~Customer's existing rate. This charge will be reassessed for subsequent initial requests made after June 30 of any year. In addition, a \$50.00 daily charge will be assessed, pre-taxes, for each day SIS is utilized.

2. Quantity Charge

The rate per therm for gas used shall be set within a range computed to be (a) the incremental cost of purchasing or producing said gas plus all applicable taxes plus \$0.0755 per therm and (b) the effective IS rate.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make a payment –in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

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Dated ~~June 22, 2018XXX3~~ in Docket No. ~~GM17121309XXX4~~

SERVICE CLASSIFICATION – SUPPLEMENTAL INTERRUPTIBLE SERVICE (SIS)

(continued)

SPECIAL PROVISIONS:1. Offering of Service

Unless otherwise agreed to in the service agreement:

- a) Any ~~customer~~Customer who does not accept gas offered under this rate schedule within the period of time allotted by the Company shall be deemed to have rejected such offer and waived all entitlements to the offered gas.
- b) Customers normally served under the IS service classification will be offered gas under this service classification only when Interruptible Gas Service does not satisfy total ~~customer~~Customer requirements. Any gas supplies available under this service classification shall be offered to qualified ~~customer~~Customers on a prorated basis utilizing the Daily Demand Requirements as set forth in the service agreements as the criteria for proration, subject to the operating capabilities and system requirements of the Company.

2. Basic Gas Supply Service Charge

Gas purchased for sale under this service classification shall not be included as part of the gas costs recoverable through the BGSS Charge.

3. Treatment of Revenues

The revenue (exclusive of any service charges and applicable riders, taxes and other similar charges) on a per therm basis produced under this service classification that exceeds the per therm cost of the incrementally purchased or produced gas including applicable taxes and -other similar charges shall be subject to the revenue sharing formula associated with the ~~customer~~Customer's regular service classification.

4. Obligation ~~To~~ Take Requested Service

If the ~~customer~~Customer requests service be rendered under this service classification and if such gas when offered is not used by the ~~customer~~Customer, the ~~customer~~Customer will be subject to being charged a per therm rate equivalent to the difference between the average gas costs as shown in the then current BGSS Charge and the actual gas cost for all therms unsold by the Gas Company under this service classification during the applicable BGSS Charge period. These revenues will be applied to the BGSS Charge as recovered gas costs. The gas cost and volumes would be applied to the BGSS Charge as purchased gas costs and available volumes.

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SERVICE CLASSIFICATION – SUPPLEMENTAL INTERRUPTIBLE SERVICE (SIS)
(continued)

SPECIAL PROVISIONS: (continued)

5. Pricing Modification

The methodology and pricing set forth in the Rate section of this Service Classification may be modified in the service agreement, if agreed to by the Customer and the Company, in order to accommodate market conditions or special ~~customer~~Customer requirements (including special requirements if the ~~e~~Customer commits to use gas for a suitable cogeneration facility).

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SERVICE CLASSIFICATION—FIRM TRANSPORTATION SERVICE (FTS)

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a third party are conditions precedent to receiving service under this Service Classification.

APPLICABLE TO USE OF SERVICE FOR:

Customers with a Demand Charge Quantity (DCQ) in excess of 2,000 therms per day.

CHARACTER OF SERVICE:

This service will be offered on a Firm basis subject to curtailment provisions as set forth in Section 17 of the Standard Terms and Conditions of this Tariff.

The availability of service to be offered for contract under this Service Classification shall be determined at the sole discretion of the Company and will be offered on a first come first served basis.

*CHARGE PER MONTH:

	<u>Tax-Exempt</u>	<u>Taxable</u>
Service Charge	\$257.01	\$274.04
Demand Charge per DCQ	\$0.966	\$1.030
Distribution Charge per Therm	\$0.0396	\$0.0422

*The charges set forth above include sales and use tax, unless noted tax exempt, and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company.

DETERMINATION OF THE DEMAND CHARGE QUANTITY (DCQ):

The DCQ will be determined by the Customer's maximum daily requirements in terms of therms per day and included in the Service Agreement.

The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer's premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise Daily Contract Demand shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April) divided by the applicable

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SERVICE CLASSIFICATION—FIRM TRANSPORTATION SERVICE (FTS)

(continued)

DETERMINATION OF THE DEMAND CHARGE QUANTITY (DCQ): (continued)

number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer's gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined.

If the Customer's maximum daily usage exceeds the DCQ as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement.

MINIMUM MONTHLY CHARGE:

The sum of the Service Charge and Demand Charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

TERM OF CONTRACT:

The term of the contract will be as specified in the individual Service Agreement, however, the term shall not be less than one year. The term of the contract will automatically renew unless the Customer notifies the Company in writing sixty (60) days prior to contract termination. In the event that a customer ceases operations completely or moves its operations to a location where the Company does not provide service, Customer shall not be liable for further charges under the Service Agreement upon notification to the Company in writing.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

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SERVICE CLASSIFICATION—FIRM TRANSPORTATION SERVICE (FTS)
(continued)

SPECIAL PROVISIONS:

1. Gas Commingling

Service under this classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas, when necessary, in accordance with the applicable curtailment provisions of this Tariff.

2. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service customers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

3. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customers total monthly requirements for that billing month.

4. Utilizing a Third Party Supplier

Customers utilizing brokers, marketers or other third party suppliers (collectively Third Party Suppliers ("TPS")) either as agents or as suppliers of gas into the Company's system, must notify the Company in writing of the TPS that will be used in any particular month. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by TPS. Any Customer or TPS that wishes to deliver gas into the Company's system prior to commencing deliveries must be a qualified TPS under the Company's TPS service classification.

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SERVICE CLASSIFICATION—FIRM TRANSPORTATION SERVICE (FTS)

(continued)

SPECIAL PROVISIONS: (continued)5. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges the customers shall be billed directly by the Company for their direct portion, if by their non-compliance to Company directives to cease gas use, and/or a prorata share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas customers will first be credited with standby gas purchased by the TPS on their behalf.

6. Automatic Meter Reading (AMR) Equipment for Customers

In order to utilize this service, (AMR) equipment is required. Customer shall pay for all costs to install (AMR) equipment including power, communications and other equipment as specified by the Company and provide access for such equipment. The cost of any Company equipment may be paid by Customer over a one (1) year or some lesser period by means of a monthly surcharge designed to recover the cost of the equipment plus interest equal to the Company's overall rate of return as authorized from time to time by the New Jersey Board of Public Utilities. Payments made by the Customer shall not give the Customers ownership of the equipment, which shall remain the sole property of the Company.

7. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

8. Gas Supply Obligation

In the event that Customer's TPS fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service, except for those whose TPS contracted for Standby Service, limited to Essential Gas User customers. In the event that a Customer that is not covered by Standby Service seeks to purchase natural gas supplies from the Company, such sales may be made by the Company in its sole discretion under such terms and conditions as the Company may require.

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SERVICE CLASSIFICATION—FIRM TRANSPORTATION SERVICE (FTS)

(continued)

SPECIAL PROVISIONS: (continued)9. Limitations on the Availability of Transportation Service

TPS Service is not available to Customers who are defined as "Essential Gas Users" under the curtailment provision as set forth in Section 16 of the Standard Terms and Conditions of this Tariff unless such Customers' TPS, in an amount sufficient to meet such Customers' DCQ, agrees to contract and pay for Standby Service as defined in the TPS Service Classification or for such Customers' TPS demonstrates that it possesses Comparable Capacity as defined in the TPS Service Classification.

10. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company's system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company's system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas into Company's system on behalf of transporting customer.

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)

The signing of a Service Agreement and possession by the Customer of a fully executed contract to purchase gas from a third party are conditions precedent to receiving service under this Service Classification.

APPLICABLE TO USE OF SERVICE FOR:

Customers eligible for service under Service Classifications LVD, IS, or CSI and having clear title to gas that is made available for ITS on the Company's distribution system, except that such Customers need not comply with the alternate fuel requirement of those Service Classifications to receive service hereunder. However, the Customer must comply with the Alternate Fuel Requirement under this Service Classification.

CHARACTER OF SERVICE:

Interruptible Transportation Service will be available when system capacity is not required to meet the demands of ~~customer~~Customers served under all other Service Classifications or other system requirements, including, but not limited to, conditions that may be imposed on the Company by its suppliers. The availability of this service, and all determinations and interpretations hereunder, shall be at the sole judgment of the Company. Service may be discontinued or curtailed at the sole option of the Company after not less than three (3) hours notice by telephone or otherwise.

*CHARGE PER MONTH:

	<u>Tax-Exempt</u>	<u>Taxable</u>
Service Charge	\$589.50	\$628.55
Demand Charge per DCQ	\$0. ~~293400~~	\$0. ~~312427~~
Distribution Charge per Therm	**	**

*The charges set forth above include sales and use tax, unless noted tax exempt, and will be adjusted for all other applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company.

**The ceiling for the Distribution Charge shall be \$0.~~08431233~~ per therm or \$0.~~07941156~~ per therm, for tax-exempt ~~customer~~Customers, but may be reduced, upon five (5) days notice to the Board to a floor of \$0.0262 per therm or \$0.0246 for tax exempt ~~customer~~Customers, if the Company determines that, without a rate reduction, competitive pressures may result in the loss of load or the Customer. Rates for Customers without alternate fuel capability will be set monthly without reference to a ceiling or floor price. The above rates will be further adjusted to include all other charges set forth in the applicable Riders of this Tariff and any additional taxes or similar charges that are lawfully imposed by the Company.

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)

(continued)

DETERMINATION OF THE DEMAND CHARGE QUANTITY (DCQ):

DCQ will be determined by the Customer's maximum daily requirements in terms of therms per day and included in the Service Agreement.

The DCQ level shall be the highest actual daily metered consumption registered from an approved automatic meter reading device at Customer's premises within a period of not less than two years, but up to three years immediately preceding the Customer obtaining service or renewing a Service Agreement under this Service Classification if such information is available. Otherwise DCQ shall be set equal to the product of (1) the highest winter monthly consumption for the most recent winter (October through April), normalized for weather, divided by the applicable number of days in the respective billing month, and (2) 1.36, provided that DCQ shall not be less than the highest non-winter month consumption divided by the applicable number of days in the respective billing month. For process loads, the Company may base the DCQ on historical consumption. If historical consumption information is not available, then (a) the initial DCQ level shall be based upon the Customer's gas utilization equipment expressed in consumption per day, and (b) after twelve (12) months of actual consumption has been metered, the DCQ level shall be redetermined.

If the Customer's maximum daily usage exceeds the DCQ as stated in the Service Agreement more than three (3) times in twelve (12) months, the Company may increase the DCQ in the Service Agreement to the highest level experienced during the previous 12 months.

MINIMUM MONTHLY CHARGE:

The sum of the service charge and the demand charge.

TERM OF PAYMENT:

All bills are due upon presentation. Should the Customer fail to make payment in full, the Company may, within the time period specified in and in accordance with Section 7.10 of the Standard Terms and Conditions of this Tariff, assess late payment charges.

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(continued)

TERM OF CONTRACT:

The term of the contract will be as specified in the individual Service Agreement; however, the term shall not be less than one year. The term of the contract will automatically renew unless the Customer notifies the Company in writing sixty (60) days prior to contract termination. In the event that a ~~customer~~Customer ceases operations completely or moves its operations to a location where the Company does not provide service, Customer shall not be liable for further charges under the Service Agreement upon notification to the Company in writing.

STANDARD TERMS AND CONDITIONS:

This Service Classification is subject to the Standard Terms and Conditions of this Tariff.

SPECIAL PROVISIONS:1. Gas Commingling

Service under this classification is provided by the Company within its service territory for the Customer. The gas transported under this Service Classification is not the property of the Company. However, the Company reserves the right to commingle such gas with other supplies. Moreover, the Company reserves the right to utilize Customer's gas, when necessary, in accordance with the applicable provisions of this Tariff.

2. Transportation to Gas Company Facilities

The Company is not responsible for making arrangements for transportation service Customers for transporting the gas from its source to the Company's interconnection with the delivering pipeline supplier.

3. Nominations for Service

The Customer's TPS shall nominate on behalf of its Customers the total monthly requirements for that billing month.

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(continued)

SPECIAL PROVISIONS: (continued)4. Utilizing a Third Party Supplier

Customers utilizing brokers, marketers or other third party suppliers (collectively Third Party Suppliers, "TPS") either as agents or as suppliers of gas into the Company's system, must notify the Company in a manner acceptable to the Company of the TPS that will be used in any particular month. Customer agrees that as between the Company and Customer, the Company shall be entitled to rely upon information concerning deliveries of natural gas on behalf of Customer provided by TPS. Any Customer or TPS that wishes to deliver gas into the Company's system prior to commencing deliveries must be a qualified TPS under the Company's TPS service classification.

5. Imbalance Charges

To the extent that a TPS ceases operations or under delivers gas, Customers shall be ultimately responsible for payment of any charges not paid for by their TPS, including but not limited to daily and or monthly imbalance charges for gas supplies consumed by Customer but not delivered by TPS. In the event a TPS fails to pay these charges the ~~e~~Customers shall be billed directly by the Company for their direct portion, if by their non-compliance to Company directives to cease gas use, and/or a 121efille share by applying the Allocation of Supply terms of the TPS Service Classification, except that essential service gas ~~customer~~Customers will first be credited with standby gas purchased by the TPS on their behalf.

6. Automatic Meter Reading (AMR) Equipment for Customers

In order to utilize this service, AMR equipment is required. Customer shall pay for all costs to install AMR equipment including power, communications and other equipment as specified by the Company and provide access for such equipment. The cost of any Company equipment may be paid by Customer over a one (1) year, or some lesser, period by means of a monthly surcharge designed to recover the cost of the equipment plus interest equal to the Company's overall rate of return as authorized from time to time by the New Jersey Board of Public Utilities. Payments made by the Customer shall not give the Customers ownership of the equipment which shall remain the sole property of the Company.

7. Unauthorized Use

This Service Classification is subject to Section I, Item 17, Unauthorized Gas Use of the Standard Terms and Conditions.

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)

(continued)

SPECIAL PROVISIONS: (continued)8. Treatment of Revenues

Revenues under this Service Classification, exclusive of applicable taxes shall be accounted for as follows: All service charge revenues derived from IS, CSI and- LVD ~~customer~~Customers shall be retained by the Company.

All demand charge revenues derived from LVD ~~customer~~Customers shall be retained by the Company. The first \$0.080 per therm of all demand charge revenues from IS ~~customer~~Customers shall be retained by the Company. All remaining demand revenues derived from IS ~~customer~~Customers shall be credited 80% to the OSMC in accordance with the Board's Order in Docket No. GO99030122 and 20% to the Company. All demand revenues derived from CSI ~~customer~~Customers shall be credited 80% to the OSMC in accordance with the Board's Order in Docket No. GO99030122 and 20% to the Company.

All distribution charge revenues from LVD ~~customer~~Customers shall be retained by the Company. All remaining distribution charge revenues from IS and CSI ~~customer~~Customers shall be credited 80% to the OSMC in accordance with the Board's Order in Docket No. GO99030122 and 20% to the Company.

Revenues derived from the application of Riders shall be accounted for in accordance with the respective Riders. Revenues derived from the payment of imbalance charges, imbalance cash outs, or unauthorized use charges shall be credited to the BGSS Charge.

9. Gas Supply Obligation

In the event that Customer's TPS fails to deliver, the Company may, in its sole discretion, provide replacement gas supplies. The Company shall have no obligation to provide natural gas supplies to Customers that contract for TPS Service.

10. Limitations on the Availability of TPS Transportation Service

TPS Service is not available to Customers who are defined as "Essential Gas Users" under the curtailment provision as set forth in Section 16 of the Standard Terms and Conditions of this Tariff unless such Customers' TPS, in an amount sufficient to meet such Customers' DCQ, demonstrates that it possesses Comparable Capacity as defined in the TPS Service Classification. In addition, the TPS can serve such ITS Customers if they can demonstrate to the Company's satisfaction that they possess sufficient alternate fuel capability to meet their energy requirements for a period not less than fourteen (14) consecutive days.

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SERVICE CLASSIFICATION – INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(continued)

SPECIAL PROVISIONS: (continued)

11. Indemnification

As between Company and Customer, Customer warrants that it has clear title to any gas supplies delivered into the Company's system for redelivery to Customer and Customer shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company's system for redelivery to Customer. Customer agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries of gas on behalf of transporting ~~customer~~Customer.

12. Availability of IS, LVD or CSI Service

ITS Customers who wish to do so may be made eligible to purchase sales service under the IS, LVD or CSI Service Classification also by designating the appropriate sales Service Classification in their ITS Service Agreements. Customer must meet the eligibility criteria applied to the designated sales Service Classification in order to obtain sales service. Customers may not designate more than one sales Service Classification. Customers that elect to purchase IS, LVD or CSI service may nominate sales or transportation service, but not both sales and transportation service, in any month. Customers who elect sales service under this provision shall remain subject to the Service and Demand Charges and the terms and conditions of this transportation Service Classification and in addition shall be liable for the Distribution and Rider Charges of the elected sales service.

13. Alternative Fuel Requirement

As of November 1 of each year, interruptible Customers using No. 2 fuel oil, No. 4 fuel, jet fuel or kerosene are required to have seven (7) days of alternative fuel either on hand or, if a Customer's on-site storage capacity is less than seven (7) days, then full storage capacity plus additional firm contractual supply arrangements to equal seven (7) days. On or before November 1st, Customers shall submit an "Alternative Fuel Certification" indicating they have met the above requirements and the alternative fuel used or will agree to suspend operations during an interruption. Customers who fail to discontinue natural gas use, consistent with the terms and conditions of the relevant interruptible tariff, shall be assessed a charge based on Unauthorized Use. Also see, Special Provision, Limitation of the Availability of TPS Transportation Service.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE

The provisions of this Service Classification shall apply to brokers, marketers, ~~customer~~Customers intending to act as their own gas supplier, and other ~~third party suppliers (collectively “Third Party Suppliers”)~~ (collectively, TPSs) of natural gas who wish to either act as agents for Transportation Customers or deliver natural gas supplies to Company’s City Gate for Transportation Customers. ~~Third Party Suppliers~~TPSs wishing to sell and/or deliver gas on the Company’s system will be required to sign a Service Agreement in which they will agree to be bound by the terms and conditions of this Service Classification as well as other applicable terms and conditions of the Company’s Tariff. By entering into a Service Agreement, TPS certifies that it is in compliance with all current applicable provisions of law, including N.J.S.A. 48:3-7.3. and will take steps to remain in compliance with all future applicable provisions and all other requirements mandated by ~~the~~ Board of Public Utilities.

TERM OF CONTRACT:

The term of the contract shall be one (1) year and from month to month thereafter unless terminated on thirty (30) days written notice.

CREDITWORTHINESS:

Company shall not be required to permit any TPS who fails to meet Company’s standards for creditworthiness to sell or deliver gas on its system. Company may require that TPS provide the following information:

- a) Current audited financial statements (to include a balance sheet, income statement and statement of cash flow), annual reports, 10-K reports or other filings with regulatory agencies, a list of all corporate affiliates, parent companies and subsidiaries and any reports from credit agencies which are available. If audited financial statements are not available, then TPS also should provide an attestation by its chief financial officer that the information shown in the unaudited statements submitted is true, correct and a fair representation of Buyer’s financial condition.
- b) A bank reference and at least three trade references.
- c) A written attestation that TPS is not operating under any chapter of the bankruptcy laws and is not subject to liquidation or debt reduction procedures under state laws, such as an assignment for the benefit of creditors, or any informal creditor’s committee agreement. An exception can be made for a TPS who is a debtor-in-possession operating under Chapter XI of the Federal Bankruptcy Act but only with adequate assurances that any charges from the Company will be paid promptly as a cost of administration.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE

(continued)

CREDITWORTHINESS: (continued)

d) A written attestation that TPS is not subject to the uncertainty of pending litigation or regulatory proceedings in state or federal courts which could cause a substantial deterioration in its financial condition or a condition of insolvency.

e) A written attestation from TPS that no significant collection lawsuits or judgments are outstanding which would seriously reflect upon the business entity's ability to remain solvent.

If TPS has an ongoing business relationship with Company, no uncontested delinquent balances should be outstanding for natural gas sales, storage, transportation services or imbalances previously billed by Company, and TPS must have paid its account during the past according to the established terms, and not made deductions or withheld payment for claims not authorized by contract.

TPS shall furnish Company at least annually, and at such other time as is requested by Company, updated credit information for the purpose of enabling Company to perform an updated credit appraisal. In addition, Company reserves the right to request such information at any time if Company is not reasonably satisfied with TPS's creditworthiness or ability to pay based on information available to Company at that time.

Company shall not be required to permit and shall have the right to suspend permission to sell or deliver gas on its system to any TPS who is or has become insolvent, fails to demonstrate creditworthiness, fails to timely provide information to Company as requested, or fails to demonstrate ongoing creditworthiness as a result of credit information obtained; provided, however, TPS may continue to sell/deliver gas on the Company's system if ~~Third Party Supplier~~TPS elects one of the following options:

- (i) Payment in advance for up to three (3) months of TPS's obligations to Company.
- (ii) A standby irrevocable letter of credit in form and substance satisfactory to Company in a face amount up to three (3) months of ~~Third Party Supplier~~TPS's obligations to Company. The letter of credit must be drawn upon a bank acceptable to Company.
- (iii) A guaranty in form and substance satisfactory to Company, executed by a person that Company deems creditworthy, of TPS's performance of its obligations to Company.
- (iv) Such other form of security as TPS may agree to provide and as may be acceptable to Company.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE

(continued)

CREDITWORTHINESS: (continued)

In the event Third Party Supplier fails to immediately prepay the required three (3) months of revenue or furnish security, Company may, without waiving any rights or remedies it may have, and subject to any necessary authorizations, suspend Third Party Supplier until security is received.

The insolvency of a TPS shall be evidenced by the filing by TPS, or any parent entity thereof, of a voluntary petition in bankruptcy or the entry of a decree or order by a court having jurisdiction adjudging the Third Party Supplier, or any parent entity thereof, bankrupt or insolvent, or approving as properly filed a petition seeking reorganization, arrangement, adjustment or composition of the TPS, or any parent entity thereof, under the Federal Bankruptcy Act or any other applicable federal or state law, or appointing a receiver, liquidator, assignee, trustee, sequestrator, (or similar official) of the TPS or any parent entity thereof or of any substantial part of its property, or the ordering of the winding-up or liquidation of its affairs.

NOMINATIONS FOR SERVICE:

A ~~Third Party Supplier~~TPS shall provide to the Company in writing, or by other means as determined by the Company, at least 10 working days prior to the beginning of the calendar month an estimate of its deliveries into the Company's system for the month. These nominations must, in the aggregate, match the nominations of all Customers that are required to submit nominations to Company and to whom the Third Party Supplier will be delivering during the month plus the ~~Average Daily Delivery Quantity~~ADDQ that the TPS is obligated to deliver to the Company's system. Failure to provide nominations may result in suspension of service to Customers of offending ~~Third Party Suppliers~~TPS.

Company will notify ~~Third Party Supplier~~TPS of its ADDQ obligation for each day of the next succeeding month in writing to be delivered by facsimile or by other means as determined by the Company no later than the fifteenth (15th) day of the month immediately preceding the month in which ~~Third Party Supplier~~TPS will be obligated to deliver the ADDQ. If Third Party Supplier does not agree with Company's determination of ~~Third Party Supplier's~~TPS's ADDQ, it must notify Company in writing to be delivered by facsimile no later than 5:00 p.m. Eastern Standard Time on the seventeenth (17th) of the month immediately preceding the gas flow month. Company and ~~Third Party Supplier~~TPS will reconcile any differences no later than 5:00 p.m. Eastern Standard Time on the twentieth (20th) of the month.

In addition, TPS must identify interstate pipeline, shipper names and interstate pipeline shipper contract number(s) on which deliveries will be made at least twenty-four (24) hours prior to the flow of gas. Failure to comply with the Company's nominating procedures may result in curtailment of third party gas deliveries or additional monthly cash-outs. The Company reserves the right to specify which pipeline a TPS will deliver gas as a percentage of the TPS total monthly deliveries.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

DETERMINATION OF AVERAGE DAILY DELIVERY QUANTITY (“ADDQ”):

The individual ADDQ for all RDS, SGS, GDS Customers with a DCQ under 500 therms, and NGV Customers shall be calculated as follows:

1. Unadjusted ADDQ – Customer’s weather normalized usage for each of the most recent billing periods, covering an annual period, prorated to calendar months, divided by the total number of days in each billing month. This quotient will be the Customer’s Initial ADDQ. For new Customers, Customer’s Initial ADDQ will be estimated by Company.
2. ADDQ Adjustment – At the end of each billing period, Company will calculate the difference between Customer’s actual usage and actual deliveries for the billing period, taking into account any adjustments from prior months, and will adjust the Initial ADDQ for the next succeeding month by that difference divided by the total number of days in the month.
3. Adjusted ADDQ – The sum of items 1 and 2 will be adjusted by 1.5% for Company use and unaccounted for gas to determine the individual customers Adjusted ADDQ.

Company may adjust Customer’s individual ADDQ at any time due to changes in Customer’s gas equipment or pattern of usage.

The TPS’s ADDQ shall be the total of the individual Adjusted ADDQs of all customers it serves that require an ADDQ delivery.

PIPELINE IMBALANCES:

Company and TPS recognize that Company may be subjected to imbalance charges from its interstate pipeline suppliers as a result of TPS’s failure to deliver confirmed quantities of gas. Company and TPS shall use their best efforts to avoid such imbalance penalties. However, in the event that Company is assessed penalties as a result of TPS’s actions or omissions, TPS shall reimburse Company for such penalties as may be attributable to TPS’s actions or omissions.

INDEMNIFICATION:

As between the Company and TPS, TPS warrants that it has clear title to any gas delivered into the Company’s system, and TPS shall be deemed to be in exclusive control and possession of gas prior to its delivery into the Company’s system for redelivery to Customer. TPS agrees to indemnify, defend and hold harmless Company from any and all claims, suits or damage actions arising out of deliveries on behalf of a transporting customer.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE

(continued)

ALLOCATION OF SUPPLIES:

If a TPS is delivering gas to Customers under more than one Service Classification, such as RDS, GDS, ~~FTS-LVD~~ and/or ITS, and does not provide the supply allocations, then gas received by the Company in that month from the Third Party Supplier shall be allocated as follows:

1. First, to the ADDQ of RDS customers
2. Second, to the ADDQ of SGS, GDS and NGV customers
3. Third, to the GDS customers not subject to ADDQ and ~~FTS-LVD~~ customers
4. Last, to ITS and special contract customers

However, a TPS may specify individual supply allocations for its GDS customers not subject to the ADDQ, ~~FTSLVD~~, ITS and special contract Customers no later than one (1) business day following the date the TPS receives final month end measurement data for these customers from the Company.

DAILY AND MONTHLY CONTRACT BALANCING:

All balancing charges shall be charged to the TPS and are in addition to any other charges under this Service Classification. The Distribution Charge in the Charge Per Month of the Customers Service Classification- is based upon actual consumption not ~~Third Party Supplier~~ TPS deliveries.

a) Daily Imbalance Charge:

The Company shall, within the existing limitations of its system, provide for balancing between gas requirements and actual gas deliveries, net of an adjustment for Company Use and Unaccounted for Gas, received by the Company for the account of the Customers served by the TPS that day. The Company shall not be obligated to provide gas service during an hourly, daily or monthly period in excess of the levels specified in the Service Classifications under which Customers of the TPS are served.

During the months of November through April, the TPS will be required to balance daily deliveries and daily takes of transported gas by the customers it serves on any day when the average temperature at Newark Airport is forecast to be 27°F or less. However, the Company reserves the right to waive this requirement. The Company reserves the right during the months of November through April to require daily balancing on any other day in which the Company, in the exercise of its reasonable judgment, determines that such balancing is necessary for operational reasons. The Company will provide the TPS in all instances with at least twenty-four (24) hours advance notice that daily balancing will be imposed daily.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

DAILY AND MONTHLY CONTRACT BALANCING: (continued)

a) Daily Imbalance Charge (continued):

In the event that daily balancing is imposed in accordance with this section, TPS shall be assessed the following charges for daily imbalances:

	Imbalance *	Charge **
	0% to 5%	\$0.00 per therm
	5% to 10%	\$0.11 per therm for imbalances in excess of 5%
Underdeliveries	> 10%	\$0.53 per therm for imbalances in excess of 10%
Overdeliveries	> 10%	\$0.11 per therm for imbalances in excess of 10%

* The Company reserves the right to limit daily imbalances to plus or minus 5% of the actual quantity received. If the Company limits daily imbalances to plus or minus 5%, all underdeliveries in excess of 5% shall be considered Unauthorized Use and shall be subject to the Unauthorized Use charges specified in Section I, Item 17.

**The Company may suspend overdelivery charges if it determines such overdeliveries would be beneficial to the systems operation.

All TPSs will automatically be placed in a non-discriminatory daily balancing pool. The Company will aggregate the deliveries and receipts of gas of all TPS customers participating in the pool for the purpose of determining whether imbalance charges will apply. In the event that charges are nonetheless assessed to certain TPSs, such charges will be no greater than the charges that otherwise would have been assessed if the Company did not have a daily balancing pool. TPSs trading imbalances will nonetheless have to set their own prices or methods by which over or under balances will be traded among individual TPSs.

b) Monthly Imbalance Cash-Out Charge:

At the conclusion of every month, the Company will cash out imbalances between TPS's deliveries and their Customers consumption made up of actual and or estimated volumes as follows:

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

DAILY AND MONTHLY CONTRACT BALANCING: (continued)

b) Monthly Imbalance Cash-Out Charge: (continued)

<u>Imbalance</u>	<u>Overdeliveries</u>	<u>Underdeliveries</u>
0% to 5%	The Company's WACOG, defined as, the weighted average commodity cost of gas exclusive of peaking supplies as estimated by the Company for the month.	The monthly floor price for Interruptible Service tariff, less any Company margin embedded in the floor price.
>5% to 10%	90% of the Company's lowest cost supply for the month.	Higher of the: 1) The rate for the 0%-5% imbalance plus two (2) cents per therm <u>-or-</u> 2) The average of the month's four weekly prices published in <u>Natural Gas Week</u> for "Major Market Prices – New York City Gate" plus two (2) cents per therm.
>10%	75% of the Company's lowest cost supply for the month.	Higher of the: 1) The rate for the 0%-5% imbalance plus two (2) cents per therm times 125% <u>-or-</u> 2) The month's highest weekly price published in <u>Natural Gas Week</u> for "Major Market Prices – New York City Gate" plus two (2) cents per therm.

The offering of gas service above the 5% allowed imbalance for the month is at the sole discretion of the Company. If it determines that it cannot continue to provide such service or that it must limit such service, it will notify TPSs served under this Service Classification. The use of service above the level allowed by the Company after notification shall constitute Unauthorized Use and shall be subject to the Unauthorized Use charges specified in Section I, Item 17.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

ADJUSTMENT FOR COMPANY USE AND UNACCOUNTED FOR GAS:

A 1.5% adjustment for Company use and unaccounted for gas shall be made to the quantity of gas received from the TPS to serve its Customers.

STANDBY BALANCING SERVICE:

A TPS cannot contract for a greater level of Standby than its Essential Gas User Customers (“EGU”) peak ADDQ month or Demand Charge Quantity (“DCQ”) as applicable for their RDS, GDS or ~~FTS-LVD~~ Customers. A TPS who does not use Comparable Capacity for their EGU natural gas requirements, must contract for Standby Service to serve these customers to assure continued gas service when their own gas supply is interrupted or underdelivered for any reason. This service is available for a minimum term of three (3) years and is payable even if EGU Customers are no longer served by the TPS per the Customers last DCQ. The charge for this service will consist of a demand charge of \$0.537 per therm of DCQ to be paid each month of the year whether or not Standby Service is used, and a commodity charge equal to: in the months October through April the greater of the Company’s monthly weighted average cost of gas plus three (3) cents per therm, or the average of the month’s four weekly prices published in Natural Gas Week for “Major Market Prices – New York City Gate,” and in the months May through September the lesser of the Company’s monthly weighted average cost of gas, or the average of the month’s four weekly prices published in Natural Gas Week for “Major Market Prices – New York City Gate” plus two (2) cents per therm, as applied to any gas service rendered. All standby service charges shall be in addition to the rates otherwise charged under this Service Classification.

All standby revenues, exclusive of taxes and other similar charges and the three (3) cent per therm commodity surcharge in the months of October through April, shall be credited to the BGSS.

DELIVERED QUANTITIES:

Quantities billed to the end-use Customers shall be considered actual quantities delivered, whether based on actual or estimated meter readings.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

SPECIAL PROVISIONS:

In addition to the preceding terms and conditions of this Service Classification, the following terms and conditions shall apply to all TPSs providing service to Customers receiving service from Company under Service Classifications RDS, GDS, ~~FTS~~-~~LVD~~ and ITS. If, and to the extent that, any portion of the following is in conflict with previous terms of this Service Classification, the terms that follow shall govern.

1.

Enrollment of RDS, SGS, GDS and NGV Customers

TPS must enroll RDS, SGS, GDS and NGV Customers in accordance with the Company electronic enrollment procedures. Customer consent is assumed if the TPS provides the Company with the Customer's account number and service address and any other information that may be required by the Company. RDS customers will receive a confirmation notice from the Company noting their choice of supplier and that the RDS customer will have seven (7) calendar days from the date of the confirmation notice to contact the Company and rescind its selection, after which, if not rescinded, the RDS customer's TPS enrollment shall be accepted by the Company. TPS supply service will commence for all enrollments received by the 10th of a month, inclusive of those RDS customers that are not rescinded, on the customer's next month's cycle meter reading date. TPS shall indemnify and hold Company harmless from any costs incurred by Company as a result of TPS's erroneous or improper enrollment of Customers.

The Company must comply with all Customer instructions verbal or written to rescind or change service with a TPS. TPS must initiate all transactions required by the Company to rescind service on the day such instructions are received by the TPS from the Company or Customer. A Customer returning to sales service will be effective on the Customer's first billing cycle meter read date following the date on which the Company has changed the TPS's ADDQ requirement. A Customer will be switched to another TPS effective on the cycle read date following the reassignment of the Customer's ADDQ for gas nominations.

2. Requirements for RDS and Essential Gas Use Customers

Any TPS seeking to serve such Customers must demonstrate that it possesses Comparable Capacity or Standby in a quantity sufficient to serve Customers' Unadjusted ADDQ or DCQ requirements during the months of November through March.

"Comparable Capacity" is a firm non-recallable service at Elizabethtown's city gate(s). The Company reserves the right to limit the service to 70% on Transcontinental Gas Pipe Line Corporation's ("Transco") system and the remaining 30% on Texas Eastern Transmission Corporation's ("Tetco") system.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE
(continued)

SPECIAL PROVISIONS: (continued)

2. Requirements for RDS and Essential Gas Use Customers (continued)

In order to demonstrate Comparable Capacity, TPS shall be required to provide, at the time the Customer is enrolled, an affidavit signed by an officer stating that Comparable Capacity is being provided for the November through March period. This affidavit must be refiled annually. The Company reserves the right to request TPS to submit copies of its Comparable Capacity contracts supporting its affidavits in the event that a TPS fails to deliver.

3. Capacity Assignment

TPS serving RDS Customers may, if they choose, accept an assignment of base load, long haul interstate pipeline capacity from Company in a quantity equal to the amount of base load, long haul capacity used by the Company to serve the Customer's anticipated design day demand. 70% of such capacity will consist of capacity on Transcontinental Gas Pipe Line Corporation and 30% of such capacity will consist of capacity on Texas Eastern Transmission Corporation. Such capacity will be assigned for a one year term on a basis prorated to the underlying contracts at the same maximum rates paid by the Company. Such capacity will be immediately recallable in the event that TPS fails to deliver the RDS Customer's ADDQ or no longer serves such RDS Customers. A TPS wishing to accept assignment of Company's interstate pipeline capacity must notify Company at the time that Customer is enrolled in RDS service.

To the extent that TPS wishes to take assignment of interstate pipeline capacity in addition to its RDS Customer's portion of base load, long haul capacity, it shall notify the Company in writing. To the extent that the Company, in its sole discretion, determines that it has additional capacity available for release, it shall notify any TPSs that have advised the Company that they wish to take assignment of such capacity prior to making such capacity available to third parties. Company reserves the right to release any interstate pipeline capacity to the highest bidder or on a non-discriminatory basis. The Company shall be permitted to retain 15% of all revenues derived from the release of pipeline capacity, with all remaining revenue to be credited to the BGSS Charge.

To the extent that Company releases capacity to TPS, TPS is responsible for utilizing the assigned capacity consistent with the terms and conditions of the interstate pipelines' tariffs. TPS is responsible for payment of all upstream pipeline charges associated with the assigned firm transportation capacity, including but not limited to demand and commodity charges, shrinkage, GRI charges, cash outs, transition cost, pipeline overrun charges, penalties assessed to Company, actual cost adjustments and all other applicable charges. These charges will be billed directly to the TPS by Transco and ~~Texas Eastern~~Tetco.

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SERVICE CLASSIFICATION – THIRD PARTY SUPPLIERS (TPS) SERVICE

(continued)

SPECIAL PROVISIONS: (continued)3. Capacity Assignment (continued)

Capacity assignments will be effective for a one year period beginning on each annual period. Company reserves the right to recall capacity in the event and to the extent that TPS fails to deliver the sufficient volume to serve its customers on any day or days. Increases in assigned capacity will only be entertained by Company to become effective for annual periods.

If, and to the extent that, the TPS fails to deliver the required volume, and such failure is not excused as a result of a pipeline force majeure event that prevents the TPS from delivering the required volume, the TPS will be assessed an Unauthorized Use charge as specified in Section I, Item 18 for each therm that the TPS has failed to deliver and be subject to a recall of the interstate pipeline capacity that has been released by Company.

Assigned capacity may be reassigned by the TPS subject to recall by Company. The original TPS shall remain subject to all operational orders and recall provisions invoked or exercised by Company. If the TPS fails to pay any interstate pipeline for capacity released or assigned by Company, and Company is required to pay the pipeline for such capacity, TPS shall be liable to Company for any amounts Company is required to pay interstate pipeline for such capacity, as well as incidental and consequential damages and the costs of any reasonable collection efforts. Failure to pay Company within twenty (20) days of billing may result in suspension of service.

4. RDS Load Balancing Charge

A Load Balancing Charge of \$0.0552 per therm, which includes sales tax, shall be billed to the TPS for all metered quantities for RDS customers it serves. Amounts due from TPS shall be paid in full within 20 days of the billing date. Any disputed amounts will be resolved by the TPS and Company and adjustments if any will be reflected on future billings. Failure to pay this charge in full within the time specified above will result in all RDS Customers of the TPS being returned to BGSS supply service.

5. Treatment of Revenues

All revenues produced under this Service Classification derived from penalties, imbalances and Load Balancing charges shall be credited to the BGSS.

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RIDER "A"

BASIC GAS SUPPLY SERVICE CHARGE ("BGSS")

This Rider sets forth the method of determining the BGSS which shall be calculated to four (4) decimal places on a per therm basis established in accordance with the Board Order in Docket No. GX01050304 dated January 6, 2003. The BGSS charge is either BGSS-Monthly ("BGSS-M") or BGSS-Periodic ("BGSS-P") and will be applied to a Customer's Service Classification as follows:

1. The BGSS-M shall be applicable to all GDS, NGV, LVD, and EGF customers receiving gas supply from the Company effective on the first of each month as determined below.
2. The BGSS-P shall be applicable to all RDS, SGS, and GLS customers receiving gas supply from the Company.

The BGSS Charge, as defined herein, is designed to recover the cost to the Company of purchased gas or fuel used as a substitute for or supplemental to purchased gas including the cost of storing or transporting said gases or fuel, the cost of financial instruments employed to stabilize gas costs, other charges or credits as may result from the operation of other tariff provisions, and taxes and other similar charges in connection with the purchase and sale of gas.

BGSS per therm rates:

<u>Effective Date</u>	<u>BGSS-M per therm</u>	<u>BGSS-P Per therm</u>
April 1, 2018	\$0.4667	\$0.4540
May 1, 2018	\$0.4809	\$0.4540
June 1, 2018	\$0.4867	\$0.4540
July 1, 2018	\$0.5000	\$0.4540
August 1, 2018	\$0.4810	\$0.4540
September 1, 2018	\$0.4890	\$0.4540
October 1, 2018	\$0.4920	\$0.4237
November 1, 2018	\$0.5139	\$0.4237
December 1, 2018	\$0.6814	\$0.4237
January 1, 2019	\$0.5639	\$0.4237
February 1, 2019	\$0.4882	\$0.4691
March 1, 2019	\$0.4778	\$0.4691
April 1, 2019	\$0.4662	\$0.4691

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RIDER "A"

BASIC GAS SUPPLY SERVICE CHARGE ("BGSS")

(continued)

I. The BGSS-P Commodity Charge shall be determined as follows:

The BGSS-P Commodity Charge shall consist of a Gas Cost Component ("GCC"), a Capacity Cost Component ("CCC"), a Prior Period Adjustment ("PPA") and a Tax Factor ("TF") as follows:

$$\text{BGSS-P} = (\text{GCC-P} + \text{CCC-P} + \text{PPA-P}) \times (\text{TF})$$

Where:

GCC-P rate per therm shall be sum of the weighted average price, including any applicable transaction costs, based on the projected monthly quantities to be utilized in the remaining period of the BGSS Year ("Period"), of the following categories of gas:

- a) Flowing gas, which will be equal to the arithmetic average of (i) the weighted-average, based on monthly sales, of the remaining New York Mercantile Exchange ("NYMEX") monthly prices for the Period as recorded on the close of trading for the forward contract month and (ii) the weighted average of the estimated Inside FERC prices for the respective locations where the Company purchases its gas for the remainder of the Period, as adjusted for the variable cost of transportation and fuel to the Company's city gate delivery points;
- b) Any gas supplies for the remainder of the Period whose price was previously set by hedges or other financial instruments, adjusted for the variable cost of transportation and fuel to the Company's city gate delivery points;
- c) The supplies of gas projected to be withdrawn from storage for the remainder of the Period, adjusted for the variable cost of transportation and fuel to the Company's city gate delivery points.

CCC-P shall be established each year in the Company's annual BGSS-P filing and shall consist of the Company's total estimated annual fixed pipeline costs, fixed supplier costs, and fixed storage costs, divided by the Company's projected annual BGSS firm gas sales.

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RIDER "A"

BASIC GAS SUPPLY SERVICE CHARGE ("BGSS")

(continued)

PPA-P shall be the Company's actual cumulative (over) or under recovery of gas costs associated with the operation of the BGSS divided by the projected BGSS-P firm gas sales for the remainder of the Period. In the initial transition to the BGSS-P, the per therm rate derived from the Company's estimated BGSS under or (over) recovery balance at May 31, 2003 with applicable interest thereon divided by the Company's projected BGSS firm sales for the period ending May 31, 2004, shall be the PPA-P. The over under recovery of gas costs shall be the cost of gas, as previously defined, less:

1. Supplier or Pipeline refunds;
2. Gas cost recoveries from the implementation of the BGSS-P;
3. Gas cost recoveries from the implementation of the BGSS-M;
4. Other gas cost recoveries or credits to the BGSS derived from sales or services as set forth in the applicable service classifications of the tariff;
5. Interest on the cumulative (over) under recovery of cost from the preceding BGSS Year ending September 30 but only when the interest is a credit. Interest being calculated on the cumulative (over) under recovery for each month of the prior period on the average of the beginning and ending monthly balance at a rate equivalent to the Company's allowed overall rate of return.

TF shall be the factors to adjust the calculated rate for appropriate taxes and other similar charges.

The BGSS-P shall be in effect until changed by succeeding BGSS-P rate filings.

The Company shall have the discretion to implement up to two (2) self-implementing BGSS-P rate changes, one to be implemented December 1 and the other to be implemented February 1 upon written notice to the Staff of the Board of Public Utilities and the Division of Rate Counsel of the approximate amount of that increase based on current market conditions by the first of the month preceding the self-implementation dates, November 1 and January 1 respectively. Each requested rate change shall not be for an increase of greater than five percent (5%) of the average rate based on a typical 100 therm per month residential total bill. The notice shall contain the information necessary to derive the components of the BGSS-P as set forth above. The Public Notice for the annual filing shall include the specific rate change sought to be implemented on October 1, a paragraph indicating that the rate is subject to self-implementing rate changes on December 1 and February 1 subject to the aforementioned 5% cap and an estimate of the impact

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RIDER "A"

BASIC GAS SUPPLY SERVICE CHARGE ("BGSS")

(continued)

from the two (2) possible five percent (5%) increases on a 100 therm residential bill. Upon establishing the initial BGSS-P, one self-implementing rate change to the BGSS-P for an increase not greater than five percent (5%) of the average rate based on a typical 100 therm per month residential total bill shall be permitted effective March 1, 2003 upon written notice made to the BPU and RC by February 1, 2003.

In accordance with the Board Order in Docket No. GX01050304 dated January 6, 2003 the Company shall have the discretion to return any over recovered balances to customers through a current bill credit or BGSS-P rate reduction upon five (5) days notice to the BPU and RC.

II. The BGSS-M Commodity Charge shall be determined as follows:

The BGSS-M Commodity Charge shall consist of a Gas Cost Component ("GCC"), a Capacity Cost Component ("CCC"), a Prior Period Adjustment ("PPA") and a Tax Factor ("TF") as follows:

$$\text{BGSS-M} = (\text{GCC-M} + \text{CCC-M} + \text{PPA-M}) \times (\text{TF})$$

Where:

GCC-M rate per therm shall be the arithmetic average of (i) the NYMEX Henry Hub gas contracts closing price for the last trading day prior to each respective month and (ii) the weighted-average of the estimated Inside FERC prices for the respective locations where purchases of gas for the ensuing month are projected to be made, as adjusted for the variable cost of fuel and transportation to the city gate delivery points of the Company.

CCC-M shall be the same as the CCC-P rate per therm as established each year in the Company's annual BGSS-P filing.

PPA-M rate per therm in the initial transition to the BGSS-M shall be the estimated BGSS under or (over) recovery balance at May 31, 2003 with applicable interest thereon divided by the projected BGSS firm sales for the period ending May 31, 2004. This rate shall continue in effect on a monthly basis until the deferred balance, which initially shall be set equal to the PPA-M times the projected BGSS-M firm sales for the period ending May 31, 2004, becomes positive as an over recovery at which time the PPA-M shall cease to be a component of the BGSS-M starting in the subsequent month, and any over recovery in the deferred balance shall be credited to the BGSS-P.

TF shall be the factors to adjust the calculated rate for appropriate taxes and other similar charges.

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RIDER "A"

BASIC GAS SUPPLY SERVICE CHARGE ("BGSS")
(continued)

The BGSS-M will be filed two (2) business days after the monthly close of the NYMEX Henry Hub gas contracts and shall be in effect for the entirety of the subsequent month and thereafter until changed by succeeding BGSS-M rate filings. The BGSS-M price shall be posted on the Company's WEB site within two (2) to four (4) days of the rate being filed with the BPU.

The Company shall make an annual BGSS filing on or before June 1 of each year. The filing shall provide for a review of the actual costs and recoveries for the previous period ending April 30 and projections of costs and recoveries through September 30. The filing shall also propose a new BGSS-P rate to be implemented on October 1. The proposed BGSS-P rate shall be based upon the projected cost of purchased gas and storage utilization to serve projected demand for gas service for the period October 1 through September 30 and an adjustment to recover or credit prior period under or over recovered gas costs as projected to exist on the preceding September 30. The Company shall provide the basis for its projected costs and the NYMEX projection of monthly gas prices for the projected period. In its annual filing the Company shall calculate the CCC-P component, as defined above, of the BGSS-P rate. Adjustments, if any, resulting from the Board's review of this filing shall be made following a Board Order.

The charges applicable under this Rider include provision for the New Jersey Sales and Use Tax, and when billed to customers exempt from this tax shall be reduced by the amount of such tax included therein.

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RIDER "B"

WEATHER NORMALIZATION CLAUSE ("WNC")

Applicable to all customers in service classifications RDS, SGS and GDS.

November 1, 2018 through May 31, 2019 \$0.0194 per therm

June 1 through September 30 of any year \$0.0000 per therm

The charges applicable under this Rider include provision for the New Jersey Sales and Use Tax, and when billed to customers exempt from this tax shall be reduced by the amount of such tax included therein. In the winter months, October through May, a weather normalization charge shall be applied to the rate quoted in this Tariff under the service classifications shown above, except as may be otherwise provided for in the individual service classification. The weather normalization charge applied in each winter period shall be based on the differences between actual and normal weather during the preceding winter period.

METHOD OF DETERMINING WEATHER NORMALIZATION CHARGE:

The weather normalization charge shall be determined as follows:

I. Definition of Terms as Used Herein

1. Degree Days (DD) - the difference between 65°F and the twenty-four point average temperature for the day, as determined from the records of the National Oceanic and Atmospheric Administration (NOAA) at its weather observation station located at Newark International Airport, when such average falls below 65°F. A day is defined as a period corresponding with the Company's gas sendout day of 10 am to 10 am.

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RIDER "B"

WEATHER NORMALIZATION CLAUSE ("WNC")

(continued)

METHOD OF DETERMINING WEATHER NORMALIZATION CHARGE: (continued)I. Definition of Terms as Used Herein (continued)

2. Actual Calendar Month Degree Days - the accumulation of the actual Degree Days for each day of a calendar month.
3. Normal Calendar Month Degree Days - the level of calendar month degree days to which test year sales volumes were normalized in the base rate proceeding that established the current base rates for the service classifications to which this clause applies. The normal calendar month Degree Days used in this clause may be updated in base rate cases. The normal degree days for the defined winter months are as follows:

<u>Month</u>	<u>Normal Degree Days</u>	<u>Leap Year Normal Degree Days</u>
October	~~225~~ 257	~~225~~ 257
November	~~523~~ 523	~~523~~ 523
December	~~807~~ 844	~~807~~ 844
January	~~1,012~~ 993	~~1,012~~ 993
February	~~823~~ 837	~~847~~ 862
March	~~685~~ 678	~~677~~ 668
April	~~338~~ 353	~~327~~ 344
May	~~105~~ 126	~~101~~ 122
Total	~~4,518~~ 4,581	~~4,519~~ 4,583

4. Winter Period - shall be the eight consecutive sales and calendar months from October of one calendar year through May of the following calendar year.
5. Degree Day Dead Band - shall be one-half (½%) percent of the monthly Normal Calendar Degree Days for the Winter Period.

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RIDER "B"

WEATHER NORMALIZATION CLAUSE ("WNC") (continued)METHOD OF DETERMINING WEATHER NORMALIZATION CHARGE: (continued)I. Definition of Terms as Used Herein (continued)

6. Degree Day Consumption Factor ("DDCF") - the variable component (use per degree day) of the gas sendout for each month of the winter period normalized for weather and adjusted for lost and unaccounted for gas. The DDCF shall be updated annually in the Company's WNC reconciliation filing annualizing to reflect the change in number of customers that has occurred since the base rate proceeding that established the initial degree day consumption factor in base rate cases. The base number of customers used to establish the normalized use in therms per ~~e~~Customer and the calculated DDCF approved in the Company's most recent base rate case are as follows:

<u>Month</u>	<u>Base Number of Customers</u>	<u>Therms per Degree Day</u>
October	~~295,597~~ ~~282,734~~	~~52,151~~ ~~54,117~~
November	~~296,718~~ ~~283,538~~	~~62,901~~ ~~59,513~~
December	~~297,887~~ ~~284,438~~	~~69,320~~ ~~64,218~~
January	~~298,542~~ ~~285,027~~	~~68,280~~ ~~65,699~~
February	~~298,992~~ ~~285,683~~	~~67,961~~ ~~67,497~~
March	~~299,338~~ ~~285,934~~	~~63,793~~ ~~64,432~~
April	~~299,221~~ ~~285,804~~	~~47,887~~ ~~55,258~~
May	~~298,773~~ ~~285,854~~	~~55,337~~ ~~54,844~~

7. Margin Revenue Factor - the weighted average of the Distribution Charges as quoted in the individual service classes to which this clause applies net of applicable taxes and other similar charges and any other revenue charge not retained by the Company that these rates may contain in the future. The weighted average shall be determined by multiplying the margin revenue component of the Distribution Charges from each service class to which this clause applies by each class's percentage of total consumption of all the classes to which this clause applies for the winter period and summing this result for all the classes to which this clause applies. The Margin Revenue Factor shall be redetermined each time base rates are adjusted. The current Margin Revenue Factor is \$0.~~2884~~3870 per therm.

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RIDER "B"

WEATHER NORMALIZATION CLAUSE ("WNC")

(continued)

METHOD OF DETERMINING WEATHER NORMALIZATION CHARGE (continued)I. Definition of Terms as Used Herein (continued)

8. Annual Period: shall be the 12 consecutive months from October 1 of one calendar year through September 30 of the following calendar year.
9. Average 13 month common equity balance: shall be the common equity balance at the beginning of the Annual Period (i.e. October 1) and the month ending balances for each of the twelve months in the Annual Period divided by thirteen (13).

II. Determination of the Weather Normalization Rate

At the end of the Winter Period during the Annual Period, a calculation shall be made that determines for all months of the Winter Period the level by which margin revenues differed from what would have resulted if normal weather (as determined by reference to the Degree Day Dead Band) occurred.

The monthly calculation is made by multiplying the Degree Day Consumption Factor by the difference between Normal Calendar Month Degree Days as adjusted for the monthly Degree Day Dead Band, and Actual Calendar Month Degree Days and, in turn, multiplying the result by the Margin Revenue Factor. To the extent the Actual Calendar Month Degree Days exceeds Normal Calendar Month Degree Days as adjusted for the Degree Day Dead Band, an excess of margin revenues exist. To the extent Actual Calendar Month Degree Days were less than Normal Calendar Month Degree Days as adjusted for the Degree Day Dead Band, a deficiency of marginal revenue exists. In addition, the weather normalization clause shall not operate to permit the Company to recover any portion of a margin revenue deficiency that will cause the Company to earn in excess of 9.6% for the Annual Period; any portion which is not recovered shall not be deferred. For purposes of this section, the Company's rate of return on common equity shall be calculated by dividing the Company's regulated jurisdictional net income for the Annual Period by the Company's average 13-month common equity balance for such Annual Period, all as reflected in the Company's monthly reports to the BPU. The Company's regulated jurisdictional net income shall be calculated by subtracting from total net income (1) margins

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RIDER "B"

WEATHER NORMALIZATION CLAUSE ("WNC")

(continued)

METHOD OF DETERMINING WEATHER NORMALIZATION CHARGE (continued)II. Determination of the Weather Normalization Rate (continued)

retained by the Company from non-firm sales and transportation services, net of associated taxes, (2) margins retained in the provision of sales in accordance with the Board Order pertaining to Docket No. GR90121391J and GM90090949, net of associated taxes and (3) net income derived from unregulated activities conducted by Elizabethtown.

The Company's average thirteen-month common equity balance for any Annual Period shall be the Company's average total common equity less the Company's average common equity investment in unregulated subsidiaries.

The balance of margin revenue excess or deficiency at September 30 of the Annual Period shall be divided by the estimated applicable sales from the classes subject to this clause for the Winter Period over which this charge will be in effect, multiplied by a factor to adjust for increases in taxes and other similar charges. The product of this calculation shall be the Weather Normalization Charge. However, the Weather Normalization Charge will at no time exceed three (3%) percent of the then applicable Residential Distribution Service rate plus the BGSS. To the extent that the effect of this rate cap precludes the Company from fully recovering the margin deficiency for the Annual Period, the unrecovered balance will be added to or subtracted from the margin deficiency or margin excess used to calculate the weather normalization charge for the next Winter Period. The Weather Normalization Charge, so calculated, will be in effect for the Winter Period immediately following the Annual Period used in such calculation.

III. Tracking the Operation of the Weather Normalization Clause

The revenues billed, or credits applied, net of taxes and other similar charges, through the application of the Weather Normalization Rate shall be accumulated for each month when this rate is in effect and applied against the margin revenue excess or deficiency from the immediately preceding Winter Period and any cumulative balances remaining from prior Winter Periods.

The annual filing for the adjustment to the weather normalization rate shall be concurrent with the annual filing for the Rider "D" Societal Benefits Charge.

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RIDER "C"

ON-SYSTEM MARGIN SHARING CREDIT ("OSMC")

Applicable to all Firm Service Classifications that pay the BGSS of Rider A and RDS customers that receive gas supply from a TPS in accordance with the Board's Order in Docket No. GO99030122.

The OSMC is subject to change to reflect the Company's actual recovery of such margins and shall be adjusted annually in its BGSS filing.

(\$0.0007) per therm

The charges applicable under this Rider include provision for the New Jersey Sales and Use Tax, and when billed to customers exempt from this tax shall be reduced by the amount of such tax included therein.

Determination of the OSMC

On or about July 31 of each year, the Company shall file with the Board an OSMC rate filing based on the credits generated from on-system margin sharing during the previous OSMC year July 1 through June 30.

The OSMC shall be calculated by taking the current year's credits, plus the prior year's OSMC over or under recovery balance and dividing the resulting sum by the annual forecasted volumes for the service classifications set forth above. The resulting rate shall be adjusted for all applicable taxes and other similar charges.

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")

Applicable to all tariff Service Classifications except those Customers under special contracts that explicitly do not permit the Company to apply increased charges as filed and approved by the BPU and those customers exempted pursuant to the Long-Term Capacity Agreement Pilot Program ("LCAPP"), P.L. 2011, c.9, codified as N.J.S.A. 48:3-60.1. See the LCAPP Exemption Procedures at the end of this Rider.

The SBC is designed to recover the components listed below and any other new programs which the Board determines should be recovered through the Societal Benefits Charge.

<u>SBC Rate Components:</u>		<u>Per Therm</u>
I.	New Jersey Clean Energy Program ("CEP")	\$0.0215
II.	Remediation Adjustment Charge ("RAC")	(\$0.0128)
III.	<u>Universal Service Fund and Lifeline:</u>	
	1. Universal Service Fund ("USF")	\$0.0049
	2. Lifeline	<u>\$0.0054</u>
TOTAL		<u>\$0.0190</u>

The charges applicable under this Rider include provision for the New Jersey Sales and Use Tax, and when billed to customers exempt from this tax shall be reduced by the amount of such tax included therein.

I. New Jersey Clean Energy Program Component ("CEP")

The Comprehensive Resource Analysis ("CRA") name was changed to the Clean Energy Program - CEP per Board Order dated January 22, 2003 in Docket No. EX99050347 *et.al.* The CEP is a mechanism that will (1) establish a rate to recover the costs of the Core and Standard Offer Programs in the Company's CEP Plan which was approved by the BPU in Docket No. GE92020104, and (2) compensate the Company for the revenue erosion resulting from conservation savings created by the Standard Offer Program. The annual recovery period for the CEP is from October 1 through September 30. The CEP recovers program costs and revenue erosion incurred during the previous CEP year ended June 30.

1. CEP program costs include the costs of core programs, standard offer payments and any administrative costs not recovered directly from standard offer providers.

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")

(continued)

I. New Jersey Clean Energy Program Component ("CEP") (continued)

2. The Standard Offer Program will reduce the volumes of gas sold by the Company and will reduce revenues corresponding to volumes of gas saved. This revenue loss will occur because the rates set in the Company's base rate case do not reflect a decrease in revenues resulting from program measures which will be implemented during the period in which the Company's CEP Plan is in effect. Consequently, the Company will not recover those fixed costs in base rates corresponding to the volumes of gas saved by the Standard Offer Program.
3. The CEP rate shall be determined as follows:
 - (a) The Company will project all program costs not recoverable directly from standard offer providers and revenue erosion, based upon current, approved rates, both of which elements are not currently collected through base rates for the annual period ("current annual period").
 - (b) The Company will include with the above projection, a statement of the prior annual period of any (over-) or under-recoveries, including interest at the rate applicable to the RAC component of the SBC. This statement will include estimated data for those months that occur after the date of filing but which correspond to the prior annual period. The CEP may be adjusted for material differences between estimates and actual results in the prior annual period.
 - (c) The sum of the program costs and recoveries for the CEP year ending June 30 plus the projected spending for the succeeding twelve month period, including interest calculated at a rate equal to that applied to the RAC component of the SBC, will be divided by the estimated sales and transportation throughput to all Customers subject to the SBC during the succeeding October 1 through September 30 period.

The formula for calculating the CEP rate is as follows:

$$\frac{PC + RE + [RB * (1+i)]}{AV}$$

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")

(continued)

I. New Jersey Clean Energy Program Component ("CEP") (continued)

3. The CEP rate shall be determined as follows: (continued)

(c) where:

PC = all projected program costs not recoverable directly from standard offer providers

RE = cumulative annual margin revenue erosion from the date of effectiveness of the Plan until the time that new base rates take effect. Margin revenue erosion is determined by multiplying the actual measured annual decrease in firm sales attributable to implementation of certain CEP programs per Board Order EX99050347 *et. al.* and the DSM legacy standard offer programs by the net margin revenue associated with that decrease in each affected service classification.

RB = prior period recovery balance, the net of actual costs and recoveries.

i = interest rate applicable to recovery balance

AV = projected annual quantity for sales and transportation throughput to all Customers subject to the SBC.

4. There will be a reconciliation of over- or under-recovery of actual program costs not recovered directly from standard offer providers and revenue erosion, based upon approved rates in effect during the prior annual period, with the revenues collected through the CEP by maintaining an account showing the cumulative balance of the (over-) or under-recoveries. Any prior annual period balance will be included, with interest, along with current annual period projected costs and amortized over the current annual recovery period. Interest is calculated on the cumulative (over-) or under-recovery of the prior annual period on the average beginning and ending monthly balance at a rate equivalent to the rate applied to the RAC component of the SBC.

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")

(continued)

I. New Jersey Clean Energy Program Component ("CEP") (continued)

5. The annual filing for the adjustment on or about October 1 of each year shall be made on or about July 31 of each year and shall be based on actual figures and experiences then available with estimates of remaining requirements.

II. Remediation Adjustment Clause Component ("RAC")

The RAC is a mechanism that will establish a rate to recover remediation costs, as defined herein. On or about July 31 of each year, the Company shall file with the Board a RAC rate component as part of the ~~Societal Benefits Charge~~SBC based on remediation costs and third party expenses/claims in the preceding remediation years.

The RAC will be determined as follows:

A. Definition of Terms Used Herein

1. Remediation Costs - all investigation, testing, land acquisition if appropriate, remediation and/or litigation costs/expenses or other liabilities excluding personal injury claims and specifically relating to former gas manufacturing facility sites, disposal sites, or sites to which material may have migrated, as a result of the earlier operation or decommissioning of gas manufacturing facilities.
2. Interest Rate - for carrying costs and deferred tax benefit calculation shall be the rate paid on seven year constant maturities treasuries as shown in the Federal Reserve Statistical Release on or closest to August 31st of each year plus 60 basis points.
3. Carrying Cost - the Interest Rate applied to the unamortized balance of remediation costs.
4. Recovery Year - each October 1 to September 30 year and is the time period over which the amortized expenses incurred during the Remediation Year shall be recovered from Customers.
5. Remediation Year - each July 1 to June 30 year and is the time period over which the ~~R~~remediation ~~e~~Costs and recoveries are incurred.

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RIDER "D"
SOCIETAL BENEFITS CHARGE ("SBC")
 (continued)

II. Remediation Adjustment Clause Component ("RAC")

A. Definition of Terms Used Herein (continued)

6. Third Party Claims - all claims brought by the Company against any entity, including insurance companies, from which recoveries may be received and will be charged through the RAC factor as follows:

- a. Fifty percent of the reasonable transaction costs and expenses in pursuing Third Party Claims shall be included as Remediation Costs and shall be recovered as part of the ~~Remediation Adjustment Clause~~RAC. The remaining 50% shall be deferred.
- b. In the event that the Company is successful in obtaining a reimbursement from any Third Party, the Company shall be permitted to retain the deferred 50% as specified in 5a. The balance of the reimbursement, if any, shall be applied against the Remediation Costs starting in the year it is received and will be amortized over seven years.
- c. The Company is not required to account for transaction costs and expenses in pursuing third party claims on a claim-by-claim basis.

7. Deferred Tax Benefit (DTB) - the unamortized portion of actual remediation costs multiplied by the Company's effective statutory federal and state income tax rate, and the Interest Rate.

$$DTB_{n,yr} = ARC_n * [(7-X)/7] * IR_{yr} * TR_{yr}$$

$DTB_{n,yr}$ = Deferred Tax Benefit in recovery year (yr) to be subtracted from one seventh the amount of the remediation costs incurred in remediation year (n).

ARC_n = Actual Remediation Costs incurred in remediation year (n).

X = Number of years that the ARC incurred in year n have been subject to amortization ($X = 1,2,3,4,5,6$)

IR_{yr} = Interest Rate

TR_{yr} = Effective combined Federal and State income tax rate.

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")

(continued)

II. Remediation Adjustment Clause Component ("RAC")A. Definition of Terms Used Herein (continued)

8. Sale of Property shall be calculated by taking the proceeds over book value of any sale of a former manufacturing gas plant site, less all reasonable expenses associated with selling the site, and subtracting the total costs that were incurred in cleaning up the site and amortized through rates. The proceeds associated with the total costs that were incurred in cleaning up the site will be included as a credit to the remediation costs incurred in the year of the sale. The remainder shall be equally shared between the Company and ~~ratepayers~~Customers.

B. Determination of the Remediation Adjustment

At the end of the remediation year, the Company shall file with the Board (1) copies of all bills and receipts relating to the amount of any remediation costs incurred in the preceding remediation year(s) for which it seeks to begin recovery; (2) similar material and information to support any expenses and/or recoveries resulting from Third Party claims; (3) a computation of the carrying cost on the unamortized balance of remediation cost; (4) a projection of remediation costs for the following remediation year.

The RAC factor shall be calculated by taking one seventh of the Actual Remediation Costs, plus applicable Third Party Claims and Sale of Property allocations incurred each year, until fully amortized, less the Deferred Tax Benefit plus the prior years' RAC over or under-recovery plus appropriate carrying costs. This amount is then divided by all applicable forecasted quantities to all Service Classifications for the upcoming recovery year.

The total annual charge to the Company's ratepayers for remediation costs during any recovery year shall not exceed five (5%) percent of the Company's total revenues from sales, transportation and storage services during the preceding Remediation Year. If this limitation results in the Company recovering less than the amount that would otherwise be recovered in a particular Recovery Year then the Company will continue to accumulate carrying costs which will be recovered by the Company from its ~~ratepayers~~Customers in a subsequent RAC proceeding.

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")
(continued)II. Remediation Adjustment Clause Component ("RAC") (continued)C. Tracking the Operation of the Remediation Adjustment Clause

The revenues billed, net of taxes- and other similar charges through the application of the Remediation Adjustment factor shall be accumulated for each month and be applied against the total amortized Remediation Costs calculated for that year. Any over or under collection at the end of the Recovery Year will be included in the determination of the following year's RAC factor.

III. Universal Service Fund ("USF") and Lifeline Components

An interim USF program was approved by the BPU in Docket No. EX00020091 dated November 21, 2001. A permanent USF program and Lifeline charge was approved by the BPU in Docket No. EX00020091 dated April 30, 2003. The Orders authorized the Company to collect costs associated with the program through the ~~Societal Benefits Charge ("SBC")~~. The USF and Lifeline rate components of the SBC will be determined as follows:

A. Definition of Terms

1. Program Costs includes all costs incurred in connection with the implementation of Board ordered services, inclusive of carrying costs.
2. Program Year is the period October 1 to September 30 as approved by the BPU in Docket No. EX00020091 dated June 22, 2005.

B. Determination of the USF and Lifeline Components

The USF and Lifeline Components will be determined and issued by the Board and shall remain in effect until changed. The USF true up between credits given customers and amounts recovered will be made annually in accordance with the Board's directives.

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RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")

(continued)

III. Universal Service Fund ("USF") and Lifeline Components (continued)C. Carrying Costs

Per Board Order dated October 21, 2008 in Docket No. ER08060455, the interest rate on USF under and over recoveries shall be the interest rate based on a two-year constant maturity Treasuries as published in the Federal Reserve Statistical Release on the first day of each month (or the closest day thereafter on which rates are published), plus sixty basis points, but shall not exceed the overall rate of return for each utility as authorized by the Board. The calculation shall be based on the net of tax beginning and end average monthly balance, accruing simple interest with an annual roll-in at the end of each reconciliation period.

IV. LCAPP Exemption Procedures

The following procedures to obtain the LCAPP exemption from the SBC charge shall apply:

A customer seeking an SBC rate exemption for all or part of its usage must submit an Annual Certification form, provided by the Company, declaring and certifying, for any applicable meter, the percentage of natural gas purchased and used for the generation of electricity sold for resale during the previous calendar year. For facilities with less than twelve months of history, estimates supported by engineering and operational plans may be used.

A. Annual Procedures

In December of each year the Company will mail an Annual Certification form to customers currently receiving the exemption, addressed to the customer's designated representative, to be returned to the Company's designated representative by the following January 15th.

The certified percentage will be used to determine the SBC rate to be charged for the twelve (12) month period beginning February 1st, for example:

Date of Issue: ~~July 10, 2018~~XXX1Effective: Service Rendered
on and after ~~July 1, 2018~~XXX2

Issued by: ~~Brian MacLean~~Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities

Dated ~~June 22, 2018~~XXX3 in Docket No. ~~GM17121309~~XXX4

RIDER "D"

SOCIETAL BENEFITS CHARGE ("SBC")(continued)IV. LCAPP Exemption Procedures (continued)A. Annual Procedures (continued)

If the full SBC rate to be charged equaled \$0.0400 per therm pre tax and other similar charges and the certified percentage was seventy-five percent (75%) then the rate charged and applied to the metered volume would be calculated as: $\$0.0400 * (1.00 - .75) = \$0.0100$ per therm before any applicable taxes and other similar charges.

If the customer fails to return the form by January 15th then the full SBC rate will be assessed on all of the customer's natural gas usage until a completed Annual Certification form is received. Any exemption will become effective after the customer's next subsequent meter reading.

Notwithstanding the foregoing, the Company will provide customers that it reasonably believes may be eligible for the exemption with a certification form for the period of January 28, 2011 through January 31, 2012 on which the customer may certify the percentage of natural gas purchased and used for the generation of electricity sold for resale during the calendar year 2010. Any adjustments to the customer's bill associated with this exemption period shall be billed or credited to the customer in the billing period following the adjustment determination.

B. Interim Period Procedures

Customers may obtain the exemption at any time during a year by obtaining and submitting to the Company's designated representative a completed Annual Certification form. The certified percentage will be used to determine the exemption which will become effective after the next subsequent meter reading. Customers will be required to re-certify for the subsequent period beginning February 1 in accordance with the Annual Procedures.

Date of Issue: ~~July 10, 2018~~XXX1Effective: Service Rendered
on and after ~~July 1, 2018~~XXX2Issued by: ~~Brian MacLean~~Christie McMullen, President
520 Green Lane
Union, New Jersey 07083Filed Pursuant to Order of the Board of Public Utilities
Dated ~~June 22, 2018~~XXX3 in Docket No. ~~GM17424309~~XXX4

RIDER "E"

ENERGY EFFICIENCY PROGRAM ("EEP")

Applicable to all ~~eC~~Customers except those ~~eC~~Customers under special contracts as filed and approved by the BPU and those customers exempted pursuant to the Long-Term Capacity Agreement Pilot Program ("LCAPP"), P.L. 2011 c.9, codified as N.J.S.A. 48:3-60.1. See the LCAPP Exemption Procedures at the end of the ~~Societal Benefits Charge ("SBC")~~ Rider "D."

The EEP shall be collected on a per therm basis and shall remain in effect until changed by order of the BPU. The applicable EEP rate is as follows:

\$0.0020 per therm

The rate applicable under this Rider includes provision for the New Jersey Sales and Use Tax, and when billed to customers exempt from this tax shall be reduced by the amount of such tax included therein.

In the "Global Warming Act," N.J.S.A.26-2C-45. or "RGGI Legislation" the State Legislature determined that global warming is a pervasive and dangerous threat that should be addressed through the establishment of a statewide greenhouse gas emissions reduction program. On May 8, 2008, the Board issued an Order (the "RGGI Order") pursuant to N.J.S.A. 48:3-98.1(c). The RGGI Order allowed electric and gas public utilities to offer energy efficiency and conservation programs on a regulated basis. The Company's energy efficiency programs were first authorized pursuant to Board orders issued in Docket Nos. EO09010056 and GO09010060. They were subsequently extended pursuant to Board orders issued in GO10070446, GO11070399, GO12100946, GO15050504 and GR16070618. The Company's current energy efficiency programs are effective through December 31, 2018 and described below.

The EEP enables the Company to recover all costs associated with the following energy efficiency programs approved by the Board order dated April 21, 2017 in BPU Docket Nos. GR16070618 and GO15050504:

1. Residential gas HVAC and hot water heater incentive programs;
2. Residential home energy assessment program;
3. Residential home weatherization for income qualified customers program;
4. Commercial steam trap survey and repair program; and
5. Enhanced customer education and outreach initiatives designed to encourage customers to conserve energy and lower their gas bills.

Date of Issue: ~~August 30, 2018XXX1~~

Effective: Service Rendered
on and after ~~September 1,~~
~~2018XXX2~~

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520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities

Dated ~~August 29, 2018XXX3~~ in Docket No. ~~GR17111146XXX4~~

RIDER "E"

ENERGY EFFICIENCY PROGRAM ("EEP")

(continued)

Determination of the EEP

On or about July 31 of each year, the Company shall file with the Board an EEP rate filing based on the costs and recoveries incurred during the previous EEP year ending June 30th as well as estimates, if applicable, through the upcoming calendar year to develop the EEP rate to be effective October 1st as follows:

The EEP monthly recoverable expenditure amounts shall be derived from taking the average of the cumulative beginning and end of month expenditures associated with the EEP investments less accumulated amortization and accumulated deferred income tax credits times the after tax weighted average cost of capital grossed up for the Company's revenue factor, as directed in the Board's August 21, 2013 Order in Docket No. GO12100946, plus monthly amortization using a four year amortization period.

The EEP rate shall be calculated by summing the (i) prior year's EEP over or under recovery balance, plus (ii) current year monthly recoverable expenditure amounts, less (iii) current year recoveries, plus (iv) current year carrying costs based on the monthly average over or under recovered balances, at a rate equal to the rate obtained on the Company's weighted average of its commercial paper and bank credit lines, if both sources have been utilized, not to exceed the weighted average cost of capital after tax as described above, plus (v) an estimated amount to recover the upcoming year's recoverable expenditures amount and dividing the resulting sum by the annual forecasted per therm quantities for the applicable ~~C~~customers set forth above. The resulting rate shall be adjusted for all applicable taxes. The EEP rate shall be self-implementing on a refundable basis as directed by the BPU.

Date of Issue: ~~August 30, 2018~~XXX1Effective: Service Rendered
on and after ~~September 1,~~
~~2018~~XXX2Issued by: ~~Brian MacLean~~Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities

Dated ~~August 29, 2018~~XXX3 in Docket No. ~~GR17111146~~XXX4

RATE SUMMARIES

Per Therm

	RDS (sales)	RDS (transportation)
Service Charge	~~8.19~~ 13.06	~~8.19~~ 13.06
Distribution Charges	0. ~~3625~~ 4835	0. ~~3625~~ 4835

Riders:

A	BGSS	BGSS-P	per TPS
B	WNC*	WNC*	WNC*
C	OSMC	(0.0007)	(0.0007)
D	SBC	0.0190	0.0190
E	EEP	0.0020	0.0020

* The WNC will apply to ~~customer~~Customer during the months of October through May.

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

Date of Issue: ~~March 8, 2019~~XXX1Effective: Service Rendered
on and after ~~March 9, 2019~~XXX2

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities

Dated ~~February 27, 2019~~XXX3 in Docket No. ~~GR18080852~~XXX4

RATE SUMMARIES

(continued)

Per Therm

	SGS (sales)	SGS (transportation)¹
Service Charge	~~21.92~~ 35.19	~~21.92~~ 35.19
Distribution Charges	0. ~~3175~~ 4006	0. ~~3175~~ 4006

Riders:

A	BGSS	BGSS-P	Per TPS
B	WNC	WNC*	WNC*
C	OSMC	(0.0007)	~~(0.0007)~~ na
D	SBC	0.0190	0.0190
E	EEP	0.0020	0.0020

¹ Balancing Charge of \$0.0171 per therm applies to ~~customer~~Customer's November to March with a DCQ under 500 therms.

* The WNC will apply to ~~customer~~Customer's during the months of October through May.

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

" na " rider not applicable

Date of Issue: ~~March 8, 2019~~XXX1

Effective: Service Rendered
on and after ~~March 9, 2019~~XXX2

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities

Dated ~~February 27, 2019~~XXX3 in Docket No. ~~GR18080852~~XXX4

RATE SUMMARIES

(continued)

Per Therm

	GDS (sales)	GDS (transportation)¹	GDS SP #21 May – October
Service Charge	~~28.90~~ 47.98	~~28.90~~ 47.98	~~28.90~~ 47.98
Demand Charge, per DCQ	0. ~~806~~ 960	0. ~~806~~ 960	0. ~~806~~ 960

Distribution Charges	0. ~~1893~~ 2814	0. ~~1893~~ 2814	0.0589

Riders:

A Commodity Charge	BGSS-M	per TPS	BGSS-M
B WNC	WNC*	WNC*	na
C OSMC	(0.0007)	na	na
D SBC	0.0190	0.0190	0.0190
E EEP	0.0020	0.0020	0.0020

¹ Balancing Charge of \$0.0171 per therm applies to ~~customer~~Customer's November to March with a DCQ under 500 therms.

*The WNC will apply to ~~customer~~Customer's during the months of October through May.

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

" na " rider not applicable

Date of Issue: ~~March 8, 2019~~XXX1

Effective: Service Rendered
on and after ~~March 9, 2019~~XXX2

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated ~~February 27, 2019~~XXX3 in Docket No. ~~GR18080852~~XXX4

RATE SUMMARIES

(continued)

	<u>LVD</u> <u>(exempt)</u>	<u>LVD</u> <u>(taxable)</u>
Per Therm		
Service Charge	<u>303.74</u>	<u>274.04</u> ~~323.86~~
Demand Charge, per DCQ	<u>1.450</u>	<u>4.03</u> ~~01.546~~
Distribution Charges	<u>0.0459</u>	<u>0.0422</u> ~~0489~~
<u>Riders:</u>		
A BGSS	<u>BGSS-M or TPS</u>	<u>BGSS-M or TPS</u>
B WNC	<u>na</u>	na
C OSMC <u>*</u>		(0.0007)
D SBC		0.0190
E EEP		0.0020

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

" na " rider not applicable

* Not applicable to customer receiving gas supply from a TPS

Date of Issue: March 8, 2019 ~~XXX1~~

Effective: Service Rendered
on and after March 9, 2019 ~~XXX2~~

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520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated February 27, 2019 ~~XXX3~~ in Docket No. GR18080852 ~~XXX4~~

RATE SUMMARIES
(continued)

Per Therm	IS <u>(ceiling)</u>	ITS Exempt <u>(ceiling)</u>	ITS taxable <u>(ceiling)</u>
Service Charge	~~355.20~~ 628.55	589.50	628.55
Demand Charge, per DCQ	0. ~~08~~ 113	0. ~~293~~ 400	0. ~~312~~ 427
Distribution Charges	0.9405	0. ~~079~~ 1156	0. ~~084~~ 31233
<u>Riders:</u>			
A Commodity Charge	BGSS-M	per TPS	per TPS
B WNC	na	na	na
C OSMC	na	na	na
D SBC	0.0190	0.0179	0.0190
E EEP	0.0020	0.0019	0.0020

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

" na " rider not applicable

Date of Issue: ~~March 8, 2019~~XXX1

Effective: Service Rendered
on and after ~~March 9, 2019~~XXX2

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated ~~February 27, 2019~~XXX3 in Docket No. ~~GR18080852~~XXX4

RATE SUMMARIES
(continued)

Per Therm	EGF <u>(exempt)</u>	EGF <u>(taxable)</u>
Service Charge	~~52.27~~ <u>80.00</u>	~~55.73~~ <u>85.30</u>
Demand Charge, per DCQ	0. ~~421~~ <u>600</u>	0. ~~449~~ <u>640</u>
Distribution Charges	0. ~~0405~~ <u>0530</u>	0. ~~0432~~ <u>0565</u>
<u>Riders:</u>		
A BGSS	BGSS-M	BGSS-M
B WNC	na	na
C OSMC	(0.0007)	(0.0007)
D SBC	0.0179	0.0190
E EEP	0.0019	0.0020

Rates shown include taxes if applicable; rates that are tax exempt are noted "exempt."

" na " rider not applicable

Date of Issue: ~~March 8, 2019~~XXX1

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on and after ~~March 9, 2019~~XXX2

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520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities

Dated ~~February 27, 2019~~XXX3 in Docket No. ~~GR18080852~~XXX4

RATE SUMMARIES
(continued)

	<u>FTS</u> <u>(exempt)</u>	<u>FTS</u> <u>(taxable)</u>
Per Therm		
Service Charge	257.01	274.04
Demand Charge, per DCQ	0.966	1.030
Distribution Charges	0.0396	0.0422
<u>Riders:</u>		
A Commodity Charge	per TPS	per TPS
B WNG	na	na
C OSMG	na	na
D SBC	0.0179	0.0190
E EEP	0.0019	0.0020

Rates shown include taxes if applicable, rates that are tax exempt are noted "exempt."

"na " rider not applicable

Date of Issue:— March 8, 2019

Effective:— Service Rendered
on and after March 9, 2019

Issued by: Christie McMullen, President
520 Green Lane
Union, New Jersey 07083

Filed Pursuant to Order of the Board of Public Utilities
Dated February 27, 2019 in Docket No. GR18080852

**IN THE MATTER OF THE PETITION OF
ELIZABETHTOWN GAS COMPANY FOR APPROVAL OF
INCREASED BASE TARIFF RATES AND CHARGES
FOR GAS SERVICE, CHANGES TO DEPRECIATION
RATES AND OTHER TARIFF REVISIONS**

BPU DOCKET NO. GR_____

DIRECT TESTIMONY

OF

DANIEL P. YARDLEY

**On Behalf Of
Elizabethtown Gas Company**

Exhibit P-12

April 18, 2019

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**ELIZABETHTOWN GAS COMPANY
DIRECT TESTIMONY OF
DANIEL P. YARDLEY**

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME, AFFILIATION AND BUSINESS ADDRESS.**

3 **A.** My name is Daniel P. Yardley. I am Principal, Yardley Associates and my business
4 address is 2409 Providence Hills Drive, Matthews, North Carolina 28105.

5 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING?**

6 **A.** I am testifying on behalf of Elizabethtown Gas Company ("Elizabethtown" or the
7 "Company").

8 **Q. PLEASE SUMMARIZE YOUR PROFESSIONAL AND EDUCATIONAL
9 BACKGROUND.**

10 **A.** I have been employed as a consultant to the natural gas industry for over 30 years.
11 During this period, I have directed or participated in numerous consulting assignments on
12 behalf of local distribution companies ("LDCs"). A number of these assignments
13 involved the development of gas distribution company cost allocation, pricing, service
14 unbundling, revenue decoupling and other tariff analyses. In addition to this work, I have
15 performed interstate pipeline cost of service and rate design analyses, gas supply and
16 capacity planning analyses, and financial evaluation analyses. I received a Bachelor of
17 Science Degree in Electrical Engineering from the Massachusetts Institute of Technology
18 in 1988.

19 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NEW JERSEY BOARD
20 OF PUBLIC UTILITIES AND OTHER REGULATORY BODIES?**

21 **A.** Yes. Over the last 20 years, I have testified before the New Jersey Board of Public
22 Utilities (the "BPU") on various ratemaking and regulatory matters including rate

1 unbundling, cost allocation, service design, rate design, revenue decoupling, cost
2 recovery mechanisms and tariff design. My testimony in various proceedings has been
3 presented on behalf of Elizabethtown, New Jersey Natural Gas Company and South
4 Jersey Gas Company, including testimony on behalf of Pivotal Utility Holdings, Inc.
5 d/b/a Elizabethtown Gas -- the previous owner of the Company's assets -- in its last two
6 base rate proceedings. I have also testified in proceedings before several other state
7 utility regulatory commissions, the Federal Energy Regulatory Commission, and the
8 National Energy Board of Canada on a variety of rate and regulatory topics. A summary
9 of my previous expert testimony is provided as Attachment A to my direct testimony.

10 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS**
11 **PROCEEDING?**

12 **A.** I have been asked by Elizabethtown to evaluate the manner in which it recovers its base
13 distribution revenue requirements from customers and to propose changes that are
14 consistent with the nature of the services it provides, as well as important rate design
15 objectives. In this regard, my testimony addresses two topics. First, I will describe the
16 Company's rate design goals, which appropriately reflect important public policy and
17 industry developments. Second, I will support the derivation of specific rates and
18 charges for distribution services that fairly apportion the Company's revenue requirement
19 among customer classes. The new charges are based on appropriate rate design
20 considerations, including the results of an allocated cost of service study ("ACOSS")
21 performed in a consistent manner with other elements of the Company's filing.

1 **Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.**

2 **A.** The following four findings and recommendations are supported through my direct
3 testimony:

4 (1) **The majority of Elizabethtown's fixed distribution costs are recovered**
5 **through variable charges applied to customer usage.** Moderately
6 reducing the link between throughput and distribution cost recovery
7 benefits customers and the Company alike by improving revenue stability
8 and supporting energy efficiency efforts.

9 (2) **The cost of distribution service provided to Elizabethtown's**
10 **residential customers is subsidized through service provided to**
11 **commercial and industrial customers.** The results of the ACOSS
12 demonstrate that the Company is currently providing service to residential
13 customers at a below-average rate of return and that remaining classes
14 subsidize the cost of residential service. Further, within the residential
15 class, non-heating customers receive the greatest level of subsidy.

16 (3) **Existing monthly fixed customer charges for the majority of**
17 **Elizabethtown's customers are substantially below cost-based levels.**
18 The customer charges for residential customers are less than 20 percent of
19 corresponding customer-related costs. Similarly, customer charges for
20 small general service customers are less than 40 percent of customer-
21 related costs. The below-cost customer charges result in intra-class
22 subsidies as substantial customer-related costs are recovered through
23 volumetric charges applied to customer use.

(4) Elizabethtown's proposed rates recover the proposed revenue requirements in an appropriate manner. The Company's rate design proposal reflects an equalized percentage increase in rates to all rate classes. At the same time, the rate design proposal incorporates necessary changes to intra-rate class rate design, including increases to fixed charges, in order to align them closer with cost-based levels. Focusing on intra-class rate design reduces subsidies among Elizabethtown's customers, including those of residential non-heating customers.

Q. DO YOU SPONSOR ANY SCHEDULES AS PART OF YOUR TESTIMONY?

A. Yes. I sponsor the following schedules, which were prepared by me or under my supervision and direction and which I discuss in greater detail later in my testimony:

Schedule DPY-1: Allocated Cost of Service Study; and

Schedule DPY-2: Summary of Existing and Proposed Rates and Revenues.

II. DEVELOPMENT OF ELIZABETHTOWN'S RATE DESIGN GOALS

Q. WHAT RELATIONSHIP EXISTS BETWEEN A UTILITY'S RATE DESIGN AND ENERGY POLICY OBJECTIVES?

A. From a public policy perspective, rate design is a critically important tool for achieving specific energy policy goals that influence the quality of life for New Jersey's citizens and the State's competitive position. Policy goals affected by rate design include end-use fuel mix, energy efficiency and the resulting environmental and cost impacts of energy consumption. Therefore, the form of a utility's rate structure is an important building block that can contribute to achieving important energy policy goals.

1 The nexus between rate design and energy policy objectives is receiving increased
2 attention throughout the U.S., due in large part to the prevalence of throughput-based rate
3 designs. Throughput-based rate designs recover a substantial portion of LDC fixed-cost
4 revenue requirements through volumetric charges applied to the amount of natural gas
5 consumed by customers. The inherent operating incentives under this form of rate
6 structure are for the LDC to add new customers and to promote increased consumption
7 by its existing customers.

8 While growing natural gas loads through the addition of new customers is
9 consistent with public policy favoring the direct and most efficient use of clean-burning
10 natural gas, the incentive to increase consumption by current customers is at odds with
11 other public policy goals that favor energy conservation and reductions in customer
12 energy bills. These policy goals are being pursued through programs run by LDCs such
13 as Elizabethtown that promote increased energy efficiency to their customers. Better-
14 aligning the form of rate design with these goals is essential to LDCs fully embracing the
15 energy efficiency imperative while also meeting fiduciary responsibilities to
16 shareholders, regulators and customers alike.

17 **Q. HOW WOULD YOU CHARACTERIZE ELIZABETHTOWN'S RATE DESIGN?**

18 **A.** Base rates are intended to recover a utility's cost of service, excluding purchased gas and
19 other tracked costs. The costs recovered through base rates are primarily fixed costs.
20 Elizabethtown's rate design reflects a throughput-based approach. A throughput-based
21 rate design recovers a substantial portion of an LDC's fixed-cost revenue requirements
22 through volumetric charges applied to the amount of natural gas consumed by customers.
23 While the rates for customers include a combination of fixed monthly charges and

throughput-based or variable charges, typically, well over half of base rate revenues are derived from the variable charge components and are directly linked to customer usage patterns. Under current rates, base revenues from variable charges account for nearly 70 percent of the Company's total base revenue recoveries. This indicates a significant dichotomy between the manner in which Elizabethtown incurs costs and how costs are recovered from customers.

Q. WHAT COMMON APPROACHES HAVE BEEN IMPLEMENTED TO ADDRESS THE THROUGHPUT INCENTIVE ASSOCIATED WITH TRADITIONAL LDC RATE DESIGNS?

A. Regulators in many individual jurisdictions have approved various types of rate design changes that address the shortcomings associated with traditional rate designs that recover the majority of LDC fixed costs through variable charges. These changes include fixed-cost rate design approaches as well as revenue decoupling mechanisms.

Q. IS ELIZABETHTOWN PROPOSING TO IMPLEMENT A RATE DESIGN APPROACH THAT FULLY ELIMINATES THE THROUGHPUT INCENTIVE UNDERLYING ITS EXISTING BASE RATES?

A. Not at this time. Nevertheless, the Company is proposing a rate design that moderately reduces the proportion of fixed costs that are recovered through variable charges. The Company believes that gradual progress toward reducing the throughput incentive is an essential outcome of its rate design proposal.

Q. PLEASE DESCRIBE ELIZABETHTOWN'S RATE DESIGN GOALS THAT GUIDED THE RATE DESIGN APPROACH YOU RECOMMEND.

A. The rate design approach I am recommending seeks to achieve the following six goals:

- (1) **Fairness** – Fairness is accomplished through pricing services based on the underlying cost. Fairness is important in many respects including, (i) between the Company and its customers, (ii) across rate classes served by Elizabethtown, and (iii) among customers taking service under a common rate schedule.
- (2) **Not Discriminatory** – Avoiding undue discrimination requires rates that do not grant an unreasonable preference or subject an unreasonable disadvantage to any customer or group of customers.
- (3) **Rate Moderation** – Moderation allows for the implementation of price changes over time to ensure that customers are not exposed to dramatic price changes all at once.
- (4) **Revenue Stability** – Revenue stability means that Elizabethtown’s base rate revenues are more predictable in view of future uncertainties. As customer usage patterns have become less certain, improved revenue stability through rate design takes on greater importance as a way of mitigating the increased risks to customers and the Company associated with such unpredictable consumption patterns.
- (5) **Energy Efficiency** – Reducing energy consumption through energy efficiency and conservation supports policy objectives that benefit customers and the environment.
- (6) **Simplicity** – Simplicity means a rate structure that is easy for customers to understand and straightforward to administer.

1 **III. ELIZABETHTOWN DISTRIBUTION RATE DESIGN**

2 **Q. PLEASE DESCRIBE THE COMPANY’S EXISTING RATE SCHEDULES.**

3 **A.** Elizabethtown’s existing rate schedules are segregated by sector, nature of service (firm
4 or interruptible), customer size, and by end-use in some cases. Nearly 98 percent of the
5 Company’s customers are served under either the Residential Delivery Service (“RDS”)
6 or Small General Service (“SGS”) rate schedules. These rate schedules provide service
7 to small customers, with average annual use of approximately 850 therms for the RDS
8 rate schedule and 1,260 therms for the SGS rate schedule. General service customers
9 whose annual use exceeds 5,000 therms take service under the General Delivery Service
10 (“GDS”) rate schedule. The RDS, SGS and GDS rate schedules provide customers with
11 the opportunity to purchase gas supply from Elizabethtown by paying the applicable
12 Basic Gas Supply Service (“BGSS”) rate or from a third-party supplier.

13 Large industrial customers, whose peak demands exceed 200 dekatherms per day
14 in most cases, take service under one of the Company’s industrial rate schedules. Firm
15 industrial customers taking sales service are served under the Large Volume Demand
16 (“LVD”) rate schedule while those purchasing supply from a third-party gas supplier take
17 service under the Firm Transportation Service (“FTS”) rate schedule. Interruptible
18 industrial customers purchasing supply from Elizabethtown take service under the
19 Interruptible Sales (“IS”) rate schedule, while interruptible customers purchasing supply
20 from a third-party supplier take service under the Interruptible Transportation Service
21 (“ITS”) rate schedule.

22 Elizabethtown also provides service under rate schedules applicable to specific
23 end-uses. Customers using natural gas to refuel vehicles are eligible to take service

1 pursuant to the Natural Gas Vehicle (“NGV”) rate schedule. Customers utilizing natural
2 gas to fuel qualifying cogeneration facilities take service under the Electric Generation
3 Firm (“EGF”) service or the Cogeneration Service Interruptible (“CSI”) rate schedules.
4 A limited number of customers are served under various other rate schedules targeted to
5 specific end-uses including for Gas Light Service (“GLS”) and public utility Contract
6 Service (“CS”) customers.

7 **Q. WHAT RATES AND CHARGES ARE INCORPORATED INTO THE RDS AND**
8 **SGS RATE SCHEDULES?**

9 **A.** The existing rate design for these rate schedules is similar and includes two types of base
10 rate charges that are intended to recover Elizabethtown’s non-gas revenue requirements
11 or cost of service: a monthly fixed customer charge and distribution charges applicable to
12 monthly volumes. Fixed monthly customer charges are applied per customer per month
13 and distribution charges are applied to each customer’s monthly usage. Under this rate
14 structure, all customers pay a minimum monthly amount to Elizabethtown equal to the
15 fixed customer charge, regardless of their monthly usage. The rate design also results in
16 customers paying higher amounts as their consumption increases due to the per-therm
17 distribution charge. The distribution charge is considered a variable charge because all of
18 the associated revenues are linked to customer usage or throughput.

19 For RDS service, the monthly fixed charge is \$7.68 and the volumetric charge is
20 \$0.3400 per therm. The monthly fixed charge for SGS service is \$20.56 and the
21 corresponding volumetric charge is \$0.2978 per therm. These prices, and all others
22 described throughout my testimony exclude the New Jersey Sales and Use Tax and
23 regulatory assessments.

1 **Q. PLEASE DESCRIBE THE RATES INCORPORATED IN ELIZABETHTOWN'S**
2 **RATE SCHEDULES GDS, LVD, FTS AND EGF.**

3 **A.** The base rates applicable to the GDS, LVD, FTS and EGF rate schedules incorporate a
4 demand charge in addition to a monthly fixed charge and volumetric charges. The
5 demand charge is an important means of recovering fixed, peak-related costs from
6 customers in an equitable manner. The base rates for the GDS rate class consist of a
7 monthly fixed charge of \$27.10 and a monthly demand charge of \$0.756 per therm of
8 peak daily contract demand. A distribution charge of \$0.1775 applies to all use, except
9 for air conditioning and distributed generation use during the summer months of May
10 through October. The base rates for the LVD and FTS rate classes consist of a monthly
11 fixed charge of \$257.01, a monthly demand charge of \$0.966 per therm of contract
12 demand and a distribution charge of \$0.0396 per therm of monthly use. The Company is
13 proposing to consolidate the existing FTS rate schedule with the LVD rate schedule as
14 described by Mr. Kaufmann in his direct testimony. Lastly, the base rates for the EGF
15 rate class consist of a monthly fixed charge of \$52.27, a monthly demand charge of
16 \$0.421 per therm of contract demand and a distribution charge of \$0.0405 per therm of
17 monthly use.

18 **Q. WHAT RATES AND CHARGES ARE INCORPORATED INTO THE NGV RATE**
19 **SCHEDULE?**

20 **A.** NGV service is compressed natural gas for use as a motor vehicle fuel delivered to
21 customers at stations that may be owned by a customer or by Elizabethtown. The rates
22 for NGV service incorporate three variable charges applied to NGV service usage. The
23 first is a distribution charge that is comparable to the charges for other commercial

1 customers. The second is a fueling charge that is intended to recover operating costs of
2 the refueling station. Lastly, a facilities charge is applied to recover the costs of a typical
3 refueling station that exceed ten times expected revenues. If the Company owns and
4 operates an NGV refueling station on a customer's property, it may enter into an
5 agreement that sets forth negotiated fueling station and facilities charges that differ from
6 the tariff charges.

7 **Q. DID YOU PERFORM AN ACOSS TO SUPPORT YOUR RATE DESIGN**
8 **RECOMMENDATIONS?**

9 **A.** Yes. I believe that an ACOSS provides an important means of assessing the
10 reasonableness of existing prices and provide guidance for the development of price
11 changes. In particular, the ACOSS that I performed for Elizabethtown examines all of
12 the Company's common costs reflected in its base rate petition, and through appropriate
13 cost assignments and allocations, establishes measures of investments, expenses and
14 income by customer class. The ACOSS is an important tool because many of the
15 Company's costs are common and are incurred to serve many classes of customers
16 collectively.

17 The ACOSS calculates the total investment and operating costs incurred to serve
18 each customer class, thereby establishing class-specific total revenue requirements. The
19 class-specific revenue requirements are compared to class revenues in order to establish
20 class income and rate of return on investment. The class-specific rates of return are used
21 to guide the apportionment of the revenue requirements among all of Elizabethtown's
22 customer classes in conjunction with the development of proposed rates. The ACOSS
23 also determines the classification of costs among demand, customer and volumetric

1 components. The classification of costs within a rate classification is used to guide the
2 development of the form of billing rates for that class. Although the ACOSS is not the
3 only factor relied upon to design rates, it is an invaluable guide to ensuring that the
4 process is fair and reasonable.

5 **Q. PLEASE DESCRIBE THE GENERAL COSTING METHODOLOGY THAT IS**
6 **INCORPORATED IN THE ELIZABETHTOWN ACOSS.**

7 **A.** The most significant consideration in the development of an ACOSS is the
8 methodological approach to allocating fixed demand costs. The ACOSS performed for
9 Elizabethtown reflects a system design approach to the allocation of fixed demand costs
10 that closely follows principles of cost causation. A full description of the Elizabethtown
11 ACOSS and detailed results are presented in Schedule DPY-1.

12 **Q. PLEASE SUMMARIZE THE RESULTS OF THE ACOSS.**

13 **A.** The primary results from the ACOSS are the rate of return by class and the unit customer
14 and demand-related costs. The ACOSS demonstrates that the rates of return for the
15 Residential Heating, and Residential Non-Heating customers are less than the system-
16 average rate of return of 3.41% at present rates. The residential class is by far
17 Elizabethtown's largest class. The rate of return for all other classes is above the system-
18 average, indicating that these classes are subsidizing the prices for residential customers.
19 Table 1 provides a summary of the rate of return by class.

Table 1
Rate of Return by Class

	ACOSS Rate of Return	Unitized
Residential Heating	0.86%	0.3
Residential Non-Heating	(4.02%)	(1.2)
SGS	4.14%	1.2
GDS	18.79%	5.5
LVD / FTS	19.00%	5.6
EGF	3.79%	1.1
NGV	13.33%	3.9
Non-Firm	24.92%	7.3
Overall	3.41%	1.0

1 With respect to unit costs, the ACOSS indicates that the system-wide average customer
2 cost is \$48.97 per month, and that the cost generally varies with the size of the customer.
3 The lowest average customer cost of \$45.00 per month is indicated for the residential
4 non-heating class. A comparison of existing customer costs to customer-related costs is
5 presented in Table 2.

Table 2

Comparison of Existing Customer Charges and Customer-Related Costs

	Existing Customer Charge	Customer- Related Cost	Difference
Residential Heating	\$7.68	\$46.20	\$38.52
Residential Non-Heating	\$7.68	\$45.00	\$37.32
SGS	\$20.56	\$54.53	\$33.97
GDS	\$27.10	\$138.25	\$111.15
LVD / FTS	\$257.01	\$572.68	\$315.67
EGF	\$52.27	\$147.54	\$95.27
Non-Firm	\$589.50	\$729.59	\$140.09

The significant variance between monthly customer-related costs and customer charges is taken into consideration when designing the intra-class rate design.

Q. WHAT STEPS DID YOU EMPLOY TO ESTABLISH THE SPECIFIC BASE RATES YOU ARE PROPOSING?

A. First, I determined the class-by-class revenue requirements, which reflect the results of the ACOSS and other rate design principles. Next, I evaluated the existing level of customer charges and proposed increases, where appropriate, to recover a greater proportion of customer-related costs through monthly fixed customer charges. Lastly, I established the appropriate rate structure and rate levels to recover the remaining portion of class revenue requirements.

1 **Q. HOW DID YOU DEVELOP THE CLASS-BY-CLASS REVENUE**
2 **REQUIREMENTS?**

3 **A.** I am proposing to allocate the proposed incremental base revenue increase of \$65.0
4 million reflected on Exhibit P-3, Schedule SMG-1 to all rate classes in proportion to
5 existing base revenues.

6 **Q. WHAT FACTORS GUIDED YOUR RECOMMENDATION THAT THE**
7 **PROPOSED REVENUE INCREASE BE APPLIED ON AN EQUAL**
8 **PERCENTAGE BASIS TO ALL RATE CLASSES?**

9 **A.** The results of the ACOSS are one consideration in the development of proposed rates.
10 The ACOSS results indicate that the greatest areas of concern are the monthly customer
11 charges and the rate of return for the residential non-heating class. Another important
12 consideration is the current rate structure including the weather normalization clause and
13 the level of fixed and variable charges. In addition, the historic level of returns and
14 existing rates for each class are important considerations as is the need to develop prices
15 that are fair and not unduly discriminatory. Taking into account all of these factors, I
16 believe that applying the revenue increase on an equal percentage basis to all rate classes
17 is reasonable and appropriate in this case as it reflects an emphasis on needed changes to
18 intra-class rate design.

19 **Q. WHY IS THE LEVEL OF THE MONTHLY FIXED CUSTOMER CHARGE**
20 **IMPORTANT?**

21 **A.** The level of the monthly fixed customer charge is important for a variety of reasons that
22 relate to the Company's rate design goals I described earlier. First, the monthly fixed
23 customer charge provides customers with an important price signal concerning the impact

1 of connecting to Elizabethtown's distribution system. Second, recovering customer-
2 related costs through monthly fixed customer charges contributes to intra-class fairness.
3 To the extent that a portion of customer-related costs are recovered through volumetric
4 charges, intra-class subsidies are created as larger customers pay a disproportionate share
5 of customer-related costs. Third, the fixed monthly customer charge provides revenue
6 stability as fixed costs that are incurred to serve customers are recovered through a fixed
7 charge.

8 **Q. WHAT MONTHLY FIXED CUSTOMER CHARGE DO YOU PROPOSE FOR**
9 **THE RESIDENTIAL CLASS?**

10 **A.** I am proposing to increase the monthly customer charge from \$7.68 to \$12.25. It is
11 desirable to recover a greater proportion of Elizabethtown's residential revenue
12 requirements through the fixed monthly customer charge, so that individual rate elements
13 move closer to cost-based levels. Even with these increases, the proposed residential
14 customer charges remain below cost-based levels. As a result, over 70 percent of the
15 residential base revenue requirements continue to be recovered through variable charges
16 that are dependent on customer throughput.

17 **Q. HOW DID YOU DERIVE THE VARIABLE DELIVERY CHARGES**
18 **APPLICABLE TO RESIDENTIAL CUSTOMERS?**

19 **A.** The remaining revenue requirements allocated to the residential class are recovered
20 through the variable delivery charge. The resulting distribution charge is \$0.4535. The
21 revenue increase from the residential customer charge reduces the revenue increase
22 required through the residential delivery charge.

1 **Q. PLEASE EXPLAIN THE PROPOSED CHANGES TO THE BASE RATES FOR**
2 **THE SGS CLASS.**

3 **A.** I am proposing to increase the monthly SGS customer charge from \$20.56 to \$33.00 and
4 the distribution charge from \$0.2978 to \$0.3757. The proposed changes to SGS base
5 rates moderately increase the recovery of fixed costs through fixed charges.

6 **Q. PLEASE EXPLAIN THE PROPOSED CHANGES TO THE BASE RATES FOR**
7 **THE GDS CLASS.**

8 **A.** I am proposing to increase the monthly GDS customer charge from \$27.10 to \$45.00 and
9 the monthly demand charge from \$0.756 to \$0.900. The remainder of the base revenue
10 change is recovered through an increase to the distribution charge from \$0.1775 to
11 \$0.2639. I am proposing to maintain the distribution charge for air conditioning use at
12 \$0.0552 per therm.

13 **Q. PLEASE EXPLAIN THE PROPOSED CHANGES TO THE BASE RATES FOR**
14 **THE CONSOLIDATED LVD AND FTS CLASSES.**

15 **A.** I am proposing to increase the monthly customer charges from \$257.01 to \$303.74 and
16 the monthly demand charge from \$0.966 to \$1.450 for LVD and FTS customers under
17 the consolidated LVD rate schedule. The remainder of the base revenue change is
18 recovered through an increase to the distribution charge from \$0.0396 to \$0.0459.

19 **Q. PLEASE EXPLAIN THE PROPOSED CHANGES TO THE BASE RATES FOR**
20 **THE EGF CLASS.**

21 **A.** I am proposing to increase the monthly EGF customer charge from \$52.27 to \$80.00 and
22 the monthly demand charge from \$0.421 to \$0.600. The remainder of the base revenue

change is recovered through an increase to the distribution charge from \$0.0405 to \$0.0530.

Q. PLEASE EXPLAIN THE PROPOSED CHANGES TO THE BASE RATES FOR NON-FIRM CLASSES.

A. I am proposing to retain the existing monthly customer charge for non-firm classes at \$589.50 and increase to the monthly demand charge for IS customers from \$0.076 to \$0.106 and for ITS-LVD customers from \$0.293 to \$0.400. The remainder of the base revenue change for non-firm service is recovered through an increase to the ITS-LVD distribution charge from \$0.0791 to \$0.1156.

Q. ARE YOU PROPOSING ANY CHANGES TO THE RATES FOR NGV SERVICE?

A. I am proposing to apply the base revenue change for NGV service to the distribution charge resulting in an increase from \$0.2585 to \$0.3612. I am proposing no change to the NGV fueling or facilities charges.

Q. HAVE YOU PREPARED A SUMMARY OF THE PROPOSED RATE CHANGES?

A. Yes. The existing and proposed rates for each class are compared in Schedule DPY-2. In addition, Schedule DPY-2 provides a proof of revenues demonstrating that the proposed charges yield the requested base revenue increase based on the Company's forecasts of sales and customers.

1 **Q. PLEASE COMMENT ON THE IMPACT OF THE PROPOSED RATE CHANGES**
2 **ON ELIZABETHTOWN'S RECOVERY OF ITS OVERALL BASE**
3 **DISTRIBUTION COSTS OF PROVIDING SERVICE TO CUSTOMERS.**

4 **A.** The majority of Elizabethtown's revenue requirements are associated with ensuring
5 ongoing reliability of service and safety to customers and the communities the Company
6 serves. These costs are all fixed in nature and do not increase or decrease with the level
7 of natural gas consumed by customers. The rate design changes that I propose
8 moderately improve the recovery of reliability and safety expenses by more closely
9 aligning them with the manner in which these costs are incurred. Even so, the majority of
10 Elizabethtown's revenue requirements continue to be recovered through variable charges
11 that are dependent on customer throughput. While the proposed rates do not eliminate
12 existing subsidies, moderate improvement in intra-class revenue responsibility is
13 achieved through the application of the proposed revenue increase among individual rate
14 elements. In my view, the proposed rates in this proceeding result from a fair and
15 reasonable rate design approach balancing the rate design goals described earlier in my
16 testimony.

17 **Q. DOES THIS CONCLUDE YOUR PREPARED DIRECT TESTIMONY?**

18 **A.** Yes, it does.

**Prior Testimony of
Daniel P. Yardley**

Jurisdiction	Sponsor	Year	Topics	Docket
Federal Energy Regulatory Commission	Northern Distributor Group	1992	Cost of Service and Cost Allocation	RP92-1
	Northern Distributor Group	1995	Cost of Service and Rate Design	RP95-185
	Atlanta Gas Light, et al.	2001	Storage Cost Allocation	RP01-245
	Bay State Gas and Northern Utilities	2002	Rate Design	RP02-13
Florida	Peoples Gas System	2008	Cost Allocation and Rate Design	Docket No. 080318-GU
Massachusetts	Bay State Gas	1998	Capacity Assignment	D.T.E. 98-32
	Bay State Gas	2001	Contract Approval	D.T.E. 00-99
	Bay State Gas	2006	Declining Use Rate Adjustment	D.T.E. 06-77
	Bay State Gas	2007	Declining Use Rate Adjustment	D.P.U. 07-89
	Bay State Gas	2009	Revenue Decoupling	D.P.U. 09-30
Illinois	Nicor Gas	2017	Cost Allocation and Rate Design	Docket No. 17-00124
	Nicor Gas	2018	Revenue Decoupling, Cost Allocation and Rate Design	Docket No. 18-1775
New Hampshire	Northern Utilities	2005	Jurisdictional Gas Cost Allocation	DG05-080
National Energy Board of Canada	Alberta Northeast Gas, Ltd.	2012	TransCanada Pipeline Service Restructuring and Tolls	RH-3-2011
	Alberta Northeast Gas, Ltd.	2013	TransCanada Pipeline Shipper Renewal Rights	RH-1-2013
	Alberta Northeast Gas, Ltd.	2014	TransCanada Pipeline Service Service and Toll Design	RH-1-2014
New Jersey	New Jersey Natural Gas	1999	Rate Unbundling	Docket No. GO99030123
	Elizabethtown Gas, <i>et al.</i>	1999	Customer Account Services	Docket No. EX99090676
	Elizabethtown Gas	2002	Cost Allocation and Rate Design	Docket No. GR02040245
	South Jersey Gas Company	2003	Cost Allocation and Rate Design	Docket No. GR03080683
	South Jersey Gas Company	2004	Capacity Charge	Docket No. GR04060400
	New Jersey Natural Gas	2005	Revenue Decoupling	Docket No. GR0512020
	South Jersey Gas Company	2005	Revenue Decoupling	Docket No. GR0512019
	South Jersey Gas Company	2007	Annual Decoupling Adjustment	Docket No. GR07060354

**Prior Testimony of
Daniel P. Yardley**

Jurisdiction	Sponsor	Year	Topics	Docket
New Jersey cont.	New Jersey Natural Gas	2007	Cost Allocation and Rate Design	Docket No. GR07110889
	South Jersey Gas Company	2008	Annual Decoupling Adjustment	Docket No. GR08050367
	Elizabethtown Gas	2009	Revenue Decoupling, Cost Allocation and Rate Design	Docket No. GR09030195
	South Jersey Gas Company	2009	Annual Decoupling Adjustment	Docket No. GR09060340
	South Jersey Gas Company	2009	Cost Allocation and Rate Design	Docket No. GR10010035
	New Jersey Natural Gas	2010	Energy Efficiency Cost Recovery	Docket No. GR10030225
	South Jersey Gas Company	2011	Annual Decoupling Adjustment	Docket No. GR11060337
	New Jersey Natural Gas	2011	Energy Efficiency Cost Recovery	Docket No. GR11070425
	South Jersey Gas Company	2012	Annual Decoupling Adjustment	Docket No. GR12060475
	New Jersey Natural Gas	2012	Energy Efficiency Cost Recovery	Docket No. GR12070640
	New Jersey Natural Gas and South Jersey Gas Company	2013	Revenue Decoupling	Docket No. GR13030185
	South Jersey Gas Company	2013	Annual Decoupling Adjustment	Docket No. GR13050434
	South Jersey Gas Company	2013	Cost Allocation and Rate Design	Docket No. GR13111137
	South Jersey Gas Company	2014	Annual Decoupling Adjustment	Docket No. GR14050510
	New Jersey Natural Gas	2014	Energy Efficiency Cost Recovery	Docket No. GO14121412
	South Jersey Gas Company	2015	Annual Decoupling Adjustment	Docket No. GR15060642
	Elizabethtown Gas	2015	Infrastructure Cost Recovery	Docket No. GR15091090
	New Jersey Natural Gas	2015	Cost Allocation and Rate Design	Docket No. GR15111304
	South Jersey Gas Company	2016	Annual Decoupling Adjustment	Docket No. GR16060483
	Elizabethtown Gas	2016	Cost Allocation and Rate Design	Docket No. GR16090826
	South Jersey Gas Company	2017	Cost Allocation and Rate Design	Docket No. GR17010071
	South Jersey Gas Company	2017	Annual Decoupling Adjustment	Docket No. GR17060586
	South Jersey Gas Company	2018	Annual Decoupling Adjustment	Docket No. GR17060586
	New Jersey Natural Gas	2015	Cost Allocation and Rate Design	Docket No. GR19030420

**Prior Testimony of
Daniel P. Yardley**

Jurisdiction	Sponsor	Year	Topics	Docket
New Mexico	New Mexico Gas Company	2018	Rate Design, Weather Normalization Adjustment and Infrastructure Cost Recovery	Case No. 18-000038-UT
North Carolina	Piedmont Natural Gas Company	2013	Cost Allocation and Rate Design	Docket No. G-9, Sub. 631
	Piedmont Natural Gas Company	2013	Cost Allocation and Rate Design	Docket No. G-9, Sub. 743
Rhode Island	Providence Gas Company	1996	Cost Allocation and Rate Design	Docket No. 2076
Tennessee	Chattanooga Gas Company	2009	Revenue Decoupling, Cost Allocation and Rate Design	Docket No. 09-00183
	Piedmont Natural Gas Company	2011	Cost Allocation and Rate Design	Docket No. 11-00144
	Chattanooga Gas Company	2018	Cost Allocation and Rate Design	Docket No. 18-00017
Wisconsin	Wisconsin Power and Light	2001	Cost Allocation and Rate Design	Docket No. 6680-UR-111

ELIZABETHTOWN GAS ALLOCATED COST OF SERVICE STUDY

I. PURPOSE AND GUIDING PRINCIPLES

Elizabethtown Gas Company ("Elizabethtown") is proposing to change existing rates in connection with a proposed increase in base rate revenue requirements. An allocated cost of service study ("ACOSS") assesses the reasonableness of existing prices, and guides the development of price changes. In particular, the ACOSS examines all of a utility's common costs, and through appropriate cost assignments and allocations, establishes measures of investments, expenses and income by customer class. An ACOSS is necessary to determine the cost responsibility for each customer class because many of the Company's costs are common and are incurred to serve many classes of customers collectively.

The ACOSS calculates the total investment and operating costs incurred to serve each customer class, establishing class-specific total revenue requirements.

The class-specific revenue requirements are compared to class revenues in order to establish class income and rate of return on investment. The class-specific rates of return are one element considered in the apportionment of the base rate increase among all of Elizabethtown's customer classes in conjunction with the development of proposed rates. The ACOSS also determines the classification of costs among demand, customer and commodity components. The classification of costs within a rate classification is used to guide the development of the form of billing rates for that class. Although the ACOSS is not the only factor relied upon to design rates, it is an invaluable guide to ensuring that the process is fair and reasonable.

The primary principle that guides the ACOSS process is that of cost causation. Each step in the development of the ACOSS is consistent with the factors that drive or contribute to the incurrence of costs on the Elizabethtown system. For example, the

principle of cost causation requires that the costs incurred by the Company for billing be apportioned to classes on the basis of the number of bills issued or customers in each class.

II. SPECIFICATION OF ELIZABETHTOWN ACOSS

A. Overview

The ACOSS follows a three-part process, which consists of the functionalization, classification and allocation of Elizabethtown's total cost of service. First, cost functionalization involves the segregation of costs into categories based on the function that each cost is incurred to provide. In the ACOSS, the functions are production, transmission, storage and distribution – the direct functions associated with costs incurred by the Company. Second, cost classification further separates costs according to the primary cost causative forces exhibited on Elizabethtown's system. The cost classifications used in the ACOSS relate to fixed costs required to serve peak requirements (demand-related), fixed costs associated with providing customers with access to and active status on the system (customer-related), and variable costs associated with system throughput (commodity-related). Finally, cost allocation takes each classification of cost for each

function and apportions that cost to each of the Company's customer classes. Cost allocation utilizes a variety of factors to apportion the various types of costs among classes in a manner that is consistent with principles of cost responsibility.

B. Customer Classes

The ACOSS includes eight customer groupings, which are: Residential Heating, Residential Non-Heating, Small General Service ("SGS"), General Delivery Service ("GDS"), Firm Industrial, Electric Generation Firm ("EGF"), Natural Gas Vehicle ("NGV"), and Non-Firm Industrial.

The Residential Heating and Residential Non-Heating customers are served under the same rate schedule, Residential Delivery Service ("RDS"); however, the two types of customers are studied separately to guide the design of the customer and delivery rates that apply to RDS customers. This approach provides for the evaluation of the cost of serving subsets of customers with disparate characteristics served under a common rate schedule. Residential Non-Heating customers have much lower use than Residential Heating customers and also have a much higher load factor, both of which have important implications for designing rates that are revealed by separating the groups in the ACOSS.

The Firm Industrial customer group includes industrial customers serviced under both the Large Volume Demand (“LVD”) and Firm Transportation Service (“FTS”) rate schedules. Similarly, the Non-Firm Industrial customer group includes customers served under the Interruptible Sales (“IS”) and Interruptible Transportation Service (“ITS”) rate schedules.

B. Data Sources

The primary data sources fall in two general categories: data related to the establishment of the total cost of service, and data used as the basis for allocating the total cost of service among customer classes. The total cost of service or revenue requirement data utilized in the ACOSS are taken from schedules supporting Elizabethtown’s base rate application in this proceeding. The Company’s forecasts of sales, customers and revenues by class supporting the application, as adjusted for pro forma changes, are used as allocation bases for several categories of costs. The remaining allocation data are derived from special studies of facility or operating costs. All of the data utilized in the ACOSS correspond to a common time period of September 2018 through August 2019, as adjusted for known changes through May 2020. This is Elizabethtown’s adjusted test

year, which is the period for which rates are to be determined.

C. Cost Functionalization

The functionalization of costs refers to the segregation of costs among the primary functions provided by gas utilities to their retail customers. The chart of accounts prescribed by the New Jersey Board of Public Utilities separates the majority of costs into the following four functions:

- *Production:* The production function includes costs associated with the upstream commodity gas supply, interstate pipeline transportation capacity necessary to deliver the supply to Elizabethtown’s system, and upstream storage facilities. Additionally, the costs of any production facilities and the administrative costs associated with procuring natural gas and transportation are categorized as production-related.
- *Storage:* The storage function includes costs associated with on-system facilities that are able to receive injected supplies or delivered liquid natural gas for later withdrawals.

- *Transmission:* The transmission function includes costs associated with large diameter, high pressure facilities that deliver gas to smaller distribution facilities. Transmission facilities include transmission mains and compressors.
- *Distribution:* The distribution function includes costs associated with delivering supplies within areas that are close in proximity to gas loads, such as distribution mains. The costs associated with connecting customers to the distribution system are also considered distribution-related, which include costs associated with services, meters and regulators.

The majority of Elizabethtown's non-gas supply costs are associated with the distribution function. Costs that do not directly fall into one of these primary functions, such as administrative and general expenses, are functionalized on the same basis as other related costs.

D. Cost Classification

Classification is the apportionment of costs among demand, customer and commodity categories. Each of Elizabethtown's rate base and expense accounts is classified consistent with the manner in which the associated costs are

incurred. Costs that are associated with serving peak requirements on the system are classified as demand-related, e.g., costs associated with transmission accounts. Costs that are associated with providing customers access to and active status on the distribution system are classified as customer-related. Customer-related costs are incurred regardless of the amount of gas a customer consumes in any given period and include the costs of services, meters and regulators, and meter reading and billing expenses. Costs that are associated with the quantity of gas purchased or transported are classified as commodity-related. Examples of commodity-related costs are purchased gas costs. Demand and customer-related costs are considered fixed, while commodity-related costs are variable. Some categories of costs vary with more than one of the classifications described previously.

Lastly, some categories of costs are appropriately classified based on how other related costs are classified. For example, distribution operations supervision and engineering expenses are classified based on the classification of all other distribution operations accounts.

The Company's investment in distribution mains is its largest category of plant investment. The classification of distribution mains reflects the distinct cost causative factors that drive the Company's

investments in these facilities. The first factor is the coincident peak demand on the system. Distribution mains are designed to deliver the maximum quantities that are required during a peak period from Elizabethtown's transmission pipelines or interstate pipeline interconnects to the interconnection with each individual customer service. The second factor is the number of customers on the system. Distribution mains are also designed to deliver supplies in reasonable proximity to customers in order to minimize the overall investment in pipe needed to collectively serve all customers.

The breakdown of distribution mains investment costs between the demand and customer-related components is determined through a minimum-size study. The premise underlying this study is that the size of distribution main installed in a given location is most affected by the peak load that will be served by the main, and that the length of distribution main is most affected by the number of customers that are served. The validity of this premise is supported by the system design criteria taken into consideration by the Company's distribution engineering staff.

The minimum size study evaluates the cost of replacing the existing distribution mains of the system under two different sets of assumptions. The first determines the

cost of replacing existing distribution mains with the same type, diameter and lengths of pipe as is currently installed. The second determines the replacement cost assuming that the entire system is replaced with two-inch diameter plastic pipe, which is the smallest, least-expensive size and type of pipe presently being installed. The customer component of distribution mains is equal to the ratio of the replacement cost using the smallest size pipe to the replacement cost using the installed sizes of pipe. Based on the results of this study, 65.6% of Elizabethtown's distribution mains investment is classified as customer-related.

E. Cost Allocation

Cost allocation is the apportionment of individual elements of the Company's classified cost of service among rate classes based on each class' responsibility for the cost being incurred. Cost allocation follows cost causation principles and requires the development of numerous allocation factors that reflect the different types of costs included in Elizabethtown's overall revenue requirements. Considerable effort is required to yield the set of allocation factors underlying the ACOSS.

The ACOSS follows system-design criteria in order to allocate costs on the basis of cost causation. The demand allocator

used in the ACOSS is the coincident design day demand factor. Under this method, the allocation of demand costs reflects the manner in which the Company designs, plans and constructs its system to satisfy firm demands. Off-peak loads do not increase the Company's demand-related investments, and therefore, are not factored into the demand allocator in a system-design ACOSS.

The other allocation factors used in the ACOSS may be grouped into three categories as follows: (i) class summary statistics reflected in the base rate filing, such as the number of customers and throughput by class; (ii) special studies that examine the costs associated with a specific type of investment or expense; and (iii) internal allocation factors, which are composite factors determined on the basis of how related cost items are allocated. All of the various factors must be developed assuming a consistent time period for the ACOSS to be accurate.

Five special studies were performed related to significant capital investment and operations and maintenance ("O&M") expense accounts. The studies are as follows:

- *Meter Investment Study:* The meter investment study establishes the aggregate investment in meters based

on the type and replacement cost of various meters installed to serve each class.

- *Service Investment Study:* Elizabethtown's investment in distribution services is the largest investment on its books after the Company's investment in mains. The service investment study separates the cost of services into two categories using a minimum-size study comparable to the minimum size distribution mains study. While services investment is appropriately classified as customer-related, the minimum size approach allocates a proportion of services investments on the basis of peak consumption, reflecting the increased costs of services for customers with larger peak consumption.
- *Industrial Customer Investment Study:* The industrial customer investment study examines the Company's investments in services and meters to serve the largest customers on the system.
- *Working Capital Study:* The working capital study examines the components of Elizabethtown's proposed working capital allowance. A composite

allocator is derived from the allocation of each component within the ACOSS.

- *Labor Expense Study:* A study of the Company's payroll expense examines components of the Company's payroll costs. The labor study is used as the basis for allocating costs that vary with direct payroll costs, such as pensions and benefits costs.

Together, these special studies are utilized to allocate a substantial portion of the Company's total revenue requirements to customer classes.

Gas costs recovered through Basic Gas Supply Service ("BGSS") charges represent a significant proportion of the Company's overall O&M expense. Costs associated with the BGSS are allocated among Elizabethtown's rate classes on the basis of the associated rider revenues. The Company does not necessarily incur all gas costs on this basis as a portion of gas costs result from fixed interstate pipeline demand charges. However, given that all customers are allowed to choose an alternate gas supplier, it is important that the application of the ACOSS results to the design of distribution prices not be affected by variances in the allocation of gas costs among sales service classifications.

III. RESULTS

Detailed ACOSS results are provided in Schedule DPY-1, Attachment I. The first two pages of the attached results provide an income statement by class at existing and proposed rates, respectively. Pages three, four and five contain summaries of allocated rate base, O&M expense and total revenue requirements by classification and rate class. Lastly, page six provides a detailed analysis of the components of monthly customer-related costs.

The ACOSS demonstrates that the rates of return for the Residential Heating, and Residential Non-Heating customers are less than the system-average rate of return of 3.41% at present rates. The residential class is by far Elizabethtown's largest class. The rate of return for all other classes is above the system-average, indicating that these classes are subsidizing the prices for residential customers.

Monthly customer costs are derived from the costs that are classified as customer-related and the apportionment of these costs to Elizabethtown's various customer classes. The system-wide average monthly customer cost is \$49, and the cost generally varies with the size of the customer. The lowest average customer cost of \$45 per month is associated with serving the Residential Non-Heating class.

Elizabethtown Gas
Income and Rate of Return at Present Rates

	Total System	Residential Heating	Non-Heating	General Service SGS	GDS	Firm Industrial	Electric Generation	NGV	Non-Firm
REVENUES									
Margin Revenues	\$ 163,724,671	\$ 97,196,744	\$ 6,844,074	\$ 10,353,896	\$ 38,457,570	\$ 5,883,840	\$ 11,372	\$ 158,791	\$ 4,818,384
Rider Revenues	137,605,679	93,382,057	4,810,442	5,701,902	30,498,614	821,374	53,359	67,037	2,270,895
Miscellaneous Revenues	<u>3,202,598</u>	<u>2,283,256</u>	<u>257,304</u>	<u>186,423</u>	<u>364,245</u>	<u>61,008</u>	<u>230</u>	<u>2,349</u>	<u>47,783</u>
Total	\$ 304,532,948	\$ 192,862,057	\$ 11,911,819	\$ 16,242,221	\$ 69,320,429	\$ 6,766,222	\$ 64,961	\$ 228,178	\$ 7,137,061
OPERATING EXPENSES									
Operations and Maintenance	\$ 217,627,846	\$151,258,905	\$11,457,527	\$10,587,922	\$39,931,984	\$1,840,165	\$58,491	\$79,803	\$2,413,048
Depreciation and Amortization	43,127,176	30,461,142	3,518,134	2,633,842	5,104,239	819,317	3,060	37,107	550,335
Taxes Other Than Income Taxes	<u>3,871,161</u>	<u>2,763,638</u>	<u>318,360</u>	<u>233,892</u>	<u>446,075</u>	<u>70,873</u>	<u>241</u>	<u>1,692</u>	<u>36,390</u>
Total	\$ 264,626,183	\$ 184,483,685	\$ 15,294,021	\$ 13,455,656	\$ 45,482,298	\$ 2,730,356	\$ 61,792	\$ 118,602	\$ 2,999,772
OPERATING INCOME BEFORE TAXES	\$ 39,906,765	\$ 8,378,372	\$ (3,382,202)	\$ 2,786,565	\$ 23,838,131	\$ 4,035,866	\$ 3,169	\$ 109,575	\$ 4,137,289
INCOME TAXES									
Federal Income Taxes	\$ 3,401,315	\$ 2,424,929	\$ 273,269	\$ 197,990	\$ 386,846	\$ 64,793	\$ 244	\$ 2,495	\$ 50,748
State Income Taxes	1,151,588	821,012	92,521	67,034	130,975	21,937	83	845	17,182
Deferred Income Taxes	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total	\$ 4,552,903	\$ 3,245,941	\$ 365,790	\$ 265,024	\$ 517,821	\$ 86,731	\$ 327	\$ 3,340	\$ 67,929
RATEMAKING ADJUSTMENTS	\$ 2,317,227	\$1,652,041	\$186,171	\$134,886	\$263,548	\$44,142	\$167	\$1,700	\$34,573
NET INCOME	\$ 37,671,089	\$ 6,784,472	\$ (3,561,821)	\$ 2,656,427	\$ 23,583,858	\$ 3,993,278	\$ 3,008	\$ 107,935	\$ 4,103,933
	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
ADJUSTED NET INCOME	\$ 37,671,089	\$ 6,784,472	\$ (3,561,821)	\$ 2,656,427	\$ 23,583,858	\$ 3,993,278	\$ 3,008	\$ 107,935	\$ 4,103,933
RATE BASE	\$ 1,103,568,748	\$786,777,009	\$88,663,096	\$64,238,622	\$125,513,503	\$21,022,431	\$79,318	\$809,535	\$16,465,233
RATE OF RETURN AT PRESENT RATE	3.41%	0.86%	-4.02%	4.14%	18.79%	19.00%	3.79%	13.33%	24.92%

**Elizabethtown Gas
Income and Rate of Return at Proposed Rates**

	Total System	Residential Heating	Non-Heating	General Service SGS	GDS	Firm Industrial	Electric Generation	NGV	Non-Firm
REVENUES									
Margin Revenues	\$ 228,744,928	\$ 135,469,098	\$ 9,924,098	\$ 14,468,355	\$ 53,741,895	\$ 8,220,308	\$ 15,895	\$ 176,571	\$ 6,728,707
Rider Revenues	137,605,679	93,382,057	4,810,442	5,701,902	30,498,614	821,374	53,359	67,037	2,270,895
Miscellaneous Revenues	3,207,359	1,816,341	36,179	182,858	969,680	201,527	490	285	-
Total	\$ 369,557,966	\$ 230,667,496	\$ 14,770,719	\$ 20,353,115	\$ 85,210,189	\$ 9,243,209	\$ 69,743	\$ 243,894	\$ 8,999,602
OPERATING EXPENSES									
Operations and Maintenance	\$ 218,183,601	\$151,636,052	\$11,476,955	\$10,610,951	\$40,055,160	\$1,843,482	\$58,707	\$80,074	\$2,422,219
Depreciation and Amortization	43,127,176	30,461,142	3,518,134	2,633,842	5,104,239	819,317	3,060	37,107	550,335
Taxes Other Than Income Taxes	4,043,309	2,886,369	332,191	243,912	465,654	74,153	254	1,818	38,958
Total	\$ 265,354,086	\$ 184,983,563	\$ 15,327,280	\$ 13,488,705	\$ 45,625,053	\$ 2,736,952	\$ 62,020	\$ 119,000	\$ 3,011,512
OPERATING INCOME BEFORE TAXES	\$ 104,203,880	\$ 45,683,933	\$ (556,561)	\$ 6,864,410	\$ 39,585,135	\$ 6,506,256	\$ 7,723	\$ 124,894	\$ 5,988,090
INCOME TAXES									
Federal Income Taxes	\$ 16,904,227	\$ 12,051,680	\$ 1,358,122	\$ 983,993	\$ 1,922,589	\$ 322,017	\$ 1,215	\$ 12,400	\$ 252,211
State Income Taxes	5,723,288	4,080,354	459,821	333,152	650,934	109,026	411	4,198	85,391
Deferred Income Taxes	-	-	-	-	-	-	-	-	-
Total	\$ 22,627,515	\$ 16,132,034	\$ 1,817,943	\$ 1,317,145	\$ 2,573,522	\$ 431,043	\$ 1,626	\$ 16,599	\$ 337,602
RATEMAKING ADJUSTMENTS	\$ 2,317,227	\$1,652,041	\$186,171	\$134,886	\$263,548	\$44,142	\$167	\$1,700	\$34,573
NET INCOME	\$ 83,893,592	\$ 31,203,940	\$ (2,188,334)	\$ 5,682,150	\$ 37,275,161	\$ 6,119,355	\$ 6,263	\$ 109,995	\$ 5,685,061
RATE BASE	\$ 1,103,568,748	\$786,777,009	\$88,663,096	\$64,238,622	\$125,513,503	\$21,022,431	\$79,318	\$809,535	\$16,465,233
RATE OF RETURN AT PROPOSED RA1	7.60%	3.97%	-2.47%	8.85%	29.70%	29.11%	7.90%	13.59%	34.53%

Elizabethtown Gas
Rate Base

		Total System	Residential Heating	Non-Heating	General Service SGS	GDS	Firm Industrial	Electric Generation	NGV	Non-Firm
I. PLANT IN SERVICE										
	Demand	\$ 412,848,134	\$ 216,358,502	\$ 4,309,506	\$21,781,651	\$115,506,108	\$31,965,032	\$65,009	\$1,181,570	\$21,680,755
	Customer	1,206,235,714	912,813,894	121,556,117	73,063,297	77,731,400	10,760,563	52,918	112,164	10,145,361
	Commodity	-	-	-	-	-	-	-	-	-
		\$ 1,619,083,848	\$1,129,172,396	\$125,865,623	\$94,844,948	\$193,237,508	\$42,725,596	\$117,927	\$1,293,734	\$31,826,117
II. ACCUMULATED RESERVE FOR DEPRECIATION										
	Demand	\$ 145,071,051	\$ 76,993,192	\$ 1,533,578	\$7,751,204	\$41,103,927	\$10,888,878	\$22,725	\$386,514	\$6,391,033
	Customer	333,625,541	239,449,148	31,957,153	20,320,501	24,626,717	9,581,483	16,158	37,167	7,637,215
	Commodity	-	-	-	-	-	-	-	-	-
		\$ 478,696,592	\$316,442,340	\$33,490,731	\$28,071,704	\$65,730,644	\$20,470,361	\$38,883	\$423,681	\$14,028,248
III. NET PLANT IN SERVICE										
	Demand	\$ 267,777,083	\$ 139,365,310	\$ 2,775,928	\$14,030,447	\$74,402,182	\$21,076,154	\$42,284	\$795,056	\$15,289,722
	Customer	872,610,173	673,364,746	89,598,964	52,742,796	53,104,682	1,179,081	36,760	74,997	2,508,147
	Commodity	-	-	-	-	-	-	-	-	-
		\$ 1,140,387,256	\$812,730,056	\$92,374,892	\$66,773,243	\$127,506,864	\$22,255,235	\$79,044	\$870,053	\$17,797,869
IV. RATE BASE ADDITIONS										
	Demand	\$ 27,534,599	\$ 18,593,424	\$ 954,924	\$1,102,387	\$6,205,163	\$584,885	\$5,166	\$7,455	\$81,195
	Customer	46,692,503	34,622,257	4,254,924	2,826,945	4,431,159	297,674	3,089	13,486	242,968
	Commodity	-	-	-	-	-	-	-	-	-
		\$ 74,227,102	\$53,215,681	\$5,209,848	\$3,929,332	\$10,636,322	\$882,560	\$8,255	\$20,941	\$324,163
V. RATE BASE DEDUCTIONS										
	Demand	\$ (26,998,747)	\$ (14,441,311)	\$ (341,092)	(\$1,383,513)	(\$7,369,493)	(\$1,980,351)	(\$4,338)	(\$73,369)	(\$1,405,280)
	Customer	(84,046,863)	(64,727,416)	(8,580,553)	(5,080,440)	(5,260,190)	(135,012)	(3,643)	(8,090)	(251,520)
	Commodity	-	-	-	-	-	-	-	-	-
		\$ (111,045,610)	(\$79,168,727)	(\$8,921,644)	(\$6,463,953)	(\$12,629,683)	(\$2,115,363)	(\$7,981)	(\$81,459)	(\$1,656,799)
VI. TOTAL RATE BASE										
	Demand	\$ 268,312,935	\$ 143,517,423	\$ 3,389,760	\$13,749,321	\$73,237,852	\$19,680,688	\$43,112	\$729,141	\$13,965,637
	Customer	835,255,813	643,259,587	85,273,336	50,489,301	52,275,651	1,341,744	36,206	80,394	2,499,595
	Commodity	-	-	-	-	-	-	-	-	-
		\$ 1,103,568,748	\$786,777,009	\$88,663,096	\$64,238,622	\$125,513,503	\$21,022,431	\$79,318	\$809,535	\$16,465,233

Elizabethtown Gas
O&M Expense

	Total System	Residential Heating	Non-Heating	General Service SGS	GDS	Firm Industrial	Electric Generation	NGV	Non-Firm
I. PRODUCTION EXPENSE									
Demand	\$ -	\$ -	\$ -	\$0	\$0	\$0	\$0	\$0	\$0
Customer	-	-	-	-	-	-	-	-	-
Commodity	<u>137,908,737</u>	<u>93,587,718</u>	<u>4,821,036</u>	<u>5,714,460</u>	<u>30,565,783</u>	<u>823,183</u>	<u>53,476</u>	<u>67,185</u>	<u>2,275,896</u>
	\$ 137,908,737	\$93,587,718	\$4,821,036	\$5,714,460	\$30,565,783	\$823,183	\$53,476	\$67,185	\$2,275,896
II. STORAGE EXPENSE									
Demand	\$ 568,611	\$ 322,007	\$ 6,414	\$ 32,418	\$ 171,908	\$ 35,727	\$ 87	\$ 51	\$ -
Customer	-	-	-	-	-	-	-	-	-
Commodity	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	\$ 568,611	\$322,007	\$6,414	\$32,418	\$171,908	\$35,727	\$87	\$51	\$0
III. TRANSMISSION EXPENSE									
Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer	-	-	-	-	-	-	-	-	-
Commodity	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	\$ -	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
IV. DISTRIBUTION EXPENSE									
Demand	\$ 3,837,313	\$ 2,173,087	\$ 43,284	\$218,773	\$1,160,134	\$241,108	\$586	\$341	\$0
Customer	12,692,607	9,697,720	1,294,535	797,715	898,774	1,039	385	1,337	1,101
Commodity	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	\$ 16,529,919	\$11,870,807	\$1,337,819	\$1,016,488	\$2,058,908	\$242,147	\$971	\$1,679	\$1,101
V. CUSTOMER ACCOUNTS EXPENSE									
Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer	947,717	767,118	104,724	52,598	22,901	159	13	38	168
Commodity	<u>2,360,198</u>	<u>1,601,679</u>	<u>82,508</u>	<u>97,798</u>	<u>523,109</u>	<u>14,088</u>	<u>915</u>	<u>1,150</u>	<u>38,950</u>
	\$ 3,307,916	\$2,368,797	\$187,232	\$150,396	\$546,010	\$14,247	\$928	\$1,188	\$39,118
VI. CUSTOMER SERVICE AND SALES EXPENSE									
Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer	477,077	386,164	52,717	26,478	11,528	80	6	19	85
Commodity	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	\$ 477,077	\$ 386,164	\$ 52,717	\$ 26,478	\$ 11,528	\$ 80	\$ 6	\$ 19	\$ 85
VII. ADMINISTRATIVE AND GENERAL EXPENSE									
Demand	\$ 10,737,601	\$ 6,025,354	\$ 120,500	\$605,958	\$3,213,636	\$693,726	\$1,646	\$4,730	\$72,050
Customer	48,653,740	37,075,206	4,951,237	3,064,754	3,487,387	34,372	1,592	5,223	33,969
Commodity	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	\$ 59,391,340	\$43,100,559	\$5,071,736	\$3,670,712	\$6,701,024	\$728,099	\$3,238	\$9,953	\$106,019
VIII. TOTAL O&M EXPENSE									
Demand	\$ 15,143,525	\$ 8,520,447	\$ 170,198	\$ 857,148	\$ 4,545,678	\$ 970,562	\$ 2,319	\$ 5,122	\$ 72,050
Customer	62,771,141	47,926,208	6,403,212	3,941,544	4,420,590	35,650	1,997	6,617	35,323
Commodity	<u>140,268,935</u>	<u>95,189,397</u>	<u>4,903,545</u>	<u>5,812,258</u>	<u>31,088,892</u>	<u>837,271</u>	<u>54,392</u>	<u>68,335</u>	<u>2,314,846</u>
	\$ 218,183,601	\$ 151,636,052	\$ 11,476,955	\$ 10,610,951	\$ 40,055,160	\$ 1,843,482	\$ 58,707	\$ 80,074	\$ 2,422,219

Elizabethtown Gas
Total Revenue Requirements

	Total System	Residential Heating	Non-Heating	General Service SGS	GDS	Firm Industrial	Electric Generation	NGV	Non-Firm
I. O&M EXPENSE									
Demand	\$ 15,143,525	\$ 8,520,447	\$ 170,198	\$ 857,148	\$ 4,545,678	\$ 970,562	\$ 2,319	\$ 5,122	\$ 72,050
Customer	62,771,141	47,926,208	6,403,212	3,941,544	4,420,590	35,650	1,997	6,617	35,323
Commodity	140,268,935	95,189,397	4,903,545	5,812,258	31,088,892	837,271	54,392	68,335	2,314,846
	\$ 218,183,601	\$ 151,636,052	\$ 11,476,955	\$ 10,610,951	\$ 40,055,160	\$ 1,843,482	\$ 58,707	\$ 80,074	\$ 2,422,219
II. DEPRECIATION									
Demand	\$ 8,686,361	\$ 4,622,793	\$ 92,078	\$ 465,395	\$ 2,467,945	\$ 644,656	\$ 1,357	\$ 33,279	\$ 358,859
Customer	34,440,815	25,838,349	3,426,056	2,168,447	2,636,294	174,662	1,703	3,829	191,475
Commodity	-	-	-	-	-	-	-	-	-
	\$ 43,127,176	\$ 30,461,142	\$ 3,518,134	\$ 2,633,842	\$ 5,104,239	\$ 819,317	\$ 3,060	\$ 37,107	\$ 550,335
III. TAXES OTHER THAN INCOME									
Demand	\$ 864,576	\$ 468,118	\$ 9,297	\$ 47,006	\$ 249,667	\$ 61,798	\$ 135	\$ 1,503	\$ 27,052
Customer	3,178,733	2,418,251	322,894	196,907	215,987	12,355	119	315	11,906
Commodity	-	-	-	-	-	-	-	-	-
	\$ 4,043,309	\$2,886,369	\$332,191	\$243,912	\$465,654	\$74,153	\$254	\$1,818	\$38,958
IV. DEFERRED INCOME TAXES									
Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer	-	-	-	-	-	-	-	-	-
Commodity	-	-	-	-	-	-	-	-	-
	\$ -	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
V. RATEMAKING ADJUSTMENTS									
Demand	\$ (563,392)	\$ (301,352)	\$ (7,118)	\$ (28,870)	\$ (153,782)	\$ (41,325)	\$ (91)	\$ (1,531)	\$ (29,324)
Customer	(1,753,835)	(1,350,689)	(179,053)	(106,015)	(109,766)	(2,817)	(76)	(169)	(5,249)
Commodity	-	-	-	-	-	-	-	-	-
	\$ (2,317,227)	\$ (1,652,041)	\$ (186,171)	\$ (134,886)	\$ (263,548)	\$ (44,142)	\$ (167)	\$ (1,700)	\$ (34,573)
VI. RETURN									
Demand	\$ 19,247,644	\$ 10,295,338	\$ 243,167	\$ 986,319	\$ 5,253,776	\$ 1,411,810	\$ 3,093	\$ 52,306	\$ 1,001,836
Customer	59,917,748	46,144,744	6,117,151	3,621,891	3,750,036	96,251	2,597	5,767	179,310
Commodity	-	-	-	-	-	-	-	-	-
	\$ 79,165,392	\$56,440,082	\$6,360,319	\$4,608,209	\$9,003,812	\$1,508,061	\$5,690	\$58,073	\$1,181,147
VII. INCOME TAXES									
Demand	\$ 5,501,474	\$ 2,942,674	\$ 69,503	\$ 281,915	\$ 1,501,665	\$ 403,532	\$ 884	\$ 14,950	\$ 286,351
Customer	17,126,041	13,189,360	1,748,440	1,035,230	1,071,857	27,511	742	1,648	51,252
Commodity	-	-	-	-	-	-	-	-	-
	\$ 22,627,515	\$16,132,034	\$1,817,943	\$1,317,145	\$2,573,522	\$431,043	\$1,626	\$16,599	\$337,602
VIII. TOTAL REVENUE REQUIREMENTS									
Demand	\$ 48,880,189	\$ 26,548,018	\$ 577,126	\$ 2,608,912	\$ 13,864,950	\$ 3,451,032	\$ 7,697	\$ 105,629	\$ 1,716,824
Customer	175,680,642	134,166,222	17,838,700	10,858,004	11,984,998	343,611	7,082	18,007	464,017
Commodity	140,268,935	95,189,397	4,903,545	5,812,258	31,088,892	837,271	54,392	68,335	2,314,846
	\$ 364,829,766	\$255,903,638	\$23,319,371	\$19,279,174	\$56,938,840	\$4,631,914	\$69,170	\$191,971	\$4,495,688

Elizabethtown Gas
Monthly Customer Cost Detail

	Total System	Residential Heating	Non-Heating	General Service SGS	GDS	Firm Industrial	Electric Generation	NGV	Non-Firm
I. AVERAGE CUSTOMER COSTS									
Customer-Related Revenue Req.	\$ 175,680,642	\$ 134,166,222	\$ 17,838,700	\$ 10,858,004	\$ 11,984,998	\$ 343,611	\$ 7,082	\$ 18,007	\$ 464,017
Average Customers	<u>298,957</u>	<u>241,987</u>	<u>33,035</u>	<u>16,592</u>	<u>7,224</u>	<u>50</u>	<u>4</u>	<u>12</u>	<u>53</u>
Average Monthly Customer Cost	\$ 48.97	\$ 46.20	\$ 45.00	\$ 54.53	\$ 138.25	\$ 572.68	\$ 147.54	\$ 125.05	\$ 729.59
II. MONTHLY CUSTOMER COST DETAIL									
<u>O&M Expense</u>									
Mains and Services Expense	\$ 2.57	\$ 2.54	\$ 2.48	\$ 2.58	\$ 3.78	\$ 1.37	\$ 1.37	\$ 2.70	\$ 1.37
Meter & Regulator Expense	0.61	0.44	0.42	1.07	6.21	-	6.28	6.21	-
Meter Reading Expense	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Customer Records and Collections	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Uncollectible Accounts	-	-	-	-	-	-	-	-	-
All Other O&M	<u>14.06</u>	<u>13.26</u>	<u>12.98</u>	<u>15.89</u>	<u>40.74</u>	<u>57.78</u>	<u>33.67</u>	<u>36.78</u>	<u>53.90</u>
Total O&M	\$ 17.50	\$ 16.50	\$ 16.15	\$ 19.80	\$ 50.99	\$ 59.42	\$ 41.59	\$ 45.95	\$ 55.54
<u>Depreciation</u>									
Mains	\$ 2.18	\$ 2.18	\$ 2.18	\$ 2.18	\$ 2.18	\$ 2.18	\$ 2.18	\$ 2.18	\$ 2.18
Services	3.39	3.32	3.15	3.42	6.84	-	-	3.77	-
Meters and Meter Installations	1.29	0.92	0.90	2.26	13.15	-	13.31	13.15	-
Regulators	0.05	0.04	0.04	0.10	0.56	-	0.56	0.56	-
All Other Depreciation	<u>2.68</u>	<u>2.43</u>	<u>2.38</u>	<u>2.93</u>	<u>7.68</u>	<u>288.92</u>	<u>19.42</u>	<u>6.92</u>	<u>298.88</u>
Total Depreciation	\$ 9.60	\$ 8.90	\$ 8.64	\$ 10.89	\$ 30.41	\$ 291.10	\$ 35.48	\$ 26.59	\$ 301.06
<u>Taxes Other Than Income Taxes</u>	\$ 0.89	\$ 0.83	\$ 0.81	\$ 0.99	\$ 2.49	\$ 20.59	\$ 2.48	\$ 2.19	\$ 18.72
<u>Deferred Income Taxes</u>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<u>Ratemaking Adjustments</u>	\$ (0.49)	\$ (0.47)	\$ (0.45)	\$ (0.53)	\$ (1.27)	\$ (4.70)	\$ (1.58)	\$ (1.17)	\$ (8.25)
<u>Rate Base-Related (Return and Income Taxes)</u>									
Mains	\$ 8.74	\$ 8.74	\$ 8.74	\$ 8.74	\$ 8.74	\$ 8.74	\$ 8.74	\$ 8.74	\$ 8.74
Services	8.35	8.18	7.74	8.42	16.83	-	-	9.29	-
Meters and Meter Installations	2.00	1.43	1.40	3.51	20.43	-	20.67	20.43	-
Regulators	0.12	0.08	0.08	0.21	1.20	-	1.21	1.20	-
All Other Rate Base-Related	<u>2.27</u>	<u>2.00</u>	<u>1.88</u>	<u>2.52</u>	<u>8.43</u>	<u>197.53</u>	<u>38.96</u>	<u>11.84</u>	<u>353.78</u>
Total Rate Base-Related	\$ 21.48	\$ 20.43	\$ 19.84	\$ 23.39	\$ 55.62	\$ 206.27	\$ 69.58	\$ 51.50	\$ 362.52
Total Average Monthly Customer Cost	\$ 48.97	\$ 46.20	\$ 45.00	\$ 54.53	\$ 138.25	\$ 572.68	\$ 147.54	\$ 125.05	\$ 729.59

Elizabethtown Gas
Base Rate Revenues at Present and Proposed Rates

<u>Component</u> (a)	<u>Amount</u> (b)	<u>Units</u> (c)	<u>Present Rates</u>		<u>Proposed Rates</u>	
			<u>Rate</u> (d)	<u>Revenue</u> (e)	<u>Rate</u> (f)	<u>Revenue</u> (g)
			<u>RDS</u>		<u>RDS</u>	
<u>Residential Service</u>						
Customer Charge	3,300,264	Bills	\$ 7.68	\$ 25,346,028	\$ 12.25	\$ 40,428,234
Distribution Charge	231,455,265	Therms	0.3400	78,694,790	0.4535	104,964,963
Total Base Revenues				\$ 104,040,818		\$ 145,393,197

			<u>SGS</u>		<u>SGS</u>	
<u>Small General Service (Existing)</u>						
Customer Charge	199,104	Bills	\$ 20.56	\$ 4,093,578	\$ 33.00	\$ 6,570,432
Distribution Charge	21,021,887	Therms	0.2978	6,260,318	0.3757	7,897,923
Subtotal Base Revenues				\$ 10,353,896		\$ 14,468,355

			<u>GDS</u>		<u>GDS</u>	
<u>General Delivery Service</u>						
Customer Charge	86,688	Bills	\$ 27.10	\$ 2,349,245	\$ 45.00	\$ 3,900,960
Demand Charge	17,107,956	Therms	0.756	12,933,615	0.900	15,397,160
Distribution	130,428,984	Therms	0.1775	23,151,145	0.2639	34,420,209
Distribution - A/C Large	426,917	Therms	0.0552	23,566	0.0552	23,566
Total Base Revenues				\$ 38,457,570		\$ 53,741,895

			<u>LVD</u>		<u>LVD</u>	
<u>LVD</u>						
Customer Charge	84	Bills	\$ 257.01	\$ 21,589	\$ 303.74	\$ 25,514
Demand Charge	274,332	Therms	0.966	265,005	1.450	397,781
Distribution	1,108,719	Therms	0.0396	43,905	0.0459	50,890
Total Base Revenues				\$ 330,499		\$ 474,186

Elizabethtown Gas
Base Rate Revenues at Present and Proposed Rates

<u>Component</u> (a)	<u>Amount</u> (b)	<u>Units</u> (c)	<u>Present Rates</u>		<u>Proposed Rates</u>	
			<u>Rate</u> (d)	<u>Revenue</u> (e)	<u>Rate</u> (f)	<u>Revenue</u> (g)
			<u>FTS</u>		<u>FTS</u>	
<u>FTS</u>						
Customer Charge	516	Bills	\$ 257.01	\$ 132,617	\$ 303.74	\$ 156,730
Demand Charge	3,954,612	Therms	0.966	3,820,155	1.450	5,734,187
Distribution	40,418,410	Therms	0.0396	1,600,569	0.0459	1,855,205
Total Base Revenues				\$ 5,553,341		\$ 7,746,122

			<u>EGF</u>		<u>EGF</u>	
<u>Electric Generation Firm</u>						
Customer Charge	48	Bills	\$ 52.27	\$ 2,509	\$ 80.00	\$ 3,840
Demand Charge	9,300	Therms	0.421	3,915	0.600	5,580
Distribution	122,163	Therms	0.0405	4,948	0.0530	6,475
Total Base Revenues				\$ 11,372		\$ 15,895

			<u>NGV</u>		<u>NGV</u>	
<u>Natural Gas Vehicle</u>						
Distribution Charge	173,126	Therms	\$ 0.2585	\$ 44,753	\$ 0.3612	\$ 62,533
Fueling Charge	173,126	Therms	0.3600	62,325	0.3600	62,325
Facilities Charge	173,126	Therms	0.2987	51,713	0.2987	51,713
Total Base Revenues				\$ 158,791		\$ 176,571

			<u>Gas Lights</u>		<u>Gas Lights</u>	
<u>Gas Lights</u>						
Service Charge		Mantles	\$ 6.07	\$ -	\$ 8.49	\$ -
Distribution	28,800	Therms	0.4159	11,978	0.5812	16,739
Total Base Revenues				\$ 11,978		\$ 16,739

Elizabethtown Gas
Base Rate Revenues at Present and Proposed Rates

<u>Component</u> (a)	<u>Amount</u> (b)	<u>Units</u> (c)	<u>Present Rates</u>		<u>Proposed Rates</u>	
			<u>Rate</u> (d)	<u>Revenue</u> (e)	<u>Rate</u> (f)	<u>Revenue</u> (g)
			<u>CSI</u>		<u>CSI</u>	
<u>CSI</u>						
Customer Charge	24	Bills	\$ 101.20	\$ 2,429	\$ 141.42	\$ 3,394
Distribution	0	Therms	0.0300	-	0.0300	-
Total Base Revenues				\$ 2,429		\$ 3,394

			<u>IS</u>		<u>IS</u>	
<u>Interruptible Service</u>						
Customer Charge	0	Bills	\$ 589.50	\$ -	\$ 589.50	\$ -
Demand Charge	127,560	Therms	0.076	9,695	0.106	13,521
Distribution	0	Therms	0.0791	-	0.0791	-
Total Base Revenues				\$ 9,695		\$ 13,521

			<u>ITS-LVD</u>		<u>ITS-LVD</u>	
<u>ITS-LVD</u>						
Customer Charge	480	Bills	\$ 589.50	\$ 282,960	\$ 589.50	\$ 282,960
Demand Charge	4,578,708	Therms	0.2930	1,341,561	0.4000	1,831,483
Distribution	38,783,827	Therms	0.0791	3,067,801	0.1156	4,483,410
Total Base Revenues				\$ 4,692,322		\$ 6,597,854

			<u>ITS-IS</u>		<u>ITS-IS</u>	
<u>ITS-IS</u>						
Customer Charge	156	Bills	\$ 589.50	\$ 91,962	\$ 589.50	\$ 91,962
Demand Charge	274,704	Therms	0.080	21,976	0.0800	21,976
Distribution	0	Therms	-	-	-	-
Total Base Revenues				\$ 113,938		\$ 113,938

Elizabethtown Gas
Base Rate Revenues at Present and Proposed Rates

<u>Component</u> (a)	<u>Amount</u> (b)	<u>Units</u> (c)	<u>Present Rates</u>		<u>Proposed Rates</u>	
			<u>Rate</u> (d)	<u>Revenue</u> (e)	<u>Rate</u> (f)	<u>Revenue</u> (g)
TOTAL SYSTEM BASE DISTRIBUTION REVENUES				<u>\$ 163,736,649</u>		<u>\$ 228,761,667</u>
<u>Other Revenues</u>						
Special Contracts				\$ 1,457,618		\$ 1,457,618
Other Miscellaneous Revenues				<u>1,587,043</u>		<u>1,587,043</u>
Total Other Revenues				\$ 3,044,661		\$ 3,044,661
TOTAL SYSTEM INCLUDING OTHER REVENUES				<u><u>\$ 166,781,310</u></u>		<u><u>\$ 231,806,328</u></u>
					INCREASE	65,025,018
					TARGET INCREASE	<u>65,027,481</u>
					Difference	(\$2,463)