

STATE OF NEW JERSEY BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF : CERTIFICATION OF

SOUTH JERSEY GAS COMPANY FOR : ROD WALKER

AUTHORIZATION TO CONSTRUCT

AND OPERATE A 16-INCH

DISTRIBUTION PIPELINE PURSUANT

TO N.J.A.C. 14:7-1.4 CAMDEN COUNTY

RELIABILITY PROJECT PHASE II : DOCKET NO. GE20090600

I, Rod Walker, of full age, certify as follows:

1. My business address is P.O. Box 2670 Chattanooga, Tennessee. I am the Chief Executive Officer and President of Rod Walker and Associates Consultancy, LLC, and I am currently working as a subcontractor and Senior Consultant with the Acadian Consulting Group ("ACG"). ACG is a research and consulting firm that specializes in the analysis of regulatory, economic, financial, accounting, statistical, and public policy issues associated with regulated and energy industries. ACG is a Louisiana-registered Limited Liability Company, formed in 1995, and is located at 5800 One Perkins Place, Suite 5-F, Baton Rouge, Louisiana. I graduated from the Clemson University with bachelor's degree in chemical engineering. I have 36 years of experience being actively involved with consulting and operations relating to energy and infrastructure industries. I have provided expert testimony and analyses to consumer counsels, state and federal agencies, as well as the private sector throughout the United States and abroad. I have a broad international background in the gas supply, energy, chemical, pipeline, liquefied natural gas, and process industries as well as extensive experience in the application of planning and management techniques, and in the development of hydraulic simulation, risk management, and optimization models. Throughout my career, I have published a number of articles and papers on the natural gas industry and optimization models. I am also a former board member of the American Public Gas Association and active in the Tennessee Gas Association and the American Gas Association.

- 2. I was retained by the New Jersey Division of Rate Counsel ("Rate Counsel") to review and provide expert engineering analysis concerning the above-referenced petition filed by South Jersey Gas Company ("SJG" or "Company") with the New Jersey Board of Public Utilities ("BPU" or "Board") for authorization to construct an approximate 6.3-mile, 16-inch gas distribution pipeline ("Project") with a maximum allowable operating pressure ("MAOP") of 600 pounds per square gauge ("psig").
- 3. As described in the Company's petition, the Project is the second of two phases ("Phase II") of a planned upgrade of portions of an existing 12-inch distribution main known as the "Lawnside Line." The Lawnside Line serves the Burlington and Camden County portions of the Company's gas distribution system. The first phase of the Project consisted of the reinforcement of an existing five-mile section of the Lawnside Line, which was approved by the Board on June 30, 2017¹ ("Phase I"). As mentioned above, Phase II consists of the replacement of approximately 6.3 miles of the existing 12-inch line with a new 16-inch line having a MOAP of 600 psig and a normal operating pressure of 250 psig.

I have reviewed the petition, along with the Company's responses to discovery requests served by Rate Counsel and Board Staff. In response to a Rate Counsel discovery request, Rate Counsel received a copy of a September 2016 report prepared by the engineering firm of Black and Veatch ("Black and Veatch Report"), which was retained by SJG to review and evaluate the

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¹ <u>I/M/O</u> the Petition of South Jersey Gas Company for Authorization to Construct and Operate a 16-Inch Distribution Pipeline Pursuant to N.J.A.C. 14:7-1.4 (June 30, 2017).

Project². Based on my review, I have identified some major concerns about Phase II of the Project.

- 4. My first concern is that it appears that the primary purpose and benefit to the Company's system of Phase II will be to support unsubstantiated future growth projections and expansion, rather than reliability. There is minimal apparent need for expansion to serve future reliability needs as presented by the Company. In a report authorized by London Economics International ("LEI") ("LEI Report") and commissioned by the BPU on the topic of New Jersey gas distribution companies' capacity to serve firm customers, the authors state that "[c]ustomer growth is driven by residential and commercial conversions from oil, and for residential customers is assumed by SJG to be 1.7% on average annually from 2020-2024." A copy of the LEI Report is attached hereto as Exhibit "A-1".
- 5. However, SJG represents that without Phase II of this Project, two outlying problem areas will experience lower than desirable pressure under Design Day conditions. The data supplied by the Company in the attachment to its response to discovery question RCR-ENG-1.1 indicates that pressures at these problem points with only Phase I complete are acceptable in Design Day conditions. As can be seen in the figure below, the following data the Company provided suggests that pressure will drop 26%-37% by 2023-2024.

² See Company response to RCR-ENG-1.1.³ See Analysis Of Natural Gas Capacity to Serve New Jersey Firm Customers, Public Version, London Economics International, LLC (November 5, 2021) at 44.

³ See Analysis Of Natural Gas Capacity to Serve New Jersey Firm Customers, Public Version, London Economics International. LLC (November 5, 2021) at 44.

Design Day Pressure Changes with Phase Completion		
Design Day Time Period	Pressure at problem area 1 (psig)*	Pressure at problem area 2 (psig)*
2016-2015 without Phase 1 or Phase 2	45.68	58.14
2016-2017 with Phase 1 and without Phase 2	116.61	130.68
2023-2024 with Phase 1 and without Phase 2	73.58	96.59
2016-2017 with Phase 1 and Phase 2	193.85	202.87
2023-2024 with Phase 1 and Phase 2	181.84	193.02

Figure 1: Design Day Pressures in Problem Areas 4

This assumed drop in pressure (and increase in load) is inconsistent with the low growth rate of the system driven by, typically, low-volume residential customers. Moreover, in reviewing the Company's pressure projections as discussed above, it is critical to understand that these pressures are derived through modeling that uses the Company's Design Day criteria. These criteria are based on a weather event that happened in New Jersey in 1994 (often referred to as a one-in-30 year weather event) and not actual recent conditions. While the system modeling performed by the Company is a good practice to check the gas system for worst case issues, it does not correlate to a one-to-one need for system improvements. In fact, the modeling performed in the Black and Veatch Report found that the five-mile reinforcement conducted during Phase I is sufficient alone to avoid customer loss given the load requirements on the 2023-2024 Design Day.

6. Further, when asked for a list of outages and/or reliability issues the Company has experienced in its gas distribution system since 2016 in the location where the Project is

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⁴ * data for this table copied verbatim from Attachment RCR-ENG-1.1

requested, the Company responded that no outages have occurred since that time⁵. While I understand that Phase II could have a net positive impact on reliability, this impact is primarily in future growth scenarios and, even then, would only have the potential for noticeable impact in the worst of conditions, which have not been seen in New Jersey since 1994. Additionally, there are temporary, non-pipeline mitigative solutions to a short-term pressure drops or potential reliability issues in an extreme winter weather event used by most utilities to avoid outages to customers such as portable LNG vaporizers at low points of the gas system that could be implemented at a much lower cost than the proposed \$32 million Phase II expansion project.

7. Moreover, the Black and Veatch Report that the Company is relying on to justify Phase II is outdated and has led to poor conclusions regarding the necessity of this Project. One example of how the Black and Veatch Report has lost its relevance in a quickly changing system is that energy consumption, including the use of natural gas, in the United States has continued to drastically decrease since 2020 due to the COVID-19 pandemic⁶. Specifically, the Annual Energy Outlook assessment prepared by the United States Energy Information Administration ("USEIA") indicates that energy consumption fell faster than gross domestic product in 2020, and the pace at which both will return to 2019 levels remains uncertain. A copy of the USEIA Annual Energy Outlook is attached hereto as "Exhibit B-1". Compared with the financial crisis of 2008, the COVID-19-related decline in the total demand for delivered energy is about 70% larger⁷. In fact, the USEIA projects that the United States' energy demand will take until 2029 to return to 2019 levels of energy demand⁸. Accordingly, current natural gas supply is largely sufficient for all but the most significant events—including the 2023-2024 Design Day

⁵ See Company response to RCR-ENG-16d.

⁶ See United States Energy Information Administration, Annual Energy Outlook 2021 (February 2021) at 3.

⁷ *Id*. at 4.

⁸ Ibid.

mentioned above. The LEI Report also states that "Under the most likely set of future outcomes, sufficient natural gas capacity exists on the regional interstate pipeline system to meet the future peak day demand forecasts of New Jersey's GDCs." Importantly, this sufficient capacity includes capacity needed during Design Day conditions.

- 8. Furthermore, I have some concerns regarding the cost of the Phase II Project. The Company estimated the cost of Phase II at \$32 million, which includes the 6.3 miles of 16-inch pipe, refurbishing the Pine Hill gate station, and rebuilding the Erial Gate station. In comparison to other SJG gas projects provided by the Company and in comparison to Phase I, these costs appear high for this Project with an approximate cost of \$5 million per mile or \$954 per foot. While there are many variables and unknown factors that affect cost per mile and make cost comparison difficult for a project of this nature the total amount is notably significant in this case and appears disproportionately burdensome to the ratepayers in comparison to the benefits of the Project.
- 9. In summary, Phase II of the Project is (1) primarily driven by the Company's unsubstantiated growth projections rather than demonstrable reliability concerns; (2) relying on an outdated justification that does not take into account changing demand characteristics especially in light of the COVID-19 pandemic and centers on a small outlying area of the system in the worst of conditions; and (3) associated with significant ratepayer cost that is greatly disproportionate to the benefits of the expansion.

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⁹ See Analysis of Natural Gas Capacity to Serve New Jersey Firm Customers Public Version, London Economics International, LLC (November 5, 2021) at 15.

¹⁰ See Company response to RCR-ENG-19.

8. I hereby certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Date: January 11, 2022