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VIA ELECTRONIC DELIVERY

Aida Camacho-Welch, Secretary
New Jersey Board of Public Utilities
44 S. Clinton Avenue, 9th Floor
P.O. Box 350
Trenton, New Jersey 08625-0350

Re: In the Matter of Natural Gas Commodity and Delivery Capacities in
the State of New Jersey – Investigation of the Current and Mid-
Term Future Supply and Demand
BPU Docket No.: GO20010033

Dear Ms. Camacho-Welch:

Public Service Enterprise Group, Inc. (“PSEG”), on behalf of its subsidiaries Public Service Electric and Gas Company (“PSE&G”) and PSEG Energy Resources & Trade LLC (“ER&T”), PSE&G’s supplier of natural gas pipeline and storage services, appreciates the opportunity to provide comments on the issues addressed in the above-referenced proceeding.

On April 20, 2021, the New Jersey Board of Public Utilities (“NJBPU” or “Board”) gave notice (“Notice”) of a stakeholder meeting in the Board’s ongoing investigation into the natural gas commodity and delivery capacities in the State of New Jersey. In that Notice the Board stated that “[t]his investigation is designed to ‘explore whether sufficient capacity has been secured to serve all of New Jersey’s firm gas customers’ through 2030, including whether sufficient natural gas capacity exists on the regional interstate pipeline system to meet the future Peak Day Demand Forecast of New Jersey’s Gas Distribution Companies (GDCs) and other aspects of the natural gas system.” The Notice also stated that the Board “is now seeking stakeholder feedback to guide the next phase of the investigation,” and that in particular, the Board seeks comment on Design Day Issues and Non-Pipe Alternatives.

In comments submitted during an earlier phase of this proceeding, attached hereto, PSEG discussed the state of the natural gas market in New Jersey and the role of natural gas, as well other important fuel sources, in supporting the achievement of New Jersey’s energy and emissions goals, which are set forth in the State’s draft Energy Master Plan and elsewhere. We also provided responses to specific questions raised by Board Staff during a stakeholder meeting conducted on October 1, 2019, and provided responses to the questions set forth in the Notice issued by the Board Secretary, dated September 10, 2019, in that earlier phase of the proceeding.¹ The

¹ Comments of Public Service Enterprise Group, *I/M/O the Exploration of Gas Capacity and Related Issues*, Docket No. GO19070846 (October 22, 2019).

comments below are submitted in response to the Board's Notice in the above-referenced proceeding, and supplement PSEG's comments at the April 29, 2021 stakeholder meeting conducted pursuant to that Notice.

Design Day Issues

a. Should New Jersey be moving towards common design day reliability criteria?

No. Each GDC should establish its own design day reliability criteria based upon knowledge of its system, customers, supply options, and historical experience.

b. Are there reasons for allowing different GDCs to utilize different design day reliability criteria?

Each GDC serves a different geographic region, and to some extent experiences different extreme temperatures. In addition, the appropriate design day criteria can vary from GDC to GDC based on customer mix between residential and C&I customers (which has a significant impact on the response of gas demand to weather), whether the GDC is reliant on a single or multiple interstate pipeline sources, as well as the individual GDC portfolio mix of pipeline transportation, storage and peaking supplies.

We also note that demand for natural gas for heating has consistently risen year over year even with advances in energy efficiency. Therefore the Board should consider that any movement to uniform reliability criteria that would result in lower reliability criteria for PSE&G would not only increase risk, but might only be a temporary fix that would soon result in the same questions the Board is asking today about the sufficiency of the state's gas resources.

PSEG determines Total Peak Day Capacity Requirements based on two fundamental elements: a Peak Day Sendout Forecast and a Reserve Margin. The Peak Day Sendout Forecast is developed by assuming a day where the average temperature is zero degree (F), and taking into account demand side factors, such as new load growth, energy efficiency initiatives including meeting New Jersey's energy efficiency goals outlined in the Clean Energy Act, and anticipated changes in our customer base. The Peak Day Forecast is prepared for a five and ten year horizon. PSEG then calculates a reserve margin, a risk mitigation measure that considers average daily temperatures below 0°F, the probabilities of third party under deliveries, and pipeline/peaking plant disruptions. This reserve margin is added to the Peak Day Sendout Forecast to come up with the Total Peak Day Capacity Requirement

The reserve margin element of the Total Peak Day Capacity Requirement is the result of a probabilistic determination at various firm demand levels in satisfying the criteria of a 3% Loss of Load Probability (LOLP) when taking into consideration supply and weather variabilities. The LOLP is a probabilistic model developed in-house. To determine the LOLP, the Company develops two separate probability distributions. In the first distribution, a composite of probability distributions is made of the daily capacity reliability of each supply source including pipeline transportation and storage contracts, TPS firm (FTS) deliveries, and LNG and LPA supplies. In the second distribution, the probability of occurrence of various levels of firm demand are determined in days/year. These daily capacity and firm demand probability distributions are then combined to evaluate the loss of load in days per year.

In light of system characteristics, customers, supply options, and historical experience, ER&T considers the 3% LOLP to be an acceptable risk of a shortfall in supplies to meet firm demand. The

criteria is that there will be 1 day in 33 years that a supply shortfall would occur (1 day per year divided by 33 years = 3% LOLP). The criteria was selected based on the cost and consequences of a supply shortage versus the additional capacity cost and availability to mitigate the supply shortage.

It is evident that as the system characteristics, customers, supply options, and historical experience differ between systems, the criteria coinciding with an acceptable risk of a shortfall in supplies to meet firm demand would also differ given the same framework of analysis.

c. How does the selection of higher or lower design day reliability criteria affect the issue of whether, in your view, there are sufficient gas resources into New Jersey to maintain system reliability?

The use of a higher reliability criteria will obviously increase one's concern regarding the sufficiency of gas resources into New Jersey to maintain system reliability. Similarly, more aggressive assumptions regarding demand side initiatives (e.g., energy efficiency and demand response) will have the opposite impact on one's view of gas supply adequacy.

d. Please discuss the costs and the benefits associated with using a 1-in-90 year design basis day versus a 1-in-30 year design basis day, with a focus on impacts to system reliability, customer affordability, and any other tradeoffs.

See response to part a., b. and c. above. There are a number of potential outcomes driven by the individual GDC circumstance, and each GDC should determine its own planning criteria based on the factors indicated and the GDCs' experience and expertise.

Non-Pipe Solutions

Turning to non-pipes solutions, we note first that effective management of ER&T's gas pipeline contracts has put PSE&G in a position where the Company does not have excess capacity, in the event that the peak day forecast lessens over time. We also note that PSE&G offers reduced rates to larger customers who agree to take gas on an interruptible basis. Customers that are served under interruptible rate schedules must switch from natural gas to an alternative fuel when instructed by PSE&G. An interruptible rate option supports supply reliability – and provides a “non-pipes solution” – but only, of course, if interruptible customers are properly incented to switch to alternative fuels when instructed to do so by the utility.

Supply issues can also be addressed through increased peaking capacity. Peak day delivery at PSE&G's Burlington LNG facility can be increased through a combination of expansion of the plant to add heating, vaporization, and compression equipment, upgrading the electric systems in the plant, and distribution system reinforcements. The current distribution system constrains LNG use due to pressure loss at system extremities. In addition, there is the possibility of increasing peaking capacity at PSE&G's LPA facilities with limited upgrades to PSE&G's distribution system. Both of these opportunities can help PSE&G meet projected increases in peak day requirements through a “non-pipes solution” that does not require additional pipeline infrastructure.

In addition to interruptible rate schedules and potential increases in peaking capacity, PSE&G has sought to reduce gas demand and usage, and will continue to do so, through its energy efficiency programs, which provide benefits throughout the year, rather than just during times of peak demand. PSE&G also continues to focus on the integrity and modernization of its gas transmission and distribution system through the GSMP and Energy Strong programs.

That said, at this time there are limits to the efficacy of gas peak demand management programs for a variety of reasons, including the fact that in the wholesale market, capacity and supply for gas is priced (at its most discrete) on a daily basis, not hourly. Other than interruptible rate structures, gas customers cannot shift or lower demand for an entire day, and peak demand programs are typically structured to only lower or shift demand for a few hours. In addition, TSG Firm & Non-Firm rates cannot be modeled econometrically since the economic drivers that impact their sales cannot be measured adequately to enable construction of such a model. Further, there is limited AMI penetration for retail gas customers, and no plan for significant expansion of AMI, in part because of the lack of a market price signal to shift gas usage within an hour or a day.

Given these challenges, to date, PSE&G has only considered pilot programs focused on localized solutions within PSE&G's gas distribution system. The non-pipe deferral options PSE&G has considered to address localized gas pipeline congestion "hot-spots" and potentially avoid or delay the need for new pipeline construction include an array of technologies and tactics, including energy efficiency, demand response (e.g., thermostat setbacks on peak days), measures to store natural gas or thermal energy, and incentives for fuel conversion (e.g., electrification of space heating and/or hot water heating, supplemented potentially by renewable energy systems). Board Staff has noted that non-pipe solutions to defer utility infrastructure investment in load constrained areas "can benefit from utility administration because utilities have better access to the necessary data for program design and are best able to determine where these programs will be most effective in their service territories."²

Regarding the request in the Notice for information regarding non-pipes solutions in other jurisdictions, these efforts are generally in the early phase of development and implementation, and it is therefore difficult to find a consensus on results or specific costs or benefits associated with these pilot programs. PSE&G respectfully requests that Staff's consultant share any information it has developed regarding the costs and benefits of the type of programs mentioned in the Notice.

Finally with regard to the opt-in/opt-out question: PSE&G has only explored opt in programs in the past. Opt out programs increase the risk of customer relationship issues, since a customer's inadvertent failure to affirmatively opt out could cause problems at the time of installation and subsequently if curtailed, as well as subsequent complaints about increased costs that would go along with the type of GDC-controlled demand management program contemplated in the Notice.

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Once again, PSEG commends the Board for conducting this stakeholder proceeding and appreciates the opportunity to submit comments. We look forward to continuing to work with the Board and all stakeholders on these important issues. We thank the Board for its consideration of our submission.

Respectfully submitted,



Matthew M. Weissman

² See New Jersey Board of Public Utilities, "Energy Efficiency and Peak Demand Program, Draft Straw Proposal, Draft for Public Comment" (December 20, 2019), at 22.