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TO: Stephanie.DeLaRosa@puc.ri.gov, Rhode Island Public Utilities Commission

FROM: Kevin O'Neill

SUBJECT: DOCKET NO. 25-16-NG

Rhode Island Energy's filing recent filing for the LNG peak shaving operation on Aquidneck Island, per the EFSB order, limited the scope of analysis to demand-side management as a method of balancing gas demand with the available supply. We see some problems with that analysis. And we recommend that the Commission ask the company to explore alternative, potentially cheaper approaches to satisfying the gas delivery capacity shortfall that is expected on the island over the next few decades. The answer provided by the company to the question of "What amount of technology investment and uptake would it take to mitigate the capacity shortfall?" fails to consider the full range of activities that would reduce gas demand, reduce the shortfall in supply, or fill the capacity gap at lower cost.

We could not find publicly available information on the actual amounts of LNG historically needed to augment pipeline delivery of gas to the island. So, we ask that the Commission compel the company to provide the following data:

- The total amount of LNG delivered to the Old Mill Lane facility each year since that facility began servicing the island.
- Estimates of boil-off gas (BOG) injected into the distribution system each year
- A list of days in each year when vaporizer operation was necessary to close the gap between pipeline supply and customer demand
- Estimated quantities of gas vaporized on those days to cover that gap
- Evidence that the quantity of gas vaporized on those days did not reduce offtake from the AGT pipeline below the maximum contracted supply rate, or estimates of how much excess vaporization occurred.

Such information would be helpful in determining the least-cost solution for delivering reliable heat to the company's customers on the island. The best data we could find was in the advisory opinion offered by Oliver and Roberti on behalf of the DPUC for Energy Facilities Docket 22-42-NG. It tells us the historic peak shortfall was 126 Dth/hour, encountered on February 23, 2023, at a time when peak demand was 1171 Dth/hour. In other words, on that peak day in 2023 a reduction in demand of 11% would have been sufficient to avoid the use of the LNG vaporization facility at Old Mill Lane. We understand that demand in excess of peak pipeline delivery capacity has rarely, if ever, occurred more than 2 days per year. In fact, the available documents suggest that in many recent years the pipeline capacity was never exceeded.

If we assume a total annual shortfall of 3 days, for 24 hours per day, at 126 Dth/hour, that would amount to 9072 Dth. We understand that the cost of the Old Mill Lane facility is approximately $1.5 million per year, not including refueling costs. Dividing $1.5 million by 9027 Dth suggests a cost of $16.53 per therm. If we estimate the cost of LNG delivered to OML at around $2.50 per therm, the cost of covering the shortfall in that year would be approximately $18/therm. If there is no shortfall in most years, the actual cost per therm required is several times higher.

The cost of propane delivered to residential customers in Rhode Island in May of 2025 was $3.96 per therm. We wonder if the old approach to peak shaving on Aquidneck Island – injecting a propane-air mixture into the distribution system, as practiced on the Island prior to installation of the LNG vaporization facility at Old Mill Lane – would be a less expensive way of procuring the required reliability of supply.

Heat pump adoption might be accelerated and gas demand might be sufficiently reduced on extremely cold days if 15-20% of customers could be sold on partial electrification, gaining both air-conditioning and summer and heating cost savings in cool weather (when an air-source heat pump can deliver heat at lower cost than a standard gas furnace), and having their legacy heating system modified to burn propane for backup heat on the coldest days.

We understand that Rhode Island Energy has projected an increasing need for peak shaving capacity on Aquidneck Island, perhaps double or triple the shortfall experienced in 2023. This seems odd, given the trend towards warmer winters, the rising popularity of heat pumps, and the attention that Massachusetts is giving to the electrification of building heat.

Both Massachusetts and Rhode Island draw supply from the AGT pipeline. If gas demand in Massachusetts does diminish due to the implementation of a Clean Heat Standard, the development of electrically-powered thermal energy networks, and the availability of more favorable electric rates for heat pump customers then, logically, Rhode Island Energy might be able to procure additional supply from that pipeline. Was that possibility considered in forecasting the supply/demand gap?

The “future of gas” study conducted for the Rhode Island PUC and similar studies in other states have pointed out that the price of delivering each therm will increase as gas consumption diminishes due to warming winters, energy efficiency improvements, and the electrification of building heat. To mitigate that price increase, and to reduce the risk of increasing stranded assets that will ultimately become a liability of the state, it would be prudent for the gas utility to proactively promote electrification and other alternatives in areas where safety and reliability considerations would otherwise require the replacement of old, leak-prone piping. Has Rhode Island Energy looked for such targeted demand reduction opportunities on the island?

We infer that the company's perception of an increasing capacity demand gap (increasing to 2 or 3 times the shortfall encountered in 2023) depends on a forecast of increasing demand and an increase in the number of gas customers on the island. That seems perverse given the state's clear interest in reducing gas consumption through energy efficiency and heating electrification. Although we do not believe an administrative moratorium on new gas connections is appropriate, we suspect that the company's demand forecast presumes current policies for new gas connections will remain the same in future years. We suggest that the forecast assume, instead, that any customers wanting a new connection to the gas system will be required to pay the full cost of that connection, as recently mandated in Maryland; and we expect that this assumption would lead to some reduction in forecast demand.

Rhode Island Energy's recent filing states that the cost of installing heat pumps will be too high and the adoption rate will be too slow to avoid continued operation of the LNG vaporization facility before 2034 or 2035. But if those costs will inevitably be incurred – as required to achieve the goals of the Act on Climate and as we think customers will desire to minimize annual energy costs – then the analysis should be looking at the marginal cost of installing heat pumps sooner rather than later.

We understand that the E3 analysis, on which the recent filing is based, modeled heat pump adoption as proceeding organically, with individual customers responding to incentives from the state or utility as their legacy heating systems age and requirement replacement or repair. We suggest that when forecasting the demand on Aquidneck Island, the analysis should have looked at the possibility of a concerted program to electrify specific neighborhoods or properties and thus retire the LNG vaporization facility quickly. We believe the Commission could require the gas utility to identify those parts of the island that are likely to need gas pipelines replaced for safety and reliability reasons within the next 20 years and then to estimate the cost of electrifying those areas sooner, in a well-coordinated manner. A coordinated electrification program, targeting many gas customers at once, could enable bulk procurement of heat pumps and installation services. This could lower the costs of customer acquisition, equipment procurement, and installation services; and it would likely increase the odds of developing of thermal energy networks, potentially reducing the electric load arising from heating electrification. Were such benefits included in the company's study and we just missed them?