

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

IN RE: THE ISSUANCE OF ADVISORY OPINION :
TO THE ENERGY FACILITY SITING BOARD :
REGARDING THE NARRAGANSETT ELECTRIC :
COMPANY d/b/a RHODE ISLAND ENERGY : DOCKET NO. 22-42-NG
APPLICATION TO CONSTRUCT AN LNG :
VAPORIZATION FACILITY ON OLD MILL LANE, :
PORTSMOUTH, RHODE ISLAND :

ADVISORY OPINION

I. Introduction

On April 1, 2022, The Narragansett Electric Company d/b/a Rhode Island Energy (RI Energy or Company) filed with the Rhode Island Energy Facility Siting Board (EFSB) a supplemental application for a license for the use of portable equipment for the conversion and storage of liquified natural gas (LNG) at Old Mill Lane, Portsmouth (the Project).¹ The Company explained that it is responsible for distributing natural gas to residents and businesses on Aquidneck Island which includes approximately 12,500 residential customers and 1,800 business customers located in Middletown, Newport, and Portsmouth. The natural gas distribution infrastructure on Aquidneck Island is fed by the Algonquin Gas Transmission, LLC (Algonquin) Northeastern interstate natural gas transmission pipeline that extends east from New Jersey to Massachusetts. According to the Company, the Project will be used to back up the supply of natural gas to the gas distribution system. The Company asserted that the Project is needed (1) to address capacity vulnerability and (2) capacity constraints to the gas distribution system.

According to RI Energy, capacity vulnerability has two aspects. First, the Company contended that it faces seasonal vulnerability from unexpected upstream disruptions that could

¹ The facility has been operating on a temporary basis through seasonal lease agreements for the equipment since 2019 under licensing waivers granted by the EFSB.

limit the flow of natural gas from the interstate pipeline below levels needed to meet demand. Second, the Company declared that capacity vulnerability occurs when Algonquin disrupts capacity in order to inspect and maintain the upstream transmission pipeline. Separately, the Company represented that the Project is designed to address capacity shortfalls that may occur during each winter season when there exists a gap between the natural gas demand and the available natural gas supply to Aquidneck Island for which the Company has contracted on extremely cold days.²

According to the Company, the Project will be operated on a recurring seasonal (winter) basis and as needed during Algonquin's scheduled transmission pipeline service and outages. The Company contended that the Project will be needed to address the vulnerability concern as long as the Distribution System is in operation on Aquidneck Island. While the size of the Project could change, the Company is seeking approval to site an operation comprising vaporization of up to 750 Dth/hr (dekatherms per hour) and storage up to 70,000 gallons of liquefied natural gas (LNG). The Project also includes a second back-up unit.³

In response to the filing, on July 25, 2022, the EFSB conducted a preliminary hearing on the supplemental application, and issued a preliminary order which, inter alia, directed the Rhode Island Public Utilities Commission (Commission or PUC) to provide the EFSB with an advisory opinion as to (1) the need for the proposed facility; (2) whether it is cost justified; (3) the expected duration of the need, with and without a hypothetical island-wide moratorium on new retail gas connections; and (4) emissions impacts assuming an island-wide moratorium on new retail gas connections. The consideration of need and cost requires a review of any technically feasible alternatives that could avoid the need for the project at a reasonable cost within a reasonable

² Siting Report at 1-2 (April 2022).

³ *Id.*

timeframe. Consideration of cost also requires a review of the impact on retail gas customers. The Division of Planning, the Office of Energy Resources (OER), and the Division of Public Utilities and Carriers (Division) were required to participate in the PUC proceeding pursuant to R.I. Gen. Laws § 42-98-9(d).⁴

Accordingly, the Commission docketed this matter and set a schedule. The Town of Portsmouth (Portsmouth), the Town of Middletown (Middletown), the Conservation Law Foundation (CLF), and the Rhode Island Attorney General (RIAG) intervened.⁵ Following a review of pre-filed testimony and position statements, discovery responses, a public comment hearing, and two days of evidentiary hearings held on May 8-9, 2023, the Commission⁶ conducted an Open Meeting on May 31, 2023, to consider the issues of need, duration of need, cost, and emissions.

II. Need and Duration

A. Need

RI Energy has asserted that the portable LNG vaporization facility is needed to: (1) meet a capacity constraint during the winter (November 1 through March 31) each year; and (2) to provide backup supply as a contingency to meet an upstream vulnerability event. RI Energy has shown that there is a need for LNG vaporization on Aquidneck Island to meet the winter capacity constraint now and in the short-term, even if an island-wide moratorium on new connections was to be imposed. Although they may be reasonable long-term solutions, the non-infrastructure alternatives are not technically feasible alternatives to solve the problem now or in the short-term.

⁴ EFSB Order No. 156 at 16-19 (Oct. 19, 2022). The Advisory Opinion was originally due on or before April 5, 2023, which date was later extended to June 5, 2023 (Email from Attorney Lucarelli to SB- 2021-04 Service List dated Jan. 27, 2023). Neither the Division of Planning nor the Office of Energy Resources contributed to the Division's recommendation.

⁵ Acadia Center originally intervened, but subsequently withdrew from the case.

⁶ Because the Chairman of the PUC also serves as Chairman of the EFSB, he does not participate in the PUC Advisory Opinion proceeding.

No party disputed a short-term need for seasonal LNG vaporization on Aquidneck Island to meet the winter capacity constraint.⁷ Middletown provided a conclusory statement that non-infrastructure options could solve the capacity constraint.⁸ Despite the conclusion, Middletown’s witness, Jeffrey Loiter, conceded that “[t]he [p]roject may be necessary in the short term to address the identified capacity deficit on Aquidneck Island, but there exist other strategies to avoid complete disruption of gas supply other than the permanent installation of the facility on Old Mill Lane.”⁹ Additionally, over the longer term, Mr. Loiter suggested that a more reasonable alternative is based on non-infrastructure solutions including electrification of heat and targeted energy efficiency and demand response.¹⁰ This testimony was consistent with CLF witness White’s testimony which did not support a permanent installation of LNG vaporization equipment, noting that it has not been used very often during previous winters.¹¹ Company witness Porcaro explained that “the Project consists of portable non-permanent equipment so that, if and when the Project is no longer needed to address the capacity vulnerability and the capacity constraint, it can be discontinued.”¹² No party other than RI Energy supported a finding of need to meet the capacity vulnerability.

According to RI Energy witness Porcaro, a capacity constraint may occur during each winter season when there exists a gap between the natural gas demand and the available natural

⁷ The summary of what White’s testimony would show suggests there is no need for the facility, but his testimony focused on the amount of time the facility has previously been needed and indicated that it was not needed as a permanent solution to the capacity constraint. *See* White Test. at 1; 14. Further, he stated that the limited amount of time vaporization has been used “calls into the question the capacity constraint as a singular threat to reliability on Aquidneck Island.” *Id.* at 14. In his opening statement, CLF counsel stated, “CLF is not opposing continued seasonal use of the facility, but we think it should be conditioned on implementation of demand-side measures, like electrification, energy efficiency, and demand response.” Hr’g. Tr. at 22 (May 8, 2023).

⁸ Loiter Test at 13 of 15.

⁹ Loiter Test. at 4 of 15.

¹⁰ Loiter Test. at

¹¹ White Test. at 14.

¹² RI Energy Response to CLF 1-3.

gas capacity to Aquidneck Island on extremely cold days. This capacity constraint is an immediate challenge because in 2019, Algonquin began to enforce contractual limits on the hourly amounts available to RI Energy. The contractual limit is approximately 145 Dth/hour less than the Company has projected to need on a design day.¹³ The Company has previously explained that to ensure that the Company maintains adequate supplies in its portfolio to meet the projected customer load requirements, the planning process includes an analysis to define the planning standards for the coldest planning day, known as the “design day.”¹⁴ This gap between supply and demand was experienced on February 3, 2023, when the Company needed to vaporize LNG to meet a peak hour demand gap of 126 Dth/hr. The Company used approximately 20% of the capacity of the current vaporization facility.^{15,16}

B. Duration

The EFSB has requested an opinion from the Commission about the duration of a license, should one be approved. RI Energy has not shown that there is a permanent need for LNG vaporization on Aquidneck Island.¹⁷ The PUC recommends the EFSB issue a license subject to periodic demonstration of continued need by the Company through five-year reviews commencing in 2028. This is a different recommendation from that which was proposed by CLF and is more in line with the recommendation of the Attorney General. While the Attorney General suggested

¹³ Porcaro Test. at 4-7.

¹⁴ Docket No. 22-06-NG, [RI Energy Long Range Gas Supply Plan \(June 30, 2022\)](#) at Bates page 4.

¹⁵ Roberti and Oliver Jt. Test. at 12, 25; RI Energy’s Response to DIV 2-1.

¹⁶ In Response to PUC 3-2, Company witness Porcaro described steps the Company took to minimize LNG vaporization in February 2023, including the curtailment of interruptible customers through Demand Response. The Company could have curtailed service to firm service customers but chose instead to maintain service to all customers using all available resources including LNG vaporization at Old Mill Lane. In Response to PUC 3-3, Company witness Porcaro and co-sponsor Parenteau described what steps the Company would have taken commencing with curtailment of non-heating customers followed by heating customers if LNG vaporization had not been available.

¹⁷ RI Energy’s assertion that LNG vaporization is needed on the island for as long as the gas system is in operation is not supported by the record, particularly given the Commission’s determination that the demonstration of need is based on the winter capacity supply constraint.

periodic reviews of a license, CLF's witness White sought the EFSB to impose the following conditions on a license, should the EFSB approve one:

(1) the Project should continue to be operated on a seasonal basis in support of actual and reported transmission supply interruptions; (2) the Company should be required to invest and deploy non-infrastructure solutions identified by the Company's analysis in the Long-Term Capacity Report from 2020 and the analysis supporting the instant application, to address demand on Aquidneck Island; and (3) the Company should be required to produce a plan for implementation of the non-infrastructure programs referenced above, with annual reporting documentation that shall include information on usage of the LNG facility; (4) the license should require renewal before the end of the 2030/2031 heating season for continued operation thereafter.¹⁸

The Commission does not comment on the appropriateness of the first three conditions that presumably will also be made in testimony before the EFSB except to note that some will require review and approval by the Commission under its jurisdiction over energy efficiency, system reliability and procurement, and the least cost procurement standards. With respect to the fourth, the Commission declines to recommend to the EFSB that it issue a license for a limited term subject to renewal, instead recommending that the EFSB issue a license with a mandate for periodic reviews to ensure continued need.

Furthermore, there is insufficient evidence in the record currently such that the Commission can recommend the facility will no longer be needed in the winter of 2030/2031. While there are known factors that may significantly change the demand on the island by increasing the viability and alternatives to gas, the speed and ultimate timing of that change is not fully understood. The evidence in the record did not provide sufficient clarity or specificity on the impact of law and regulation such as the Act on Climate, the Commission's Future of Gas proceeding, or federal funding from the Inflation Reduction Act.

¹⁸ White Test. at 1-2.

In response to discovery issued by CLF, RI Energy witness Porcaro explained that the capacity constraint could be alleviated as early as the winter of 2029/2030, “[w]ith an assumed 20% of HVAC turn over to heat electrification under a moratorium scenario and assumed 40% of HVAC turn over to heat electrification under a non-moratorium scenario as well as energy efficiency and demand response demand reductions sized equivalent to assumed maximum potential.”¹⁹ At the hearing, she confirmed that in the latter scenario, all three of those things would have to happen to achieve that result.²⁰ Based on this information, the Commission cannot make a definitive recommendation that the duration of the facility will be less than seven years.

The parties identified other numerous factors that may change the company’s forecast of gas needs and possibly eliminate the current gap between supply and demand during peak conditions on Aquidneck Island, including, but not limited to weather; economic indicators; definition of the design day and peak hour; consumer adoption of electric heat technologies; changes in service requirements due to energy efficiency or changing customer base; impacts of demand response; or potentially an island-wide moratorium or other forms of curtailment in conjunction with these actions.²¹ However, there is insufficient evidence today for the Commission to make a recommendation on when the facility will no longer be needed except to state that it will not be needed permanently. For this reason, the Commission recommends meaningful periodic reviews.

For all these reasons and where much of the utility’s planning is based on five-year projections, periodic reviews of the continued need for the license that match the planning cycles are warranted. Should the EFSB accept this recommendation, the Commission leaves it to the

¹⁹ RI Energy Response to CLF 1-3.

²⁰ Hr’g Tr. at 173-75.

²¹ See Oliver and Roberti Test at 15-17, 22-23, 25-26; Loiter Test. at 7-8; White Test. at 17-18, 25-26; Oliver and Roberti Surr. Test. at 12-13.

EFSB to determine the proper procedure before the Board. The Commission notes, however, that the Company will file a Long Range Gas Supply Plan and forecast in 2028. Separately from this Advisory Opinion, the Commission could require the Company to include in its Long-Range Plans a specific assessment of the ongoing winter constraint during the forecast period of each respective Long Range Gas Supply Plan. Conducting the first review in 2028 after the Company files its Long Range Gas Supply Plan will provide the opportunity to examine many of the things that can impact gas supply needs prior to a critical Act on Climate milestone in 2030, requiring a reduction in greenhouse gas emissions of 45% below 1990 levels.^{22,23}

III. Cost Justification

Having found that LNG vaporization is needed on Aquidneck Island to meet the winter capacity constraint now and in the short-term, the Commission finds the proposal to operate LNG vaporization facilities at Old Mill Lane represents the least cost solution to meet the need compared to the alternatives examined by the Company. According to Company witness Porcaro:

The alternatives the Company considered include the proposed Project, Seasonal Portable LNG Operation at a New Navy Site, Permanent LNG at a New Navy Site, LNG Barge, Reinforcement of the Algonquin Transmission Line, and Non-Infrastructure Solutions. All of the alternatives were more expensive than the Project, did not provide the operational advantages of being located next to the take station, or would take several years to implement during which time the proposed Project would be needed.²⁴

The Company elaborated through witness Montigny that the Project would require 1-2 years to implement while each of the others would take longer. The LNG barge would require 3-4 years while each alternative located at a Navy site would take 4-5 years as would a reinforcement

²² The Commission also naturally reviews ongoing need through the annual GCR filings because the LNG costs will need to be recovered through the GCR. If, prior to any five-year review period, the Commission finds there no longer exists a need justifying continued operation of the LNG facility, it can make a recommendation to the EFSB to reopen the license, so the Company is required to show an ongoing need for the license.

²³ R.I. Gen. Laws § 42-6.2-2(a)(2)(i)(B).

²⁴ Porcaro Test. at 9.

of the Algonquin pipeline.²⁵ It was undisputed that the non-infrastructure alternatives were more expensive than the seasonal LNG vaporization,²⁶ and, according to the Company, it would likely not solve the immediate winter capacity constraint.²⁷ While the exact final costs of the Project will not be known or included in a request for cost recovery until operational, the record is clear that, despite the disputed issues of cost and ratepayer impact between the Company and the Division, LNG vaporization at Old Mill Lane is the least cost alternative that is technically feasible to solve the immediate and short-term winter capacity constraint.²⁸

However, the Commission cautions that this proceeding is not a rate proceeding and the recommendation to the EFSB that LNG vaporization is needed in the short-term, should not be substituted as a finding that the ownership model or even the proposed unit sizing and associated cost is appropriate to include in any specific ratemaking mechanism. In recommending that the EFSB find the Company has supported the short-term need for LNG vaporization, the Commission is not opining on whether the Company should own or continue to lease the equipment.²⁹ While the availability of the equipment under the Company's ownership model may provide additional benefits as compared to the lease model, the ownership model does not serve as the basis to prove need for the proposed facility.³⁰

²⁵ RI Energy's Response to PUC 1-10.

²⁶ RI Energy's Response to PUC 1-10; White Test. at 25; Loiter Test. at 9.

²⁷ RI Energy's Response to PUC 1-10 and PUC 1-11.

²⁸ Portsmouth's counsel asked several questions about the chosen location, safety issues, and other matters that may be relevant to the EFSB's proceeding but which did not directly address the Commission's narrow charge from the EFSB. However, counsel elicited from Mr. Montigney that LNG at "the new Navy site was ultimately turned down because it required a significant amount of gas main installation to get the gas, the vaporized gas from that site to our distribution system. And that would be a similar situation for the other site on Burma Road." Hr'g. Tr. at 116-17.

²⁹ The Commission notes that in response to PUC 1-13, the Company expects to continue using leased equipment through the winter of 2024/2025, even assuming an order is placed to purchase equipment in Calendar Year 2023.

³⁰ Kirkwood Rebuttal Test. at 8.

Nor does the ownership model serve as the basis for the Commission's determination that LNG vaporization at Old Mill Lane is the least cost solution to solve the immediate problem – the need is for the vaporization of LNG to meet the winter capacity constraint and the Old Mill Lane location is less cost than other locations. The costs of ownership and leasing were similar, albeit disputed between the Company and Division.³¹ Additionally, there was evidence that the output size of the units could be smaller at a lower cost and still satisfy the winter capacity constraint.

While LNG vaporization is needed on the island in the short-term, a smaller facility could meet the capacity constraint. The vaporizers come in different sizes, 500 Dth per hour, 750 Dth per hour, and 1,000 Dth per hour. Company witness Montigny testified that the capacity constraint could be met with the 500 Dth per hour units (main unit and backup).³² He estimated this would result in a 10% to 20% cost savings on the vaporizers. The physical size of the units would be the same.³³ These sizing choices are not available under the lease model. To reiterate, however, the Commission will address such cost issues in the appropriate ratemaking proceeding.

The Commission declines to make any ruling or to provide any opinion on those disputed issues related to cost and associated recovery as they are best left to the appropriate ratemaking docket. The Commission also does not provide any opinion on which ratemaking mechanism will be the appropriate one through which the Company might collect the supported costs. EFSB approval of a license does not supersede the finding of whether equipment sizing or ownership are the most prudent decisions for ratemaking treatment. Thus, as with any cost for which the utility

³¹ Compare RI Energy's Responses to PUC Data Request Set 2 and DIV Data Request Set 3 with Oliver and Roberti Surr. Test. at 2-9, 17-19, 34-35. (explaining the Division's concerns with the Company's cost projections and ratepayer impacts).

³² Hr'g. Tr. at 88 (May 8, 2023).

³³ Hr'g. Tr. at 239-44 (May 8, 2023).

seeks rate recovery, the prudence of the cost of procuring and operating seasonal LNG vaporization to meet a winter capacity constraint will be reviewed in the appropriate ratemaking docket(s).

The Commission notes that the Division has raised other important questions about ratepayer impacts. In particular, the Division suggested that the existing seasonal operation under a lease agreement without additional site work would be the most cost-effective solution for ratepayers. The Division's position may be the least cost solution and provide the most flexibility to respond to the uncertain duration of the need.³⁴ Realization of these things, however, will be dependent upon the EFSB's final decision under its statutory charge to consider more than just need and cost. The results of the EFSB's decision will provide additional context to the Company, Division, and Commission when the Company seeks rate recovery.

IV. Greenhouse Gas Emissions With a Moratorium

In addition to the other questions, the EFSB also requested the PUC to estimate a range of hypothetical emissions impacts if an island-wide moratorium on new gas connections was imposed, considering the alternative heating choices available to the public. Several parties' witnesses provided testimony on the GHG emissions question. Only two provided estimates. At the outset, the Commission notes that the baseline used by those two witnesses included the assumption that a moratorium is imposed. The baseline for Mr. Olney's analysis is a moratorium on new gas connections, fixing gas demand at present levels.³⁵ Emissions and avoided emissions from alternative projects were compared to this baseline.³⁶

CLF witness White made adjustments to Mr. Olney's assumptions to develop his own estimates.³⁷ Middletown witness Loiter has testified that the baseline should reflect the status quo

³⁴ Roberti and Oliver Jt. Surr. Test. at 34-35.

³⁵ Olney Test. at 4, 6; RI Energy Response to PUC 1-7.

³⁶ Olney Test. at 9-15.

³⁷ White Test. at 16-19.

with no moratorium and not the assumption of a moratorium.³⁸ However, the capacity constraint exists now and would continue to exist even with a moratorium. Although a moratorium on new connections would limit growth in demand and may reduce the duration of need for the Project, it would not eliminate the need. Therefore, a legitimate baseline for the analysis is the Project with a moratorium.

Based on Company witness Olney's and CLF witness White's testimony, the available heating choices under a moratorium are reasonably electric heat or home heating oil and, given their testimony, those heating choices may have an impact of negative 7,000 to 44,000 tons of CO₂ equivalent compared to seasonal trucking.³⁹ Between those two witnesses, their analyses have presented reasonable range of fuel & technology substitutes to gas service should a moratorium be imposed. Mr. Olney's analysis assumed a baseline where a moratorium was imposed and the replacement heating fuel was oil. Mr. White's analysis criticized this assumption and adjusted the number of customers who would switch to electric, particularly given the federal funding to incentivize switching that was made available after Mr. Olney's analysis had been completed.⁴⁰

V. Conclusion

The Commission recommends there is a need for LNG vaporization on Aquidneck Island to meet the winter capacity constraint now and in the short-term, even if an island-wide moratorium on new service connections were to be imposed. However, the project is likely not needed in perpetuity. There is uncertainty in the timing so the Commission recommends the EFSB issue any license subject to periodic reviews for continued need commencing in 2028 after the Company files its Long Range Gas Supply Plan. LNG vaporization on Aquidneck Island at Old Mill Lane

³⁸ Loiter Test. at 5.

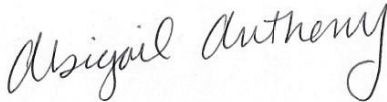
³⁹ White Test. at Figures EJW-2 and EJW-3.

⁴⁰ White Test. at 16-19.

represents the least cost solution to meet the need compared to the alternatives examined by the Company. Finally, a moratorium on new service connections alone has been estimated to have an impact of negative 7,000 to positive 44,000 tons of CO2 compared to seasonal trucking.

(24669) Advisory Opinion⁴¹

Public Utilities Commission



Abigail Anthony, Commissioner



John C. Revens, Jr., Commissioner

Dated: June 5, 2023

⁴¹ This number is being assigned for administrative purposes only and does not constitute an order or decision of the Commission.