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Also admitted in Massachusetts, Connecticut and Vermont

February 24, 2023

## VIA HAND DELIVERY & ELECTRONIC MAIL

Emma Rodvien EFSB Coordinator RI Public Utilities Commission 89 Jefferson Boulevard Warwick, RI 02888

# RE: Docket No. SB-2021-04 – Narragansett Electric Company Aqidneck Island Gas Reliability Project Old Mill Lane, Portsmouth, Rhode Island Response to Town of Portsmouth's Data Requests – Set 1 (Batch 1)

Dear Emma:

On behalf of The Narragansett Electric Company (the "Company"), I have enclosed the Company's responses to the Town of Portsmouth's First Set of Data Requests (Batch 1) in the above-referenced docket. The Town of Portsmouth has consented to the Company's request for an extension of time to respond to the following Data Requests: 1-3, 1-6, 1-12, 1-14, 1-13 and 1-15. The Company will complete its responses to these requests as soon as possible. A full set of responses will be provided when the Company's responses to the Town of Portsmouth's First Set of Data Requests are complete.

Thank you for your attention to this matter. If you have any questions, please contact me at (401) 709-3351.

Sincerely,

Men Wet

George W. Watson III

Enclosures

cc: Docket SB-2021-04 Service List

Boston | Hartford | New York | Washington, DC | Providence | Miami | Stamford | Wilmington | Philadelphia | Los Angeles | Albany | rc.com

## Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate were electronically transmitted to the individuals listed below.

The paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.

Gladder

Heidi J. Seddon

February 24, 2023 Date

SB-2021-04 The Narragansett Electric Company's Application for a License to Mobilize and Operate a Liquified Natural Gas (LNG) Vaporization Facility at Old Mill Lane (Portsmouth, RI)

# **Updated February 24, 2023**

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# Portsmouth 1-1

## Request:

Please confirm that the E.F.S.B. granted the Company's predecessor gas distribution utility a license to site, construct and operate an LNG transfer station on property leased from the United States Navy in Middletown, R.I., in 2001 in Docket SB- 00-01.

# Response:

Please see EFSB Order 48 from Docket No. SB-00-1 which is attached as Attachment Portsmouth 1-1.

## STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS ENERGY FACILITY SITING BOARD

In Re: Application of ProvGas for the Construction and Siting of a Liquefied Natural Gas (LNG) Transfer Station

Docket No. SB-00-1

#### FINAL ORDER

## I. INTRODUCTION

On August 23, 2000, Providence Gas Company, a Division of Southern Union Company ("ProvGas"),<sup>1</sup> filed an application with the Energy Facility Siting Board ("EFSB" or "Board") for the construction and siting of a liquefied natural gas ("LNG") transfer station. ProvGas proposed to build a facility that will operate as a transfer station providing supplementary natural gas to Aquidneck Island in times of peak demand during the coldest periods of the winter (the "Project"). The application was amended on December 26, 2000 changing only the design of the transfer station.

In response to the filing, the Board conducted a preliminary hearing on February 15, 2001 to determine the issues to be considered in evaluating the application, to designate those agencies which were to act at the direction of the Board for the purpose of rendering advisory opinions, and to identify those licenses, if any, required by the Project which are under the direct control of the Department of Environmental Management ("DEM") and the Coastal Resources Management Council ("CRMC"). As a result of the evidence proffered by the parties at the EFSB preliminary hearing, and in accordance with R.I. Gen. Laws § 42-98-9(b), the Board issued a Preliminary Order which identified those agencies having jurisdiction over the Project and which designated the state and local agencies and political subdivisions who would act at the

direction of the EFSB for the purpose of rendering advisory opinions on the issues to be considered by the Board. Accordingly, the Board ordered that the following agencies provide advisory opinions: the Rhode Island Public Utilities Commission; the Rhode Island State Planning Council; the Rhode Island Department of Environmental Management; the Town of Middletown Town Council and Zoning Board of Review; and the Motor Carrier Section of the Division of Public Utilities and Carriers. For each of these agencies, the Board identified the issue or issues on which the particular agency was to render an advisory opinion.

In its preliminary order, the Board required all advisory opinions to be submitted not later than June 1, 2001. On May 8, 2001, ProvGas filed a Motion for Continuance, which was subsequently granted, extending the deadline for advisory opinions to July 2, 2001. After the advisory opinions had been submitted, the Board held a hearing for the purpose of receiving public comment on ProvGas' application on September 5, 2001 at Middletown Town Hall. Additionally, the Board held its final hearing in this docket on September 6, 2001. Based upon the advisory opinions provided, and the evidence presented at all of the hearings, the Board hereby issues the following decision granting a license for the Project.

## II. <u>THE PROJECT</u>

As described in the application, the Project is a transfer station located on Navy property in the Town of Middletown. The proposed site is located on the former Derecktor Shipyard site at the Naval Station Newport in Middletown, Rhode Island, on approximately 4.3 acres of land.

The transfer station will consist of a truck unloading facility, an LNG pumping/vaporization system, a send-out metering and odorization system, a control facility, a

<sup>&</sup>lt;sup>1</sup> The application was filed on behalf of the Providence Gas Company. Since the filing of the original application and the amended application, the Providence Gas Company has become a Division of Southern Union Company.

hazard detection system, a security system, an emergency shut-down system and the necessary control valves, instrumentation and associated piping and attachments. The entire transfer station will be enclosed within a security fence and will be equipped with industry-approved fire and gas detection equipment.

Natural gas will be delivered to the transfer station in its liquid form by special tank trucks owned and operated by licensed and experienced transportation companies. The LNG will be unloaded into the pumping/vaporization system at the transfer station. The unloading system and related equipment will be located within an impoundment area that is designed to hold and retain the liquid volume of any truck in the unlikely event of a spill. The pumping/vaporization system and related equipment will also be located within a similarly designed impoundment area. Once vaporized from its liquid state and odorized, the gas will flow from the transfer station through 900 feet of 12" gas pipe, to ProvGas' existing 99-psig distribution system located approximately 200 feet to the east of the site. The 12" gas pipe will be above ground within the site, and will be below ground from the exterior of the site to the connection with the 99-psig system.

ProvGas anticipates operation of the transfer station only during periods of peak demand, which occurs during the coldest days of the year. Past experience indicates that usage will occur, on average, during 8-10 days per heating season. During the unloading process, and at all times trucks are on-site, trained ProvGas personnel will be both on-site, monitoring the operations first-hand, and remotely monitoring operations through use of the ProvGas Supervisory Control and Data Acquisition ("SCADA") System at ProvGas' Allens Avenue facility in Providence.

## III. TRAVEL OF THE CASE

ProvGas' application was docketed on August 23, 2000. ProvGas' amended application was docketed on December 26, 2000.

On February 15, 2001, after public notice, the EFSB conducted a preliminary hearing. The purpose of the hearing was to determine the issues to be considered by the Board in evaluating ProvGas' application, to designate those agencies which were to act at the direction of the Board for the purpose of rendering advisory opinions, to identify those licenses, if any, required by the transfer station which are under the direct control of the Department of Environmental Management ("DEM") and the Coastal Resources Management Council ("CRMC"), and to consider ProvGas' request for expedited consideration of the amended application. At the hearing, ProvGas provided testimony from Gary S. Munroe, Director of Systems Planning, and offered 10 exhibits. Subsequent to the hearing, pursuant to a Preliminary Order dated March 15, 2001 ("Preliminary Order"), the Board certified the Project as being of critical economic need, granted ProvGas' request for expedited consideration, and ordered designated agencies to submit their advisory opinions to the Board no later than June 1, 2001. The Board identified for each agency required to provide an advisory opinion, the scope of that agency's review, and the issues on which the designated agency should render an advisory opinion. Such advisory opinions were submitted to the Board on or about July 2, 2001<sup>2</sup>. Such advisory opinions are outlined below.

On September 5, 2001, after public notice, the EFSB conducted a hearing for the purpose of receiving public comment on ProvGas' application. The hearing was held at Middletown Town Hall, in Middletown, Rhode Island. At such hearing, ProvGas gave an opening statement outlining the Project, and public comment was heard.

On September 6, 2001, after public notice, the EFSB conducted a Final Hearing ("Final Hearing"). The purpose of the Final Hearing was to receive testimony and evidence regarding ProvGas' application, and to address those issues raised in the advisory opinions, as outlined below. Jeffrey H. Gladstone, Esquire, on behalf of ProvGas, summarized the conclusions in the advisory opinions, and explained that the Project complies with the statutory standards by which an application must be judged as enumerated in the Energy Facility Siting Act (R.I. Gen. Laws § 42-98-1 et seq.). Public comment in support of the Project was provided by Keith W. Stokes, Executive Director of the Newport County Chamber of Commerce. ProvGas provided testimony from Charles Buckley, Senior Vice President of TransGas, Inc., an LNG transporter, and from Gary S. Munroe, Director of Systems Planning, in response to issues raised at the public hearing, and issues raised in the advisory opinions. Members of the Board directed questions to the witnesses and to Mr. Gladstone. ProvGas offered for admission the eight exhibits from the preliminary hearing, as well as two additional exhibits, all of which were admitted. Six advisory opinions were also admitted as exhibits. At the hearing, ProvGas, the public, and all other parties in the proceeding were provided the opportunity to address in a single forum, and from a consolidated, statewide perspective, the issues reviewed, and the recommendations made in the proceedings before those agencies who provided advisory opinions. After a review of the evidence, the Board approved the Project, subject to those conditions as outlined below, and subject to ProvGas returning on September 11, 2001, to provide the final costs of its lease with the Navy.

On September 11, 2001, the Board heard testimony from William E. Coyle, III regarding the value of the property on which ProvGas proposed to construct the transfer station. The Board was satisfied from Mr. Coyle's testimony, and from the costs of the property transfer

On May 8, 2001, ProvGas filed a Motion for Continuance, which was subsequently granted, extending the

as presented by Mr. Gladstone, that the Project is cost justified pursuant to R.I. Gen. Laws §42-98-11(B)(2). Additionally, Mr. Gladstone indicated that those concerns raised by the Board regarding the presence of functional warning systems at all railroad crossings were being addressed by ProvGas. Accordingly, the Board gave its final approval for the Project.

#### IV. THE ENERGY FACILITY SITING ACT

The Energy Facility Siting Act ("EFSA" or "Act") consolidates in the Board, with two exceptions, all state and local governmental regulatory authority for the siting, construction or alteration of major energy facilities. Thus the Board is the "licensing and permitting authority for all licenses, permits, assents or variances which, under any statute of the state or ordinance of any political subdivision of the state, would be required for the siting, construction or alteration of a major energy facility in the state of Rhode Island." R.I.G.L. § 42-98-7(A). A Board decision in favor of an application to site a major energy facility in Rhode Island "shall constitute a granting of all permits, licenses, variances or assents which under any law, rule, regulation or ordinance of the state or of a political subdivision thereof which would, absent [the EFSA] be required." R.I.G.L. § 47-98-11(C).

Although the EFSB does consider and act upon each of the permits, licenses, variances and assents, the board does so in a comprehensive manner that is distinct in nature from the review that would be performed by the several agencies absent the EFSA. Whereas each such agency would review its respective permitting, licensing, variance or assent issues according to its own particular mandates or concerns, the Board evaluates all of such issues in a single and comprehensive decision based upon the "overall impact of the facilities upon the public health and safety, the environment and the economy of the state." R.I.G.L. § 42-98-1(A).

deadline for advisory opinions to July 2, 2001.

Thus, the role of the Board is substantially distinct from, and more expansive than, a mere aggregation of the various agency processes that would occur absent the EFSA.

While the EFSA makes the Board the final licensing authority, an applicant for a Board license must still apply to all state and local government bodies for permits and licenses that would, absent the EFSA, be required. Instead of issuing a permit or license, however, the state or local agency must act at the direction of the Board and issue an advisory opinion to the EFSB regarding such permit or license. The Board has authority to designate "those agencies of state government and political subdivisions of the state which shall act at the discretion of the Board for the purpose of rendering advisory opinions." R.I.G.L. § 42-98-9(A). Each such agency must follow "the procedures established by statute, ordinances, and/or regulation provided for determining the permit, license, assent or variance \* \* \* [and] shall forward its findings from the proceeding, together with that record supporting the findings and a recommendation for final action, to the siting board." R.I.G.L. § 42-98-7(A)(2). Such advisory opinions must be submitted to the Board not later than six months following designation by the Board of the agency that will render the advisory opinion, or within such lesser time as the EFSB specifies. R.I.G.L. § 42-98-10(A). The advisory opinions will be considered by the Board before it renders its final decision. A state or local governmental body which renders an advisory opinion to the Board as a designated agency may also intervene as a matter of right and participate in Board hearings. EFSB Rules of Practice and Procedure ("EFSB Rules"), Rule 1.10(a)(1).

In addition to those advisory opinions specifically authorized under R.I.G.L. § 42-98-7, § 42-98-9(B) and 42-98-10 from the agencies that, in the absence of the EFSA, would have permit, license or variance authority, the Board may require further advice from state and local

agencies in order to assist the Board in assessing the overall impact of a facility. The EFSA clearly envisions that the Board shall have the benefit of the full range of technical expertise available within other existing agencies in making its decisions. R.I.G.L. § 42-98-1(D). Accordingly, the Board may request the opinion of various agencies on matters in addition to those covered by specific permits, licenses, assents or variances that would be required absent the Act.

The primary discussion of issues to be considered in the review of a major energy facility application, and the designation of agencies to act at the Board's discretion, occur at the Board's preliminary hearing. Following the preliminary hearing, the Board issues a preliminary order establishing the agenda of issues for the Board's final hearings and designating agencies to act at the Board's discretion. Such agenda may be modified and additional agencies and issues may be designated and determined as needed. Rule 1.9(f). The advisory Opinions directed by this Preliminary Order and as requested by ProvGas' Request for Expedited Consideration must be submitted to the Board by June 1, 2001. Final Board hearings must begin not later than forty-five days after the date for submission of advisory opinions, whether or not such opinions are submitted. A hearing will be held in Middletown prior to the commencement of final hearings.

The purpose of the final hearing shall not be to rehear evidence presented in the hearings before designated agencies providing advisory opinions , but rather to provide the parties and the public the opportunity to address in a single forum, from a consolidated statewide perspective, the issues reviewed and the recommendations made by such agencies. R.I.G.L. § 42-98-11(A). The final hearing shall be concluded not more than sixty days after its initiation, and the Board shall issue its final decision sixty days after the conclusion of the final hearing. A final decision favoring the application shall constitute a granting of all required and jurisdictional

permits, licenses, variances and assents, and such final decision may be issued on any condition the Board deems warranted by the record. R.I.G.L. § 42-98-11(B) and C).

#### V. AGENCY ADVISORY OPINIONS

A. <u>The Public Utilities Commission</u>. In its Preliminary Order, and in accordance with R.I. Gen. Laws § 42-98-9(D), the EFSB directed the Rhode Island Public Utilities Commission Commission ("Commission") to conduct an investigation (with the participation of the State Planning Council, the Governor's Office of Energy Assistance and the Division), and to provide an advisory opinion as to the need for the proposed transfer station.

On June 6, 2001, the Division of Public Utilities and Carriers and the State Energy Office jointly filed comments with the Commission regarding the need for the Project. The Division represented that the comments and findings were based upon a "thorough investigation of [the Company's] proposal including a careful review of the Company's submissions relating to this proposal, substantial discovery, and numerous discussions with ProvGas personnel." The Commission conducted a duly noticed public hearing on June 18, 2001 in which testimony was received from ProvGas and Division witnesses, and in which documentary evidence was presented. At an open meeting held on June 27, 2001, the Commission considered the evidence presented to determine whether the record supported a conclusion of the need for the Project, and found that such need is present. Accordingly, on July 2, 2001, the Commission issued its written advisory opinion finding, "after review and due deliberation of the evidence presented in this proceeding, that there is a need for the proposed LNG transfer station." Exhibit EFSB 1 at p. 9.

In its advisory opinion, the Commission expressed its concern regarding the longterm economics of the proposed LNG facility with respect to the ability of ProvGas to provide

LNG storage at the site at some point in the future. At the time of the Commission hearings, a provision in the proposed grant of easement from the Navy to ProvGas appeared to bar the storage of LNG at the Project site. The Commission indicated in its advisory opinion that "ProvGas should use its best efforts to obtain the right to provide LNG storage at the site to improve the long-term economics and reliability of the investment." Exhibit EFSB 1 at p. 8.

At the Final Hearing, Mr. Gladstone indicated that the Commission's concerns have been adequately addressed because the latest version of the lease with the Navy specifically states that although no permanent storage of LNG is allowed under the terms of the lease, such prohibition does not preclude ProvGas from requesting storage under a separate governmental application and approval process at some point in the future. The Board also expressed concern that ProvGas make reasonable efforts to address the long-term supply needs of natural gas on Aquidneck Island. Accordingly, the Board recommended that ProvGas consult with city and town officials on Aquidneck Island and other appropriate state agencies to develop a long term strategy to supply natural gas to these island communities, and to report on their activities within a year of this order.

At the September 11, 2001 hearing, Mr. Gladstone explained that toward the end of August 2001, ProvGas became aware that the Navy wanted to renegotiate the cost of and terms of their agreement with ProvGas regarding use of Navy property. At the hearings before the Public Utilities Commission in June 2001, ProvGas had stated that the cost of the easement would be a one-time expense of approximately \$500,000. At the Final Hearing before this Board, Mr. Gladstone stated that the Navy wanted a lease agreement with ProvGas instead of an easement. The lease agreement with the Navy would be a one-time expense of approximately \$900,000. Mr. Gladstone argued that the case should not be remanded back to the Public Utilities Commission. He stated the cost of any alternative project would greatly exceed the cost of the LNG facility on Navy's property. Furthermore, he noted that construction needed to begin immediately in order for the facility to be in place for the winter of 2001-2002.

2. <u>The State Planning Council</u>. In its Preliminary Order, and in accordance with R.I. Gen. Laws § 42-98-9, the EFSB directed the State Planning Council to conduct an investigation and render an advisory opinion as to the socioeconomic impact of the proposed facility and its construction and consistency with the State Guide Plan.

On May 10, 2001, the State Planning Council submitted its advisory opinion to the Board (Exhibit EFSB 2). The advisory opinion was prepared by the staff of the Statewide Planning Program, and was reviewed and approved by the State Planning Council. The State Planning Council found that ProvGas' proposal appears on balance to be beneficial to the socioeconomic fabric of Rhode Island by allowing the expansion of its energy infrastructure whereby expanding the potential use of natural gas to the residents. Exhibit EFSB 2 at p. 1. Additionally, the Planning Council found that ProvGas' proposal is in substantial conformance with the State Guide Plan. Id.

The Planning Council did recommend, however, that ProvGas submit a stormwater runoff management plan for both the construction and operational phases of the Project, and that ProvGas incorporate into the final facility design all technical recommendations of the U.S. Navy, and State and municipal fire officials regarding protection of surrounding land uses, particularly residences. At the Final Hearing, ProvGas offered, through the testimony of Gary S. Munroe, a Stormwater Management Plan, as prepared by Beta Engineering, Inc. (Exhibit ProvGas 10). ProvGas also confirmed its intentions to coordinate on matters of safety with Navy, State, and municipal fire officials.

3. <u>Department of Environmental Management</u>. In its Preliminary Order, the EFSB requested that DEM advise the Board whether DEM's preliminary comments of November 2, 2000, were addressed by ProvGas, and whether DEM has any final comments to the application.

On July 30, 2001, the DEM submitted its advisory opinion, which was admitted in the EFSB final hearing as Exhibit EFSB 3. In its advisory opinion, the DEM concluded that ProvGas addressed DEM's preliminary comments of November 2, 2000 adequately on all issues raised in those preliminary comments. Specifically, the DEM concluded that ProvGas adequately addressed its comments regarding waste management, air resources and water quality at the proposed LNG transfer station site at the former Derecktor Shipyard on Naval Station Newport in Middletown, Rhode Island.

4. <u>Town of Middletown</u>. In its Preliminary Order, the EFSB requested the Town of Middletown Town Council to supply its advisory opinion and its position on the proposed facility. The EFSB also requested the Town of Middletown Zoning Board of Review to supply its position on the proposed facility based on the standards and requirements contained in the Middletown Zoning Ordinances and the Town of Middletown Comprehensive Community Plan which, absent the act, would otherwise be required.

On March 12, 2001, a public hearing was held before the Middletown Town Council in which the Council received and reviewed the site plan submitted with ProvGas' application along with various reports and supporting data describing the proposed facility. In addition, testimony was received from James A. Grasso, Providence Gas Company's Vice President of Governmental Affairs; Gary S. Munroe, Providence Gas Company's Director of Systems Planning; and Charles Buckley, Senior Vice President of TransGas, Inc., an LNG

transporter. Based on the application, the site plan as presented and modified, the reports and analysis in support thereof, as well as the testimony of the witnesses presented at the public hearing, the Council endorsed and supported ProvGas' application for the construction and siting of an LNG transfer station in Middletown. Additionally, the Council concluded that the facility is in an area designated by the Town of Middletown Comprehensive Community Plan to be used for future industrial development; that the character of the surrounding area of the facility is predominantly industrial; that the proposed facility is compatible with the Comprehensive Community Plan of the Town of Middletown; that the facility will help ProvGas to supply all of Aquidneck Island's demand for natural gas on peak demand days; and that the facility is beneficial to the public, welfare, and convenience. Such conclusions were presented to the EFSB in an advisory opinion on June 13, 2001, admitted at the Final Hearing as Exhibit EFSB 4.

On May 24, 2001, the Town of Middletown Zoning Board of Review held a public hearing to consider ProvGas' application. During the public hearing, the Zoning Board received and reviewed the site plans, including modifications thereto, along with various reports and supporting data describing the proposed development. In addition, testimony was received from Gary S. Munroe, the Director of Systems Planning for ProvGas, Michael W. Desmond, a professional engineer/traffic expert with the firm of Bryant Associates, Inc., Charles P. Buckley, a Senior Vice President with TransGas, Inc., and J. Nathan Godfrey, a real estate expert with Newport Appraisal Group, LLC. Based on ProvGas' amended application, as presented and modified, the reports and analyses in support thereof, the plans and data submitted by ProvGas, as well as the testimony of the witnesses, the Zoning Board concluded that the proposed facility does not result in any diminution of property values in the surrounding area or district; that the proposed facility will be compatible with the Comprehensive Community Plan of the Town of

Middletown; that the supply of natural gas is currently insufficient to meet the projected demand on Aquidneck Island during peak demand period; that the proposed facility would enable ProvGas to meet Aquidneck Island's demand for natural gas on peak demand days; that the proposed facility is beneficial to the public welfare and convenience; and that the proposed facility and the trucking operations associated with the facility will not have an adverse impact on traffic safety. Accordingly, the Middletown Zoning Board of Review voted to endorse and approve ProvGas' proposed use of the 4.2 acres of land at a site formerly occupied by the Derecktor Shipyard as a liquefied natural gas transfer station. Such approval was submitted to the EFSB on July 31, 2001 in the form of an advisory opinion, admitted at the Final Hearing as Exhibit EFSB 5.

5. <u>The Division of Public Utilities and Carriers Motor Carrier Section</u>. In its Preliminary Order, the EFSB directed the Division of Public Utilities and Carriers to provide the Board with an advisory opinion regarding the existing regulatory oversight over trucking of the type used to transport LNG, including safety regulations governing such vehicles.

On July 2, 2001, the Division responded to the Board's request in the form of a letter (Exhibit EFSB 6). The Division first indicated that primary jurisdiction concerning the transportation of LNG resides with the United States Department of Transportation ("USDOT"). Accordingly, uniform national standards govern hazardous materials transportation. In other words, any transporter of LNG that ProvGas utilizes must be in compliance with all applicable federal safety regulations contained in Part 397 of Title 49 of the Code of Federal Regulations. The primary enforcement of such regulations, however, resides with the Rhode Island State Police, which has adopted the Federal Motor Carrier Safety Regulations in their entirety. The Division, along with the Rhode Island State Police, pursuant to these regulations, recommended

that the Board require ProvGas to utilize an LNG transportation company that currently maintains a satisfactory safety rating and that has done so for at least two (2) years as evidenced by USDOT records. Exhibit EFSB 6 at p. 3.

With respect to highway routing, the Division opined that States are permitted to designate highway routing requirements that enhance public safety in the area subject to state jurisdiction. Consistent with that delegated authority, the Division conducted an inspection of the transportation route designated in ProvGas' amended application. Accordingly, the Division recommended that any transportation company bringing LNG to the proposed facility should use Route 24 across the Massachusetts border proceeding south through the Towns of Tiverton and Portsmouth, and then exiting on to Route 114 and proceeding south through the Town of Middletown until reaching the access road to the United States Naval Station in Middletown. Accordingly, the Division recommended that the Board condition the grant of the license subject to the Board's designation of the above-specified route as the sole route for all trucking companies delivered in LNG to the proposed transfer station site. Exhibit EFSB at p. 3.

The Division also considered the routes that would likely be utilized for transporting LNG to the Derecktor site within the confines of Navy property. After a thorough review, the Division recommended that the Board insure that the LNG tankers cross the railroad at points that contain functional warning systems. Furthermore, the Division recommended that the Board require annual inspection and testing of any warning systems that will be relied upon by LNG transporters. Given the absence of gates at the railroad crossings, the Division also recommended that prior to a tanker truck crossing the railroad, ProvGas have a designated person (other than the truck driver) present at the crossing to conduct a visual inspection of the railroad tracks to insure that no trains or railroad devices are approaching. At the Final Hearing, the Board directed questions to Mr. Buckley and Mr. Gladstone regarding the issues raised by the Division. The Board made it clear that the recommendations of the Division should be made conditions of the Board's final order, particularly with respect to railroad crossings by LNG transporters occurring only at points with functional warning systems. The Board also indicated that ProvGas should on an annual basis report to the Division of Public Utilities and Carriers, and Town of Middletown regarding all deliveries of LNG to the facility located on the Navy property indicating the day it was delivered and the amount of LNG delivered. At the September 11, 2001 hearing, Mr. Gladstone assured the Board that ProvGas had investigated the situation and that ProvGas would assure the activation of functional warning systems at all railroad crossings on the designated LNG route, and would also assure the continued maintenance of such warning systems.

## VI. CONCLUSION

Given the conclusions provided in the advisory opinions, the testimony at the various EFSB hearings, and all of the evidence provided, the Board concludes: that the proposed Project is necessary to meet the needs of the State of Rhode Island and/or the region for energy; that the proposed Project is cost justified and can be expected to produce energy at the lowest reasonable cost to the consumer consistent with the objective of ensuring that the construction and operation of the proposed facility will be accomplished in compliance with all the requirements of the laws, rules, regulations, and ordinances, under which, absent R.I. Gen. Laws § 42-98-1 et seq., a permit, license, variance, or assent would be required; that the proposed Project enhances

the socioeconomic fabric of the State of Rhode Island; and that the construction and operation of the proposed Project is consistent with the State Guide Plan.

Accordingly, it is hereby:

## (48) ORDERED

- 1. The Board accepts all those above-mentioned advisory opinions.
- 2. The Board grants a license for the construction and operation of the

Project.

3. Such license shall constitute a granting of all permits, licenses, variances,

or assents which under any law, rule, regulation, or ordinance of the state or of a political subdivision thereof which would, absent § 42-98-1 et seq., be required for the proposed Project.

- 4. Such license shall be issued on the following conditions:
  - (a) ProvGas shall utilize an LNG transportation company that currently maintains a satisfactory safety rating with the USDOT Federal Motor Carrier Safety Administration, and that has done so for at least two (2) years as evidenced by USDOT records.
  - (b) Any transportation company bringing LNG to the proposed facility shall use Route 24 across the Massachusetts border proceeding south through the Towns of Tiverton and Portsmouth, and then exiting on to Route 114 and proceeding south through the Town of Middletown until reaching the access road to the United States Naval Station in Middletown. Deviation from such route shall not occur except in the event of unforeseen, exigent circumstances, whereupon the LNG transportation company shall obtain the prior approval of the Division for such deviation, or in the event that prior approval is not reasonable under the circumstances, the LNG transportation company shall notify the Division of such route deviation in writing within 48 hours.
  - (c) Any transportation company bringing LNG to the proposed facility shall cross the railroad on Navy property at points that contain functional warning systems. ProvGas shall make reasonable efforts to provide for functional warning systems at all such railroad crossings, and shall make reasonable efforts to ensure the continued maintenance thereof. The Division and the Navy shall

provide the final determination as to whether such reasonable efforts have been made. Prior to a tanker truck crossing the railroad, ProvGas or an LNG transporter shall have a designated person (other than the truck driver) present at the railroad crossing to conduct a visual inspection of the railroad tracks to ensure that no trains or railroad devices are approaching.

- (d) ProvGas shall incorporate into the final facility design all technical recommendations of the U.S. Navy, and State and municipal fire officials regarding protection of surrounding land uses, particularly residences.
- 5. The license holder shall respond promptly to any unforeseen adverse consequences of the facility's construction and operation, consistent with its commitment to be a "good neighbor".

6. ProvGas will consult with city and town officials on Aquidneck Island and other appropriate state agencies to develop a long-term strategy to supply natural gas to Aquidneck Island, and will report on their activities within a year of the date this order is issued.

7. ProvGas on an annual basis will report to the Division of Public Utilities and Carriers, and Town of Middletown listing all deliveries of LNG to the facility located on the Navy property, indicating the day it was delivered and the amount of LNG delivered.

DATED AND EFFECTIVE AT WARWICK, RHODE ISLAND THIS18t OF SEPTEMBER, 2001.

## ENERGY FACILITY SITING BOARD

ELIA GERMANI, CHAIRMAN

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ROBERT'K. GRIFFITH, MEMBÉR D~

JAN RELASMA, MEMBER

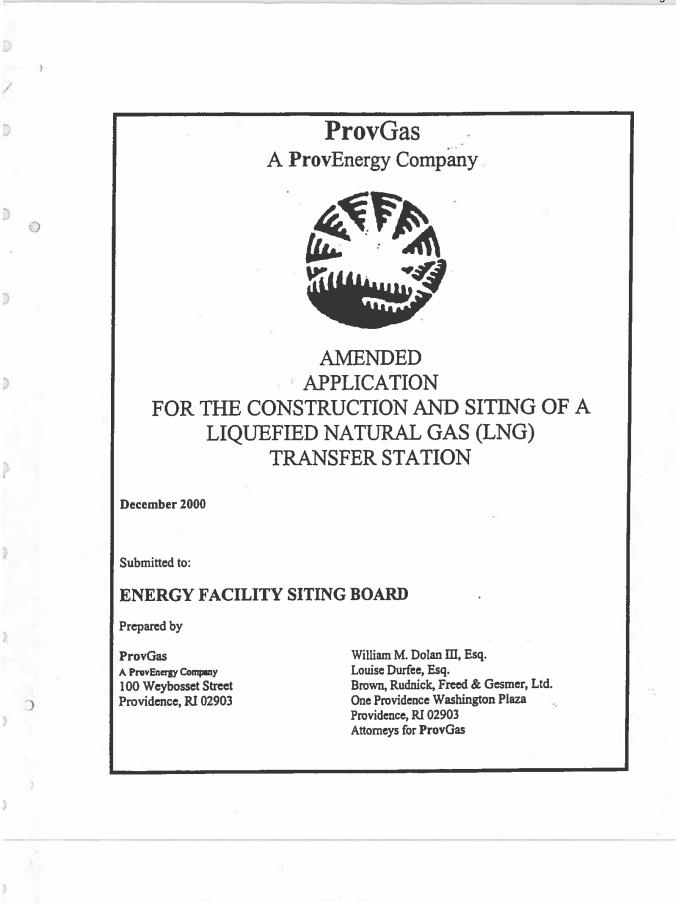
# Portsmouth 1-2

# Request:

In 2001, was the Naval Station intended to serve as a permanent facility for the vaporization of LNG to provide natural gas to Aquidneck Island as needed? If so, when and by whom was such decision made. Please provide all correspondence and memoranda that describe such decision.

# Response:

Please see pages 26 and 27 of ProvGas's Amended Application for the Construction and Siting of a Liquefied Natural Gas (LNG) Transfer Station attached as Attachment Portsmouth 1-2 which references a "permanently sited vaporizer" and "fixed vaporizer" at the Naval Station. The Company does not have any additional information concerning the decision making for the Naval Station LNG Transfer Station.



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warrants future consideration of storage, ProvGas would be required to obtain approvals and permits similar to those required by this Facility.

3.1.1 <u>Site</u>

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The proposed site chosen for the Facility is located on the Naval Education and Training Center in Middletown, Rhode Island on a parcel of land encompassing about 5 acres that was the site of the Derecktor Shipyard. An eighteen-inch thick reinforced concrete slab, on which the Facility will be placed, covers the majority of the site. The majority of the rest of the site is covered with asphalt paving. Access to the Facility site will be through the gate at the north end of the site as shown on the conceptual site plan attached hereto as Exhibit B. For views of the existing conditions of the Facility site and the surrounding area, see Photos S-1 through S-11, attached hereto collectively as Exhibit C.

## 3.1.2 Project Layout

The site plan shows the layout of the Facility using a precast concrete control/generator/sendout building, two (2) precast concrete boiler buildings and one (1) process skid. The skid will be used for the LNG pump system, vaporizer and associated valves. Each of the three buildings at the Facility will be raised five (5) feet above grade so that they are above the 500 year flood level.

#### 3.1.3 Control Building

The control building (drawing attached hereto as Exhibit D) will be a 12' by 29' precast concrete building that will be partitioned into three

separate rooms; a sendout metering/odorization room, a control room and a generator room. Appropriate gas detectors, heat/smoke detectors, and hand held fire extinguishers will be located as necessary in each room of the building. This building will contain an emergency shutdown ("ESD") station.

The sendout metering/odorization room of the control building will contain send-out piping, the odorization system including an odorant storage with 110% containment and the sendout flow meter.

The control room of the control building will contain the Remote Terminal Unit ("RTU"), a Fire Alarm Control Panel ("FACP"), a Security System, a Communications System, a personal computer to remotely monitor and control operations, heating, ventilation and air conditioning ("HVAC") equipment and an incinerating toilet facility.

The generator room will contain the emergency generator set, electric motor control equipment and the instrument air compressor system. This room will also be the termination point for electrical, telephone and data lines for the building.

#### 3.1.4 Vaporizer/LNG Pump Skid

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The Vaporizer/LNG pump skid will include appropriate UV/IR (flame) detector(s), heat detector(s), gas detector(s) and an ESD station.

The vaporization portion of the skid will consist of the vertical LNG vaporizer including the LNG measurement and control systems.

This portion of the skid will include liquid and vapor connections with automatic shutoff valves.

The LNG pump portion of the skid will contain the LNG pump, which will be used to unload the truck transporting the LNG to the site. From this portion of the skid the operator will connect the LNG truck liquid and vapor connections using the Facility pump liquid and vapor hoses. A pump bypass valve will allow the operator to take liquid into the pump using gravity feed and return vapor to the truck via the vapor line prior to starting the pump. This method of transferring the natural gas from the truck will cool down the LNG pump and will avoid any discharge into the atmosphere. A pump stop-start panel will allow the operator to send a signal to the variable frequency drive ("VFD") starter and to stop the pump as well. After cool down and pump start, the operator will be able to control the flow of LNG to the vaporizer.

#### 3.1.5 Boiler Buildings

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Two (2) boiler buildings will be provided (drawing attached hereto as Exhibit D). Each will be a 12' by 28' precast concrete building with no internal partitions. Each of the two (2) boiler buildings will house two (2) natural draft boilers and the required primary/secondary glycol pumps. Appropriate gas detectors, heat/smoke detectors and hand held fire extinguishers will be located in each building as necessary. Each of these buildings will contain an emergency shutdown ("ESD") station.

#### 3.1.6 System Description

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The site plan (Exhibit B) illustrates the layout of the components. The process flow diagram attached hereto as Exhibit E illustrates the input and output of the Facility.

LNG transport unloading equipment will be provided with vapor and liquid connections and pressure controls.

The vaporization unit will be located within an impoundment area. The vaporizer will consist of a vertical shell and tube heat exchanger with a tube arrangement surrounded by a single shell. The vaporizer will be operated using automatic LNG flow rate control that will be performed by a PID control loop in a programmable logic controller (PLC). The PID controller will modulate the LNG flow control valve located at the inlet to the vaporizer to maintain the desired flow rate of LNG through the vaporizer. The process variable input to the flow controller is provided by the sendout flowmeter located in the control building. To raise or lower the flow, the operator will need only make the desired setpoint changes through the personal computer located in the control room. The system will monitor pressure and temperature and is designed with safety features so that if temperature and/or pressure exceed pre-established limits, the system will automatically shut down. These temperature and pressure shutdown controls will be designed to override any contrary input from the personal computer.

A water/glycol mixture pumped from the boiler buildings will transport heat for the vaporization process from four (4) boilers. The four (4) boilers will be arranged in a primary/secondary parallel configuration. Each boiler will provide one third (1/3) of the design maximum heat input. The water/glycol boilers will be fueled by natural gas taken from a tap on the distribution system piping downstream of the odorizer. The water/glycol supply and return lines will be routed from the vaporizer to the boiler buildings above ground on common pipe supports. The gas send-out piping will connect directly into the distribution system after odorization.

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A stainless steel temperature safety valve will be located in the vaporizer discharge line upstream of the transition to carbon steel. This is the required temperature shutdown valve for the plant. The piping, equipment and outlet of the vaporizer will be stainless steel, up to and including the temperature shutdown valve. This arrangement will effectively protect the downstream carbon steel piping systems from gas temperatures above or below their design rating.

Following vaporization, the gas will flow through 900 feet of 12inch gas pipe that will connect to ProvGas' existing 99 PSIG distribution system located approximately 200 feet to the east of the site. The 12-inch gas pipe will be run above ground within the site, and will be run below ground from the exterior of the site to the connection with the existing 99 PSIG distribution system.

Pipe supports will be constructed of reinforced concrete and/or stainless steel to provide low maintenance cryogenic supports to ensure the integrity of the structure.

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Pneumatic and electric controls and electrical power will be run from the control room and motor control center to the heater and vaporizer areas on above ground supports. The Facility will have a backup generator that will be capable of providing all necessary electricity in the event of a power outage.

As another important safety feature, a check valve, will prevent back flow of natural gas vapor from the distribution system into the plant. A manual block valve on the plant discharge line will allow for total isolation of the vaporization unit.

In accordance with prevailing insurance industry standards, Factory Mutual Approved fire and gas detectors, complete with the requisite audible and visual alarms will monitor the pump/vaporizer area, the water/glycol heater areas, the truck unloading area and the control area.

Automatic controls and safety interlocks for the system will be executed by either the RTU or the FACP, located on-site in the control building. These first level controllers will be programmed to protect the plant according to safety and operational requirements that have been developed in the Interlock Logic Diagram -- a widely recognized safety methodology. The RTU and the FACP will be connected to the on-site

personal computer, which in turn will be connected to the ProvGas SCADA system that will be monitored 24 hours per day by trained ProvGas personnel at the Allens Avenue facility in Providence.

All electrical equipment will be installed in accordance with the requirements of the National Electric Code.

## 3.2 Site Plan for the Proposed Location

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As shown on Exhibit B, the Facility will be enclosed by an eight-foot tall security fence, that has two vehicle gates and a personnel gate. Buildings and facilities shown on the site plan are described in detail in section 3.1 above. Painting lines on the existing concrete slab and paved areas of the site will serve to delineate the road shown on the plan.

#### 3.3 Total Land Area Involved

As shown on Exhibit B, the total area of the site on which the Facility will be constructed is about five (5) acres. Excluding the area necessary for the movement of trucks and other vehicles, the Facility will occupy approximately 17,000 square feet, or approximately four-tenths of an acre, at the site. A total approximate area of 5 acres for the site is necessary to ensure adequate security coverage for the Facility and to facilitate site access.

## 3.4 Number of Facility Employees

Because of the intermittent use of the Facility as a peaking facility, there will be no full-time employees required. It is anticipated that the Facility will be operated for about eight to ten days each year as a peaking facility. During the periods of usage, which are assumed to be twelve hours per day, there will be at least two trained ProvGas employees on-site

to operate the Facility. Also on-site at the same time will be the driver of the LNG transport vehicle. As discussed in section 6.4, electricians and mechanics will be on site at various times during the year to perform maintenance.

## 3.5 Plan for Decommissioning the Facility at the End of its Useful Life

One advantage of the Facility is that its useful life will be essentially unlimited. The major components of the Facility will not be subject to operating conditions that will cause them to wear out. Minor items such as valve packing will be easily replaced. The larger components of the Facility will also be easily replaced since they are all portable and are fabricated off-site. In addition, the processes used in the Facility will not generate any waste. Consequently, nothing will have to be removed from or remediated at the site in the unlikely event that ProvGas chose to move or decommission the Facility.

## 4.0 Support Facilities, Impact Analysis and Environmental Characteristics

## 4.1 Analysis of Support Facilities

The Facility may require various support facilities including roads, electricity, telephone and water.

### 4.1.1 Roads

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Final access to the site will be made through the Anderson Avenue Gate on the Navy base at the North end of the site as shown on the site plan (Exhibit B). Based upon discussions with TransGas, a licensed and experienced transporter of LNG, trucks coming to the Facility will proceed by one of two routes outlined below.

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For the principal route to the Facility, trucks will follow Route 24 over the Sakonnet River Bridge, to Route 114 in Middletown, and then proceed by way of Stringham Road and Defense Highway to reach Gate 11 at the Navy Base. From Gate 11, the trucks will follow Simon Pietny Drive on the Navy Base to get to the Facility.

As an alternative route to the Facility, trucks will follow Route 138 over the Newport Bridge, and then proceed by way of J.T. Connell Highway, Admiral Kalbfus Road, and Coddington Highway to reach Gate 10 at the Navy Base. Thereafter, the trucks will proceed as discussed above.

On the limited cold weather days that the Facility is anticipated to be in operation, the trucking operation is not expected to impact traffic conditions.

### 4.1.2 Electricity

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The electric service, designed to support both the immediate and future operational requirements of the Facility will be 480V, 3-phase, 4-Wire, 250 Amps. This is no larger than many small commercial services. This power capability is readily available on the Navy base already. As noted previously, the Facility will be provided with a backup generator that can supply all electrical needs in the event of a power outage.

### 4.1.3 Communications

Existing telephone wires located near the Facility have the capacity to support all the voice and data transmission necessary for daily

operations of the Facility. This service is also readily available on the Navy base. In addition, during the eight to ten days of operation, the ProvGas personnel on site will be equipped with radios and mobile phones. These communication devices will serve as a back-up to the existing telephone lines.

### 4.1.4 <u>Water</u>

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Water service to the site is available through the water line located at the North end of the site. At this time there are no plans to use any water from this source for the Facility. The only water to be employed in the Facility will be the water/glycol mixture used as the heat transfer mechanism to vaporize and warm the LNG that is delivered to the site by truck. This system will be entirely closed and will rarely, if ever, need replenishing. In the unlikely event that replenishment becomes necessary, it will be implemented by delivery of a premixed fluid to the Facility. The planned toilet for the Facility will not require sewer or water service. There will be no wastewater generated by any other use at the Facility.

## 4.2 Impact Analysis

### 4.2.1 Physical Impact

The site chosen for the Facility is predominately covered by a reinforced concrete slab that is about 18 inches thick. The remainder of the site with the exception of a small sloped area at the north end of the site is covered with asphalt paving. The low profile of the Facility will ensure that the Facility will blend in very well with the existing use of the

surrounding area. The tallest piece of equipment will extend only 20 feet above the surface of the slab and the remainder of the Facility will be considerably lower. All of the Facility will be supported on or above the existing slab and paving.

As previously noted, approximately 900 feet of 12-inch belowground pipe will have to be placed outside the Facility site to connect the Facility to the existing 99 psig distribution system. It is not expected that this pipe will have much, if any, physical impact.

### 4.2.2 Social Impact

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The Facility will not present any impact on the social environment.

## 4.3 Environmental Characteristics

# 4.3.1 <u>Measures for Protecting the Public Health and Safety and the Environment</u>

The Facility will be designed using state-of-the-art methods and materials resulting in a finished product that will be both safe and environmentally friendly and is in compliance with all applicable state and federal requirements. ProvGas personnel are trained in the safe operation of these facilities and in the implementation of the plans to be used in case of an emergency. Additional safety-specific design provisions include secondary containment for odorant, the impoundment space in the highly unlikely event that a LNG transport truck spilled its contents, and the onsite and remote system monitoring. The Facility itself will be laid out and located on the site in accordance with the provisions of 49 CFR 193, Liquefied Natural Gas Facilities: Federal Safety Standards and NFPA

59A, Standard for the Storage and Handling of Liquefied Natural Gas (LNG).

## 4.3.2 Noise

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There will be essentially no noise associated with the operation of the Facility under normal conditions. In fact, under normal operating conditions, the noise generated would be virtually unnoticed even in a residential neighborhood. In the event of a power outage, the operation of the back-up generator will generate about 50db at 75 feet (about the same as a well-tuned car engine). The operation of the Facility will not be audible offsite.

## 4.3.3 Air Ouality

Impact on air quality will be minimal. Natural gas will be used as the fuel for the water/glycol heaters and for the back-up electric generator. The size of the heaters and the generator will be such that no emissions permit will be required.

### 4.3.4 Water Ouality

The location of the Facility on this site is expected to have no impact on either the quantity or quality of runoff from the site. Since no water will be used on site (with the exception of the closed vaporization system that will use a water/glycol mixture), there will be no impact on water supplies.

### 4.3.5 Aesthetics

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The site chosen for the Facility is located in an area of the Navy base that is industrial in appearance and the Facility will be lower than the surrounding structures and adjacent activities. Consequently, the view of the Facility from the water will be unobtrusive and would blend in with the existing conditions. The Facility will be designed to have a low profile with the highest point being the top of the vaporizer at about 20 feet above grade. As raised, the buildings will be only 15 feet tall and all other equipment will be shorter than the 8-foot tall chain link security fence.

### 4.3.6 Wetlands

The existing conditions of the site and the intended use of the Facility are such that there will be no impact on wetlands.

### 4.3.7 Sensitive Species

The existing conditions of the site and the intended use of the Facility are such that there will be no impact on sensitive species.

### 4.3.8 Habitat Zones

The existing conditions of the site and the intended use of the Facility are such that there will be no impact on habitat zones.

### 4.3.9 Historical

The existing conditions of the site and the intended use of the Facility are such that there will be no impact on historical features.

## 4.3.10 Archeological

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The existing conditions of the site and the intended use of the Facility are such that there will be no impact on archeological features even if they existed below the slab or the paved areas of the site.

### 4.3.11 Traffic

The impact on traffic both on and off the base is expected to be negligible. As discussed in other sections of this Amended Application, the Facility is anticipated to be used eight to ten days per year with a maximum of two trailers of LNG per day. The vehicles will primarily arrive before 5 AM, a time of very low traffic on the area roadways, and at a time of year (winter) when traffic is at a minimum anyway. Operating and maintenance personnel will have a similar low impact on the traffic in the area.

Additional details concerning environmental issues can be found in the Draft Environmental Assessment (EA) dated August 21, 2000 prepared by ProvGas for the U.S. Navy under the provisions of the National Environmental Policy Act (NEPA). A copy of the draft EA is attached hereto as Exhibit F.<sup>5</sup>

<sup>5</sup> The final EA is in the process of being prepared. ProvGas will submit the final EA as soon as it is available.

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## 4.4 Plans for Handling and Disposal of Wastes

## 4.4.1 **Operation Wastes**

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There will be essentially no wastes generated by the operation of the Facility. The system is designed such that during normal operation, there is no release of either the natural gas or the odorant that is injected into the gas before it leaves the Facility to the distribution system. The quantities of waste products from the water/glycol heaters will be minimal because of the inherent efficiency of the heaters and the minimal number of days (eight to ten days per year) that the Facility is expected to operate. In addition, the size of these heaters will be considerably smaller than would trigger emissions permitting.

## 4.4.2 Construction Wastes

There are several factors that minimize the generation of wastes during construction. The most important is that all major components will be fabricated off-site and delivered to the site for installation. These components include the building, the vaporizer skid and the truck-unload skid. One unusual characteristic of this site is the fact that it is entirely covered with a reinforced concrete slab and that all site construction will be above the grade of the concrete slab. This will have the effect of virtually eliminating any potential construction wastes generated by normal site preparation, such as excavated soils. The construction of the 12 inch below-ground gas pipe running from the exterior of the site to the existing 99 psig distribution system may result in some minor subsurface

soil disturbance, which will be handled in accordance with standard construction industry practices.

## 4.4.3 Maintenance Wastes

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Any wastes generated by maintenance activities would be extremely limited. Because there are no grounds at the Facility, there is no vegetation to maintain. The process area will have to be cleared of shells and other seagull droppings, an activity that will produce very small amounts of waste. Other maintenance activities will not generate any measurable waste.

## 5.0 Need for the Facility and Alternative Analyses

## 5.1 Need for the Facility<sup>6</sup>

### 5.1.1 Overview

Algonquin pipeline provides gas supply service to Aquidneck Island through a single delivery point in Portsmouth, RI, which is fed by a six inch pipe for the last 4 to 5 miles upstream of the delivery station (gate). This single run of 6 inch pipe, including approximately a mile of pipe crossing the Sakonnet River, is a bottleneck to receiving increased deliveries.

Growth in natural gas use on Aquidneck Island has raised consumption to the limits of this available pipeline capacity. New facilities are required to allow ProvGas to continue to accept applications

The Act requires that any application thereunder assess need in terms of the Statewide Master Construction Plan. R.I. Gen. Laws § 42-9-8. Because the Facility does not implicate the Statewide Master Construction Plan, the Amended Application does not address need in terms of that plan. for gas service for new customers or increases in service for existing customers who wish to install additional equipment. This need for additional gas supply could be met by paralleling the existing pipeline capacity to increase deliveries or through the installation of a facility to deliver a supplemental supply such as vaporized LNG or propane.

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ProvGas has evaluated the various supply options and long term supply requirements and determined that the option with the lowest environmental impact and cost is the installation of a LNG transfer station, preferably to be located on the Navy site.

Over the next five to ten years, the projected shortfall in supply will be concentrated in a small number of days where the available pipeline capacity will actually be exceeded for a few hours, something which will occur only on the very coldest days of the year. This is an ideal situation for the LNG transfer station proposed here where supply can be brought in just to cover these infrequent and brief needs. The alternative of expanding pipeline capacity would require a much larger expenditure for added capacity which would only be used a small number of hours each year for the foreseeable future.

The Navy property is the best choice among the sites available for such a facility for several reasons. Its proximity to the loads to be served minimizes the need to add more pipe to deliver this peaking supply where it is needed. The facts that the site has been historically used for industrial purposes and that an existing concrete slab can be used for siting the

facility minimize the environmental impact that would be associated with a green field or less heavily developed site.

### 5.1.2 The Existing System

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Aquidneck Island is served by Algonquin Gas Transmission through the Portsmouth gate, the only supply source for the Island. Algonquin has a 6 inch pipe crossing the Sakonnet River and approximately 3 miles of additional 6 inch pipe upstream of the river crossing. Upstream of that point the original 6 inch line has been paralleled by a 12 inch pipe. The river crossing and the 3 miles of 6 inch upstream pipe create a bottleneck to receiving additional supply. Before the bottleneck became a problem for expanding supply to the Island, ProvGas was allowed to expand its contract level on Algonquin pipeline by moving contract entitlements at other points on the same primary lateral, the "G" lateral which also serves the city of Providence area, to the Portsmouth gate. To meet near term growth, which has exceeded historic levels, ProvGas has entered into a short term arrangement with Algonquin. In order to create the supply capability for the additional volumes above the current contract, ProvGas will reduce its Providence area pipeline deliveries during peak hours. This reduction can be accommodated by using LNG capability at facilities in Providence and elsewhere without a problem for the 2000-2001 winter for the volumes required, but will be insufficient for future needs as growth continues.

## 5.1.3 Growth Projections/Future Need

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The existing contractual limit at the Aquidneck Island gate station is 775 mcfh (thousand cubic feet of gas per hour). As explained above this has been temporarily expanded to 825 mcfh through an agreement with Algonquin. Long term, there has been regular growth on the Island. For example, in 1986, the projected peak hour usage at the gate station was only 548 mcfh. By 1997, the projected peak hour usage at the gate station was 744 mcfh. Thus, in eleven (11) years, peak hour usage under design conditions grew 36%, an annual growth rate of 2.8% per year. Recent growth has been higher and, given the strength in the economy, is expected to continue to be strong with a number of residential and commercial projects in development. ProvGas is also having discussions with the Navy about the possibility of expanding their firm demand.

Current projections call for the Island to exceed available capacity, including the temporary capacity addition, by the spring of 2001. Without additional capacity, ProvGas will be forced to deny applications for new loads and must refuse to allow load additions for existing customers. The contractual level of 775 mcfh for peak hour supply is all that Algonquin is willing to commit to long term without upgraded pipeline facilities. Existing loads this past winter reached a peak level of just over 800 mcfh and are expected to be about 825 mcfh for the 2000/2001 winter, the upper limit of the temporary agreement with Algonquin. By the 2001/ 2002 winter it appears that ProvGas will see a peak hour load of approximately

875 mcfh, and possibly higher if certain Navy projects converting a portion of their existing interruptible load to firm go forward. Simply assuming the historic level of growth of 2.8% would cause load to reach approximately 1000 mcfh within five years.

### 5.2 Alternative Analyses

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## 5.2.1 Expansion of the Existing System

In determining how best to deal with the projected future need, ProvGas considered a number of alternatives including expansion of the existing upstream pipeline transmission system. Given the long lead times and regulatory requirements for any facility project, a viable project needs to satisfy growth needs for at least 5 years, and preferably longer for a costly major project. Discussions were held with and analyses performed by Algonquin to identify the possible approaches for expansion of the existing system. The alternatives presented by Algonquin were: (1) A paralleling of part of the upper portion of the "G" lateral. This proposal was rejected immediately by ProvGas because it was inadequate as a long term solution for upgrading gas delivery to Aquidneck Island. It would not provide capacity to meet longer term needs and it would have left the ProvGas with the same problem faced today in a couple of years. (2) Parallel the existing 6" pipeline upstream of the river crossing at an estimated cost of \$3.5 million. This option, as it was proposed by Algonquin, would have provided only about a 15% increase in capacity to 900 mcfh, insufficient for long term needs. Within two years there would

be a need for more capacity. (3) <u>A paralleling of the river crossing itself at</u> <u>an estimated cost of \$9 million</u>. This option provided capacity sufficient to cover only 3 or 4 years growth. (4) <u>Both paralleling the upstream 6</u>" <u>and build the river crossing</u>. Only this combination of options (2) and (3) meet even the five year level of need.

Because any new pipeline installed would only serve the needs of ProvGas' customers and would not benefit other pipeline customers, Algonquin stated that it would only pursue expansion of the existing pipeline transmission system if ProvGas paid a surcharge to cover 100% of the incremental cost of service for the facilities necessary including return, income taxes, property taxes, depreciation and appropriate overheads. The projected increase in cost would be approximately \$700,000 per year for 20 years for option 2 and \$1.8 million per year for 20 years for option 3, the river crossing. These charges would only cover the local lateral capacity and ProvGas would still need to dedicate other Algonquin capacity, existing or new, to move supply from a receipt point on the Algonquin system to the upgraded delivery lateral.

## 5.2.2 Propane Peaking

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Following ProvGas' expansion of its pipeline supply capability on the Algonquin pipeline in the late 1980's, the propane facility at Old Mill Lane that had provided peaking capability for Aquidneck Island was no longer needed.

Reactivation of this propane peaking facility (See Section 5.4) was evaluated and found to be undesirable for several reasons:

- (a) The equipment at the site would require substantial repair or replacement to achieve a level of safety and reliability consistent with its long term use as a primary supply facility. The estimated cost would be around \$2 million but would require an additional \$1.8 million to expand the pipeline capacity to carry the peaking supply to Newport. Reactivating the site would also require going through the permitting process.
- (b) Because propane is limited to a 30% mix with pipeline supply, a propane peaking facility would only provide about half the peak hour capability as the proposed LNG Facility.
- (c) This facility would be ProvGas' only propane facility. The Company's infrastructure, supply contracting, safety training, purchasing and operations are built around LNG as the peaking resource.
- (d) Propane interferes with the operation of natural gas fueled vehicles and would cause problems with RIPTA's new Newport bus fleet and other natural gas vehicles on the Island.

## 5.2.3 LNG Peaking Facility Option

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The alternative proposed by this Amended Application to address the projected growth is construction of a LNG peak shaving facility. LNG is the dominant peaking option used throughout New England today.

With one exception, all major companies and market areas in our vicinity have substantial LNG capabilities. With the development of Trinidad as a supply source, more LNG is available and it seems likely that it will become increasingly more economical. The technology is well developed and ProvGas has over 25 years of experience in using it as a peaking resource.

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ProvGas' existing substantial tank space in Providence and Exeter, Rhode Island and regular LNG fill make it well situated to manage a low frequency, low volume satellite facility as is proposed here. To supply the satellite facility, ProvGas has the option of pulling liquid (i) from the primary regional supply source, the Distrigas terminal in Everett, Massachusetts, where supply is received from Trinidad and Algeria or (ii) from either the Providence tank or its Exeter facility. Near term this ready supply capability eliminates or, at least, substantially reduces the need to have on-site storage for the low frequency/low volume facility proposed here, where the supply can be reliably trucked in as it is needed. This means ProvGas can use the permanently sited vaporizer and simply schedule trucks as part of its normal operations on the few extreme cold days where LNG for vaporization is needed.

Given the very low volume of projected supply requirements over the next few years, or possibly longer, depending on the rate of growth, and the availability of a very suitable long term site, the best option is the

proposed project, a fixed vaporizer that is fed directly by a truck holding LNG.

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In its evaluation of alternatives ProvGas also considered adding a very small amount of tank storage capable of holding the equivalent of a small number of truckloads of LNG. That approach would be more expensive, requiring purchase of a tank and other equipment, and given the low frequency of use near term, it was decided that installing a tank was not necessary. Still, one advantage of the Navy site is that it is capable of accommodating installation of small satellite tanks that can economically support higher levels of use if that option is determined to be necessary in the future. Whether this option will ever be needed will depend on load growth on the Island and what happens on the pipeline system. With the enormous changes occurring in New England gas infrastructure and the extensive development of gas fueled electric power plants, other options not available today may become available over the next few years.7 However, as noted in Section 3.1, in the event that customer need warrants future consideration of storage, ProvGas would be required to obtain approvals and permits similar to those required for this Facility.

<sup>&</sup>lt;sup>7</sup> For example, any new electric generation facility on the "G" lateral will require a major expansion to reduce bottlenecks on the lateral. Delivery capability to Portsmouth could be positively affected by such changes. (Because of the existing contract it could not be negatively affected.) Further, if the Navy or another customer on the Island wished to build a generating plant, the increased load may support or even require a pipeline based approach.

### 5.3 LNG Peak Shaving as the Best Available Alternative

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While the addition of incremental pipeline capacity would be an easy and operationally simple solution, the cost would be substantial when compared to peaking options with much lower fixed costs per unit of hourly or daily delivery capacity. The analysis attached hereto as Exhibit G compares the costs of pipeline expansion and LNG peaking using the Navy site and shows that the net present value of the peaking facility is considerably less than the pipeline option over 10 years.

This result is not surprising. ProvGas today operates or retains contract entitlements to LNG peaking equal to approximately half of its peak day send-out because it is the lowest cost approach to providing supply under peak conditions. Aquidneck Island is the only major area of the ProvGas system not served by a peaking facility and, for the same reasons LNG peaking facilities make sense elsewhere, they make sense here.

The best economic solution is an LNG peaking facility because it is capable of meeting the low frequency, seasonal need at the lowest cost. Based on current growth projections, it will be capable of meeting the Island's supply needs for at least 5 years. This approach also has the advantage of being able to expand to meet higher levels of output to accommodate future growth if better alternatives fail to arise. As an added benefit, it creates a second supply source for the Island so that in the event

of a pipeline outage or other emergency, the capacity available from the

Facility could be used to provide supply.

## 5.4 <u>Alternative Sites to the Facility and Estimated Costs of Alternatives</u> Considered

The various sites considered for location of the Facility are identified below:

a. Old Mill Lane Site

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This site, owned by ProvGas, is presently the location of a former propane-air facility that has been out of service for many years. The property, located on Old Mill Lane, straddles the town line between Middletown and Portsmouth and the developed portion of the property lies entirely within the Town of Portsmouth. The site is large enough for a mobile facility.

Advantages:

- (a) Close proximity to distribution system
- (b) Site is already disturbed
- (c) Good access
- (d) Site preparation would be simple
- (e) ProvGas owns the property

Disadvantages:

- (a) Wetlands
- (b) High water table
- (c) Site size precludes use as permanent facility
- (d) 8-inch distribution piping on Wapping Road needs upgrade
- (e) Property is zoned R-40, which would require change

- (f) Reinforcements to the distribution system necessitated by use of this site would alone cost approximately \$1,800,000
- (g) The cost of developing this site would greatly exceed those of the chosen site.

### b. Portsmouth Business Park Site

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This site is located in the Town of Portsmouth in the Portsmouth Business Park. The property under consideration is located at the corner where High Point Avenue turns east from the north-south road. The site is approximately rectangular in shape with dimensions of about 500 feet by 660 feet. Because the site is not level, considerable earth moving would be required to use the site.

### Advantages:

(a) Good access

(b) Property is probably available

### Disadvantages:

- (a) Small depressed wetland on property
- (b) Considerable connection distance to distribution system and no access to 99 psig system. It is estimated that the cost of connection from this site to the 99 psig system would alone approximate \$2,100,000
- (c) The cost of developing this site would greatly exceed those of the chosen site.
- (d) Property is zoned I-L (Light Industry), which would require change

### c. Kaiser Aluminum Site

This site is located on the Kaiser Aluminum property south of Willow Lane in the Town of Portsmouth. The parking lot to the south of the Kaiser Aluminum buildings appears large enough for a mobile facility.

## Advantages:

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- (a) Site is already disturbed
- (b) Good access

Disadvantages:

- (a) ProvGas does not own the property
- (b) Property would probably be very costly
- (c) Considerable connection distance to distribution system and no access to 99 psig system. It is estimated that the cost of connection from this site to the 99 psig system would alone approximate \$8,100,000.
- (d) Property is zoned I-H (Heavy Industry), which would require change.

## d. 9 J.T. Connell Highway Site

This site, owned by ProvGas, is the parking lot adjacent to the ProvGas offices in Newport, Rhode Island. The parking lot has dimensions of about 104 feet by 145 feet. The property is zoned CI (Commercial-Industrial) which does not appear to allow the use of the lot for LNG purposes. A variance or special use permit would probably be required. The cost to connect the 8-inch (99 psig) steel gas main from this location to the 8-inch line to the ProvGas distribution system at the intersection of Farewell Street and Warner Street was estimated at \$450,000.

### Advantages:

- (a) Site is already disturbed
- (b) Good access
- (c) Property is owned by ProvGas

### **Disadvantages:**

- (a) Estimated connection cost to 99 psig system of \$450,000
- (b) Site size would be tight even for a portable facility
- (c) Property is zoned Commercial/Industrial, which would probably require change or special use permit
- (d) Residential areas are nearby
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e. Tank Farm 3 Site

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This site is located on the Naval Education and Training Center in

the Town of Middletown.

Advantages:

- (a) Site is already disturbed
- (b) Good access
- (c) Property is probably available

Disadvantages:

- (a) Environmental concerns due to prior use
- (b) Estimated connection cost to 99 psig system of \$4,500,000

f. Tank Farm 4 Site

This site is located on the Naval Education and Training Center in

the Town of Middletown.

Advantages:

- (a) Site is already disturbed
- (b) Good access
- (c) Property is probably available

Disadvantages:

- (a) Site development costs would be substantial due to sloped terrain
  - (b) Environmental concerns due to prior use
- (c) Estimated connection cost to 99 psig system of \$3,800,000

g. Tank Farm 5 Site

This site is located on the Naval Education and Training Center in

the Town of Middletown.

Advantages:

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- (a) Site is already disturbed
- (b) Good access
- (c) Property is probably available

Disadvantages:

- (a) Site development costs would be substantial due to sloped terrain
- (b) Environmental concerns due to prior use
- (c) Estimated connection cost to 99 psig system of \$2,300,000

## h. Newman Road Regulator Site

This site is located on Newman Road off Aquidneck Avenue in

Middletown. The regulator station itself is on a piece of property that is too small for a portable facility. However, the property between the

regulator and Aquidneck Avenue is for sale. Unfortunately, the size of the

combined property (about 20,000 square feet), precludes its use for the

portable LNG facility.

Advantages:

- (a) Close proximity to distribution system
- (b) Site is already disturbed
- (c) Good access
- (d) Property is available

Disadvantages:

- (a) ProvGas does not own the adjacent property
- (b) Site size is too small
- (c) Property currently zoned R20A, requiring zoning change
- (d) Residential property nearby

### Green End Road Site

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This site is located in the Town of Middletown on the East side of

Riverview Avenue. The site is currently used for farming. It abuts

	residential housing to the North and what appears to be residential housing
D	under construction to the South.
	Advantages:
Ð	<ul> <li>(a) Close proximity to distribution system</li> <li>(b) Site is already disturbed</li> </ul>
0	Disadvantages:
	(a) ProvGas does not own property
	<ul><li>(b) Residential property nearby</li><li>(c) Property would require zoning change</li></ul>
D	(d) Access through narrow roads in residential area
	(e) Reinforcements to the distribution system necessitated by use of this site would alone cost approximately \$1,250,000
	j. <u>Wapping Road Nursery Site</u>
D	This site is located on the north side of Wapping Road near the
	intersection of Riverview Avenue in the Town of Middletown. The site is
	privately owned and is currently in use as a nursery.
D	Advantages:
	<ul><li>(a) Close proximity to distribution system</li><li>(b) Site is already disturbed</li></ul>
	Disadvantages:
	(a) ProvGas does not own the property
)	(b) Reinforcements to the distribution system necessitated by
	use of this site would alone approximate \$1,100,000
	(c) Cost of site may be extreme
	<ul><li>(d) Close to residential area</li><li>(e) Property would require zoning change</li></ul>
3	(f) Access through residential area
	Additional details concerning alternative sites for the Facility can be found
0	in the draft EA prepared by ProvGas for the U.S. Navy under the
)	provisions of the National Environmental Policy Act (NEPA); Exhibit F.
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#### 6.0 **Cost Analysis**

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#### 6.1 **Estimated Construction Cost of the Facility**

The total cost of constructing the Facility is developed as shown below.

Item	Cost Estimate
Control Building	\$940,000.00
Vaporizer Skid	\$425,000.00
Truck Unload Pump Skid	\$200,000.00
Outlet Piping	\$195,750.00
Installation	\$ 40,000.00
Truck Unioad Ramp	\$ 40,000.00
Truck Spill Impoundment	\$ 15,000.00
Flood Plain	\$295,300.00
Miscellaneous Site Work	\$400,000.00
Overhead and Contingency (30%)	\$765,315.00
Permit Fees	\$ 25,000.00
TOTAL	<u>\$3,341,365.00</u>

### Proposed Dates for Beginning of Construction, Completion of 6.2 **Construction and Commencement of Service**

Attached hereto as Exhibit H is a Executive Summary outlining the proposed dates for beginning of construction, completion of construction and commencement of service. The proposed completion date is October 15, 2001. Start/Finish dates are contingent upon a number of factors including securing regulatory approvals sufficient to permit timely commencement of construction, but the duration dates are relatively accurate estimates of the amount of time needed to complete each phase of the Facility.

## 6.3 Proposed Financing for Construction of the Facility

As with other capital investments, the Facility will be temporarily financed through ProvGas' short term lines of credit until such time when long term financing is deemed appropriate.

## 6.4 Projected Maintenance and Operation Costs

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The following cost estimates are based on the assumption that the Facility will be used for one 12-hour shift for ten (10) days each year to provide supplementary gas for the ProvGas distribution system on Aquidneck Island. This assumption is in turn based on the projected need analysis for the distribution system and is valid for the next five years. The maintenance costs are based on the experience of ProvGas with other LNG facilities.

The annual cost for operation assumes that two operators are required for each 12-hour shift for a total of 240 man-hours at a total labor cost of \$7,200. Additional operating costs including electricity, telephone and property tax bring the total annual operating costs to \$15,000.00.

The annual cost for maintenance is estimated assuming the need for an electrician for forty (40) hours and for a mechanic for eighty (80) hours. The cost of labor for maintenance would be approximately \$3,600.00. The cost of materials (e.g. test relief valves, nitrogen bottles, odorant, etc.) is estimated to be \$1,400.00. The annual estimated costs for maintenance is therefore \$5,000.00.

## 6.5 <u>Estimated Cost to Community such as Safety and Public Health</u> <u>Issues and Storm Damage</u>

There are expected to be no costs to the community as a result of the addition of this Facility to the ProvGas distribution system on Aquidneck Island.

## 6.6 <u>Estimated Cost to Businesses and Homeowners Due to Power</u> Outages

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The impact on the Facility due to power outages is nonexistent since the Facility is designed to be totally self-sufficient with the provision of 100% backup power generation capability. In fact, because of the reliability of the Facility, interruptions in gas service will not occur due to power outages and gas will be available at all times of facility operation.

### 6.7 Estimated Unit Cost of Energy to be Produced by the Facility

Like all peaking facilities, this Facility will reduce the need for pipeline service that calls for the payment of large fixed fees that make low volume/low frequency use very expensive. As noted in Section 5.3, attached as Exhibit G is a schedule showing the projected cost of the LNG peaking alternative compared to the pipeline construction option including all the costs associated with the facilities. To simplify the analysis it is assumed that the pipeline option would obtain supply by diverting existing pipeline capacity from Providence where LNG peaking capability above design conditions exists today. This means the commodity cost of the supply is virtually the same under either approach and the dominant cost driver for the analysis is the fixed costs. If we assumed additional pipeline capacity were needed instead relying on diverting existing supply capability, the analysis would be even more favorable to the LNG peaking option. The net present value of the option proposed in this Amended Application when compared to the pipeline option is \$7,283,399.

## 7.0 Other Agencies

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The following agencies may exercise licensing or permitting authority over the Project.

AGENCY	REQUIREMENT				
Federal					
U. S. Navy	Compliance with the National Environmental Policy Act. See copy of the draft Environmental Assessment; Exhibit F				
U. S. Environmental Protection Agency	Notification				
State and Local					
Coastal Resource Management Council	Approval by CRMC or waiver of jurisdiction				
Public Utilities Commission	Approval See § 42-98-9(d) of the Act				
Statewide Planning Council	Approval See § 42-98-9(e) of the Act				
Rhode Island Department of Environmental Management	Notification (see Footnote 8)				
Town of Middletown, RI	ProvGas will obtain all approvals and local permits to comply with applicable law.				

## 8.0 Conclusion

ProvGas respectfully submits that the Facility meets all the requirements of the Act and the Rules. Accordingly, ProvGas requests that the Board grant a license to ProvGas for the construction, siting and operation of the Facility.

<sup>&</sup>lt;sup>8</sup> ProvGas has notified RIDEM and EPA of the Project as the Project is located on a superfund site, but no specific approvals of the Project are required from either agency. ProvGas has requested both agencies to confirm that ProvGas will not be held responsible for any existing contaminants at the site. Once filings are made with any of the foregoing agencies/departments, ProvGas will provide the Board with copies of the filings, copies of pertinent information, date of filings and the expected date of decision.

### The Narragansett Electric Company EFSB Docket No. SB-2021-04 Attachment Portsmouth 1-2 Page 39 of 39

## **Glossary of Acronyms**

Abbreviation Acronym		Meaning
LNG	20	Liquefied Natural Gas
ESD		Emergency Shutdown
RTU		Remote Terminal Unit
FACP		Fire Alarm Control Panel
IR		Infrared (heat)
VFD		Variable Frequency Drive
NEPA	1	National Environmental Protection Act
HVAC		Heating, Ventilating, Air Conditioning
UV		Ultraviolet
PSIG		Pounds per square inch
MCFH		Thousand cubic feet per hour
GPM		Gallons per minute
SCADA		Supervisory Control and Data Acquisition

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## Request:

Does the company acknowledge and agree with the statement in the EFSB Order 147 (dated January 29, 2021) that it "abandoned" a licensed LNG vaporization facility on the Naval base in Middletown, R.I.? If not, describe any basis for any disagreement with such conclusion.

## Response:

EFSB Order 147 describes the LNG vaporization facility at the Middletown, Rhode Island Naval station as "now-abandoned." The LNG vaporization facility located on the Naval base in Middletown has not been used in many years due to access restrictions imposed by the U.S Navy, which has rendered it unsuitable to the purposes of maintaining LNG vaporization and injection capabilities on Aquidneck Island. In addition, over the years, the site has also become obsolete.

At this time, the site has not been abandoned in the manner in which the Company uses that term. However, Rhode Island Energy is engaged in developing an abandonment plan that will return the site to the same state in which it existed when the Company began leasing it. The proposed abandonment of the facility will occur prior to the expiration of the lease with the Navy, and the Navy has indicated to the Company that it would not renew the Company's lease if asked to do so.

## Request:

Did the Company's predecessor, i.e., Providence Gas Company, state to the EFSB in a 2001 application that it had rejected reactivating the proposed facility at Old Mill Lane for long term use as a primary supply facility the Old Mill Lane location because the size of the site precludes its use as a permanent facility?

## Response:

According to the discussion beginning on page 24 of Attachment Portsmouth 1-2, the Providence Gas Company rejected reactivation of the Old Mill Lane Propane Peaking Facility because it was determined to be an unsuitable alternative to the vaporization and injection of liquefied natural gas ("LNG"). The perceived disadvantages of the Old Mill Lane site for use as an LNG facility can be found on pages 29-30 of Attachment Portsmouth 1-2.

The Narragansett Electric Company EFSB Docket No. SB-2021-04 In Re: Aquidneck Island Gas Reliability Project Old Mill Lane, Portsmouth, Rhode Island Responses to the Town of Portsmouth's First Set of Data Requests Issued on February 8, 2023

## Portsmouth 1-7

Request:

Describe the difference in annual costs (if any) associated with the operation and maintenance of the alternatives to the Old Mill Lane site that are described in the Siting Report.

## Response:

Section 4.3 in the Siting Report describes that the Portable LNG Operation at Navy property would cost \$1.5 million per year in operations and maintenance cost. This estimate was based on the Portable LNG Operation at the Navy property mirroring the operation and maintenance of the Project. This includes the updated plan to purchase the LNG equipment for the Project. Even with the change to purchasing the LNG equipment, we expect the annual operation and maintenance costs at the Navy property would be the same as the Project.

Section 4.4 in the Siting Report describes a permanent LNG operation on Navy property. Based upon similar installed LNG operations, the Company estimates that the annual operation and maintenance cost of a permanent LNG facility would be \$1.5 - 2.0 million annually consisting of labor, monthly inspection of equipment (fire safety, LNG, ancillary, and security systems), annual inspection and maintenance of LNG and ancillary equipment, consumables, utility costs, and vehicle usage.

Section 4.5 in the Siting Report describes a LNG Barge solution and estimates the cost associated with a LNG barge and vaporization services to be \$10 million per year over a 15 year contract. This is a high-level estimate and is subject to fluctuation based on contract specifics regarding responsibility for all aspects of operating and maintenance cost associated with the LNG barge, labor cost, and subsea pipeline riser maintenance.

Section 4.6 in the Sitting Report describes an AGT Reinforcement Project. There would be no operations and maintenance cost incurred by the Company, as ownership and maintenance of the pipeline would be managed by the pipeline company Enbridge.

The operation and maintenance cost for the non-infrastructure solutions would be the same as the Project's operation and maintenance costs because the non-infrastructure solutions would rely on Project to address the capacity vulnerability and provide peak shaving until there is sufficient adoption of the non-infrastructure measures to obviate the need for the Project for peak shaving during periods of high demand. Please note that the Project would remain necessary to address capacity vulnerability even if non-infrastructure solutions were sufficiently adopted to obviate the need for the Project for peak-shaving purposes.

## Request:

The Siting Report (at Section 3.2) notes that the utilization of LNG at the Old Mill Lane site commenced in 2021, and that the use of this site was "needed while the permitting process was being completed for the Navy Yard LNG site." Describe the permits that are referenced, the regulatory agencies that were then reviewing any permit applications, when the referenced permitting process was commenced and ended, and whether any permits were denied.

## Response:

The narrative in Section 3.2 refers to the application effort dating back to August 23, 2000 by Southern Union Company to obtain a license to operate an LNG transfer station to be located at the Navy Yard in Middletown. The LNG site located at the Navy Yard did not physically exist yet.

Providence Gas Company, a Division of Southern Union Company, filed an application with the Energy Facility Siting Board on August 23, 2000 for the construction and siting of a liquified natural gas transfer station. The application was ultimately approved by the EFSB at the time, and the LNG transfer station facility was subsequently constructed. See EFSB Order No. 48 found at Attachment Portsmouth 1-1.

The use of LNG at the Old Mill Lane site began in 2001 in order to enable to peak shaving during the winter of 2001 – 2002. Southern Union Company obtained the Special Use Permit dated September 25, 2001 and recorded October 3, 2001 in Volume 724, Page 130 of the Portsmouth Land Records, a copy of which is attached as Attachment Portsmouth 1-8-1. The Rhode Island Department of Environmental Management also issued an Insignificant Alteration – Permit, a copy of which is attached as Attachment Portsmouth 1-8-2. The permitting of the Old Mill Lane Site and the Navy Yard LNG site was completed by Southern Union Company, the Company is not aware of any additional permitting records for the 2001 operation.

The Narragansett Electric Company EFSB Docket No. SB-2021-04 Attachment Portsmouth 1-8-1 Page 1 of 8



## Town of Portsmouth

Post Office Pox 207 / Portsmouth, Rhode Island 02871

Board of Review

(401) 683-3611

Petition of Southern Union Company successor in interest to Providence Gas Company 135 Old Mill Lane Map 68, Lots 73 & 74 Zoned: R-40

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### DECISION

Town Clork

This matter came on to be heard before the Portsmouth Board of Review on June 14 and July 19, 2001, on Petitioner's application for a special use permit to allow the expansion of a nonconforming use on the subject site. Petitioner sought a special use permit pursuant to ART. VI, Sec. C of the Portsmouth Zoning Ordinance to allow modification of the existing facility for use as a temporary peak shaving facility for public utility gas supply.

Petitioner was represented by Robert M. Silva, Esq.. The Board heard the testimony of Gary Munroe, James Grasso, Charles Buckley, Nathan Godfrey, Michael Desmond and Russell Walsh in support of the petition. The Board also heard the testimony of Lawrence Sylvia, Jeffrey Houhanesian, Stepehen McDonald, Mark Hatzberger, Katherine Hatzberger, E. Richard Carpender, Madeline Ray, Fidelis Sylvia, Mario DeSoto and Joseph Marshall.

Mr. Munroe testified that he is the Director of Systems Planning for Providence Gas. He stated the facility on the subject site was constructed in 1963 as a peak shaving facility. A peak shaving facility is a facility in which additional gas is pumped into the system during periods of heavy use. Initially, the gas company injected propane gas into the system at the subject site during peak periods. The present proposal calls for the injection of liquefied natural gas (LNG) at the site. He stated that the site was used continuously as a peak shaving facility from 1963 until 1991. It is also used daily as a gate station where the gas is odorized, metered, pressure adjusted, etc.. Mr. Munroe testified that the sole gas supply to Aquidneck Island is a six inch, Algonquin Gas Transmission line which runs under the Sakonnet River from Tiverton to the site. Algonquin will not provide additional capacity through that line and replacing it with a larger line would be prohibitively expensive. As a result of continued growth on the island, the company is low on capacity during the coldest days of the year. The company plans to address this capacity problem by constructing a permanent peak shaving facility

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Portsmouth Board of Review Petition of Southern Union Company page 2

at the former Derecktor Shipyard in Middletown, however, the permitting process has delayed that project such that it cannot be constructed for use this winter. Providence Gas seeks to utilize the present site as a temporary, peak shaving facility for one year to address any potential capacity shortages this winter. Mr. Munroe explained that the existing building on the site would be removed and two temporary, portable buildings would be installed on the site One would house boilers to heat the LNG and the other a control room. A pump and vaporizer would also have to be installed. All buildings and equipment would be portable. He explained that LNG is super cooled natural gas which is transported in insulated trucks at a temperature of minus 260 degrees farenheit. If a spill were to occur on site it would be contained and because LNG is lighter than air it would dissipate. Propane gas is heavier than air and would stay on the ground where it could be trapped in enclosed spaces and constitute a greater risk of explosion. Mr. Munroe testified that LNG is not combustible in its super-cooled liquid state and one could "throw a match" on the liquid and it would not ignite. Combustible vapor detectors and flame detectors would be installed to provide early warning of any potentially dangerous conditions. He stated that Providence Gas operates other LNG peak shaving facilities in Providence Harbor, on Route 2 in Exeter and in Westerly, Rhode Island. In his thirty years of experience there have been no spills, explosions or harmful emissions.. A certified driver and two technicians would be present whenever a delivery was made and no LNG would be stored on the site when no one is present. Mr. Munroe stated that the maximum number of days the facility would be used in a normal year was eight (8) to ten (10) and the average was five (5) to six (6). Due to the mild weather the facility would not have been used at all last year but if we experience a normal winter this year there is a "high liklihood" some large scale customer would be shut off. Mr. Munroe also explained the lighting plan and that the lighting was designed to shine down on the subject property. He explained that when deliveries were not in progress the lights which illuminated the controls and connections would be shut off.

James Grasso testified that he is the Vice President for Governmental Affairs for Providence Gas. He stated that LNG cannot detonate, it is too concentrated. Liquefied Propane Gas on the other hand could detonate. LNG is a much safer product. He stated that there are thirty (30) LNG sites in New England and that the proposed permanent Middletown facility already has approval from the Middletown Town Council, and Zoning Board of Review, U. S. Environmental Protection Agency, U.S. Navy and R. I. Statewide Planning.

Charles Buckley testified that he is a Senior Vice President for Transgas, the transportation provider for Providence Gas Co. and that he had familiarized himself with the routes to be used and the road conditions. He stated the product would be delivered in a double walled tank truck consisting of an aluminum inner container with an outer steel shell. Each truck could hold up to 10,000 gallons or 800,000 cubic feet of gas. He stated his company made 2,600 deliveries to Rhode Island last year without incident and

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Portsmouth Board of Review Petition of Southern Union Company page 3

that they had hauled 200,000 loads since 1980 with only three incidents in which the truck rolled over. Only one accident in the region, experienced by another carrier, resulted in a puncture and in that incident the product was offloaded without incident. He noted that the trucks are so rugged that one skidded 300 feet at 40 miles per hour without leakage. All drivers would possess CDLs with tanker endorsements. The federal government has strict guidelines on hours per shift at the wheel for such drivers and maintenance of the trucks including special regulations for hauling hazardous materials. He stated that the site is a very easy site to access and the trucks would normally arrive around 3:00 to 3:30 a.m.. He noted that the New England Gas Association has an LNG Fire School in Stowe, Massachusetts, to train local firefighters which would be made available to the local departments.

Nathan Godfrey testified that he is a certified real estate appraiser and managing partner of Newport Appraisal Group, LLC. He had reviewed the site, the surrounding properties, the proposed project and the local ordinance and comprehensive community plan. He testified that many of the proposed physical improvements would be relatively insignificant and there was no indication that the existing facility had a detrimental impact on surrounding properties. He noted that physical improvements would be minimal, traffic increase would be slight and the operation would provide no significant noise, smoke or odor. He concluded that the proposed use would be compatible with the neighboring land uses, would not be detrimental to the surrounding area, that adequate protection was afforded other properties by use of open space and plantings and the proposal was in conformance with the purposes and intent of the comprehensive plan and zoning ordinance.

Michael Desmond testified that he is a registered professional engineer employed by Bryant Associates, Inc., and had been retained to review the traffic safety aspects of the petition. He stated that he had reviewed the site, volume and type of traffic anticipated, the proposed route and existing conditions along the route. He stated the most likely route for all delivery vehicles would be south on Route 24 to Boyds Lane, east on Boyds Lane to Chase Road and East Main Road, south on East Main Road to Sandy Point Avenue, east on Sandy Point Avenue to Wapping Road, south on Wapping Road to Old Mill Lane, east on Old Mill Lane to the site. He reviewed pavement widths intersection angles sight distances and road conditions along that route and also traveled that route as a passenger in a truck of the largest type which would be used to deliver the LNG. He reported that there were no dangerous or unsafe conditions encountered along the route and the presence of the truck along the route would not result in a reduction in safety for other travelers.

Russell Walsh testified that he has been employed by Newport Gaslight Company and Providence Gas Company since 1966. He stated that as a gas supply supervisor he operated the Old Mill Lane facility and had records of propane deliveries to the site from 1978 to 1990. He stated the facility was used a peak shaving facility until 1991 and

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Portsmouth Board of Review Petition of Southern Union Company page 4

during winter months there were daily deliveries of propane and at times more than one delivery of per day. He stated that the propane was delivered by tractor trailers along the same route proposed to be used for the LNG and he recalled only one minor accident in which the truck slid off the roadway resulting in no spill, injury or damage.

Lawrence Sylvia testified that he has lived in the neighborhood for many years and had never seen truck as large as those which would be delivering the LNG. He stated that all neighbors are against the proposal and that the present facility is noisy and smelly and incompatible with the neighborhood.

Jeffrey Houhanesian testified that the delivery route was too narrow and hazardous for such large trucks and there was too much risk of an explosion.

Stephen McDonald stated that he would never have purchased his house if he knew the facility would be used for transfer and not just as a pumping station. He noted that the truck in which Mr. Desmond took his test drive drove over his lawn on two occasions. He cited a drainage problem in the area and expressed fear that the berms and landscape barriers would disrupt existing drainage patterns and prevent his property from shedding storm water.

Mark Hatzberger echoed the sentiments expressed by others and expressed concern regarding whether there would be sufficient security to prevent trespassing by the many neighborhood children.

Katherine Hatzberger stated that the traffic engineers study did not take into account the rolling fogbanks which envelope the roads abutting the nearby turf farms and which make early morning travel on Wapping Road very dangerous. She stated that she had to "nose out" into Wapping Road to exit Old Mill Lane and is sure the tractor trailer operator will have to also. She described the present facility as smelly and noisy.

E. Richard Carpender stressed that the neighborhood was primarily residential and early morning truck traffic was not conducive to a peaceful neighborhood. If the Board saw fit to allow the proposal he stressed that it be a for the requested one year period only.

Marlene Ray stated that there is a drainage problem in the area and that school buses have trouble exiting Old Mill Lane. She stressed that there are a number of children in the neighborhood.

Fidelis Sylvia stated that the facility does not belong in a residential area. She stated that the tanker truck needed every inch of room to make the corner at Old Mill Lane and Wapping Road and the roads are worse in the winter.

Portsmouth Board of Review Petition of Southern Union Company page 5

Mario DeSoto testified that he is subjected to gas smells from the present facility and has seen fires in the rear portion of the site.

Joseph Marshall stated that he doe not live in the immediate area but believed the facility should be approved so that the gas company could continue to provide many residents with necessary services.

The Board determined that due to the nature and location of the project, and the character of the surrounding area, it was necessary to impose certain conditions upon any approval of the project. The purpose of the conditions was to minimize possible adverse impacts on neighboring properties and prevent certain features from becoming objectionable, hazardous or a nuisance. The Board also determined that many of the judgments which allowed a grant of the permit were based on petitioner's request that the proposed permit be effective for a period of one year only. The fact that the proposed use and its impacts were only temporary was an important factor in the Board's determinations. The temporary nature of the proposed use prevented its objectionable features from ripening into characteristics which would have a detrimental impact on neighboring properties, however any change to a permanent use may result in more adverse impacts and different findings by the Board. The Board determined that there was competent evidence on the record to support a limit on the duration of the proposed use pursuant to Article X, Section 3C of the Portsmouth Zoning Ordinance and RIGL 45-24-43(3). Those conditions were unanimously adopted by the Board, and are attached hereto as Exhibit A.

The Board considered the project as proposed with the conditions imposed by the Board and determined that the project would not be detrimental to the surrounding area and would be compatible with neighboring land uses. The Board further decided that the project would not constitute a nuisance or a hazard, that the proposal provided safe vehicular access and parking and that adequate protection was afforded surrounding properties by the use of open space and plantings. The Board noted further that solar rights of abutters were addressed, control of noise, smoke, odor, lighting and other objectionable features was provided, the project complied with the Comprehensive Community Plan and the Zoning Ordinance and that the health, safety and welfare of the community were protected. Accordingly, the Board voted unanimously to grant Petitioner a special use permit pursuant to ART. VI, Sec. C of the Portsmouth Zoning Ordinance to allow modification of the existing facility for use as a temporary peak shaving facility for public utility gas supply. The grant of this special use permit is specifically limited to one year in duration, (as more specifically set forth in Exhibit A), and conditioned upon Petitioner's compliance with the conditions set forth on Exhibit A attached hereto and made a part hereof.

The Narragansett Electric Company EFSB Docket No. SB-2021-04 Attachment Portsmouth 1-8-1 Page 6 of 8

Portsmouth Board of Review Petition of Southern Union Company page 6

Portsmouth Board of Review by:

wand

James Edwards, Secretary

Date: 9/25/01 \_\_\_\_

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Portsmouth Board of Review Petition of Southern Union Company page 7

## EXHIBIT A SPECIAL CONDITIONS PETITION OF SOUTHERN UNION COMPANY

- 1. That the duration of the use allowed pursuant to this special use permit is one year and the facility shall not be allowed to operate as a peak shaving facility utilizing LNG fuel after the expiration of one year from the date of this decision.
- 2. Peak shaving operation, (LNG vaporization), will only be allowed to take place after December 1, 2001 and prior to March 1<sup>st</sup> 2002, during days when the outdoor air temperature is below fifteen (15) degrees Fahrenheit.
- 3. Petitioner shall enclose the perimeter of the property with a chain link fence no less than six (6) feet in height, topped with barbed wire.
- 4. All buildings shall be monitored by an intrusion alarm system equipped with remote, off site monitoring and no external, audible alarm.
- 5. Petitioner or its representatives shall notify the Portsmouth Fire Department at least one hour in advance of all LNG deliveries to the site and of the site being placed into operation.
- 6. The 150 watt high-pressure sodium lights will be operational during LNG vaporization only and shall remain off at all other times.
- 7. The site shall not be used for LNG storage.
- 8. All deliveries and/or truck traffic to the site shall be restricted to the hours between 9:00 o'clock p.m. and 6:00 o'clock a.m. on any day.
- 9. Prior to the arrival of any LNG delivery petitioner shall ensure that the requisite travel areas on the site are free of snow and ice.
- 10. Petitioner shall provide the local Fire Department with training at the LNG Fire School in Stowe, Massachusetts, at no cost to the department. Said training shall be conducted prior to commencement of operation of the facility.
- 11. Safety procedures and protocols shall be explained to the neighbors prior to operation of the facility.

Portsmouth Board of Review Petition of Southern Union Company page 8

> 12. Trucks will be shut down and the key removed from the vehicle prior to offloading of LNG.

## RECEIVED

AUG 27 2001



Rhode Island Department of Environmental Management

235 Promenade Street, Providence, RI 02908-5767

TDD 401-831-5508

August 23, 2001

Providence Gas Company c/o Charles K. Meunier, Vice President 100 Weybosset Street Providence, RI 02903

### **Insignificant Alteration - Permit**

RE: Application No. 01-0317 in reference to the property and proposed project located:

approximately 120 feet south of Old Mill Road and approximately 1050 feet southeast of the intersection of Old Mill Road and Wapping Road, Utility Pole No. 17, Assessor's Plat 68, Lot 74, Portsmouth, RI.

Dear Mr. Meunier:

Kindly be advised that the Department of Environmental Management's ("DEM") Freshwater Wetlands Program ("Program") has completed its review of your **Request for Preliminary Determination** application. This review included a site inspection of the above referenced property ("subject property") and an evaluation of the proposed facility upgrade, including construction of two buildings and an impoundment area, as illustrated and detailed on site plans submitted with your application. These site plans were received on July 26, 2001.

Our observations of the subject property, review of the site plans and evaluation of the proposed project reveals that alterations of freshwater wetlands are proposed. However, pursuant to Rule 9.03 of the Rules and Regulations Governing the Administration and Enforcement of the Fresh Water Wetlands Act (Rules), this project may be permitted as an **insignificant alteration** to freshwater wetlands under the following terms and conditions:

Terms and Conditions for Application No. 01-0317:

- 1. This letter is the DEM's permit for this project under the R.I. Fresh Water Wetlands Act, Rhode Island General Laws (RIGL) Section 2-1-18 et seq.
- 2. This permit is specifically limited to the project, site alterations and limits of disturbance as detailed on the site plans submitted with your application and received by the DEM on July 26, 2001. A copy of the site plans stamped approved by the DEM is enclosed. Changes or revisions to the project which would alter freshwater wetlands are not authorized without a permit from the DEM.
- 3. Where the terms and conditions of the permit conflict with the approved site plans, these terms and conditions shall be deemed to supersede the site plans.
- 4. You must notify this Program in writing immediately prior to the commencement of site alterations and upon completion of the project.

Office of Water Resources/Tel.(401) 222-4700/Fax. (401) 222-6177

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Application No. 01-0317

- 5. A copy of the stamped approved site plans and a copy of this permit must be kept at the site at all times during site preparation, construction, and final stabilization. Copies of this permit and the stamped approved plans must be made available for review by any DEM representative upon request.
- 6. Within ten (10) days of the receipt of this permit, you must record this permit in the land evidence records of the Town of Portsmouth and supply this Program with written documentation obtained from the Town showing this permit was recorded.
- 7. The effective date of this permit is the date this letter was issued. This permit expires four (4) years from the date of issue.
- 8. Any material utilized in this project must be clean and free of matter that could pollute any freshwater wetland.
- 9. Prior to commencement of site alterations, you shall erect or post a sign resistant to the weather and at least twelve (12) inches wide and eighteen (18) inches long, which boldly identifies the initials "DEM" and the application number of this permit. This sign must be maintained at the site in a conspicuous location until such time that the project is complete.
- 10. Temporary erosion and sediment controls detailed or described on the approved site plans shall be properly installed at the site prior to or commensurate with site alterations. Such controls shall be properly maintained, replaced, supplemented, or modified as necessary throughout the life of this project to minimize soil erosion and to prevent sediment from being deposited in any wetlands not subject to disturbance under this permit.
- 11. Upon permanent stabilization of all disturbed soils, temporary erosion and/or sediment controls consisting of staked haybales or silt fencing must be removed.
- 12. You are obligated to install, utilize and follow all best management practices detailed or described on the approved site plans in the construction of the project to minimize or prevent adverse impacts to any adjacent freshwater wetlands and the functions and values provided by such wetlands.
- 13. This Program has made a specific revision to the approved site plans. This revision is clearly marked in red on the approved plans. This project must take place in compliance with this revision. Specifically, the Limit of Disturbance and location of the soil erosion and sedimentation controls has been relocated to allow for a more realistic work area.

This permit is valid for the original applicant only and is not transferable to another person unless the new owner completes and submits an Application for Permit Transfer in accordance with Rule 9.08.

You are required to comply with the terms and conditions of this permit and to carry out this project in compliance with the Rules at all times. Failure to do so may result in an enforcement action by this Department.

In permitting the proposed alterations, the DEM assumes no responsibility for damages resulting from faulty design or construction.

## Request:

Did the Company represent to the EFSB in its 2019 Petition for Declaratory Ruling that the Old Mill Lane "Property could not support a permanent LNG facility"? If so, has the Company acquired additional property adjacent to the existing site?

## Response:

No, the quoted language appeared in the Company's September 16, 2020 Petition for Declaratory Order in Docket No. SB-2020-02. The Company has not requested or filed an application for a permanent LNG facility at Old Mill Lane and has not acquired additional property adjacent to the existing site.

## Request:

The Siting Report's discussion of "Alternatives" in Section 4.3 indicates that use of either Navy site would not be expected to have any public health, safety or welfare, or environmental or social adverse impacts. Please state whether the reason such sites were not selected was primarily based upon the expected costs of construction of such facilities.

## Response:

As noted in the last paragraph of Siting Report Section 4.3, the Navy Site "was ultimately rejected due to significant infrastructure investments required for connection to the natural gas distribution system. In addition, the 'downstream' location of the system did not provide the operational advantages of a location closer to the take station."

## Request:

The Company's response to EFSB Record Request 14 states that "the current proposal provides higher capacity than an alternative site due to hydraulic conditions." Please describe all such alternative sites referenced, including their location and hydraulic conditions as compared to the Old Mill Lane site.

## Response:

The only other feasible alternative sites identified for a portable liquefied natural gas ("LNG") vaporization and injection facility was a new site located at either Tank Farm 3 or Tank Farm 5 on land owned by the Naval Station Newport in Middletown, Rhode Island.

However, these sites had significant disadvantages and presented significant obstacles. In addition to the design, site development, permitting and construction required for an LNG facility located at Naval Station Newport, there was no infrastructure available at these locations to carry the gas away to the gas distribution system. The new LNG facility would, therefore, necessitate construction of natural gas infrastructure including new gas main piping and valves, along with an additional pressure regulation facility in order to regulate the supply injected by the LNG facility into the existing distribution system and to maximize vaporization rate.

Ultimately, these alternatives were rejected because adequately sized distribution system piping already existed within Old Mill Lane, as did existing pressure regulation stations. Moreover, the Old Mill Lane site proved to be more hydraulically suitable for providing superior peak shaving support to the entire distribution system from the Old Mill Lane location, due to the location at the head of the system, as opposed to a more remote injection facility located downstream within the distribution system.

Please refer to Attachment Portsmouth 1-11 for the options studied and the hydraulic study performed to illustrate and compare the different alternatives. Ultimately, the alternative sites did not match the vaporization rate of 750 Dth / hour that was achievable from the Old Mill Lane site, despite the pipe infrastructure improvements and a new pressure regulation station improvement for the 99 psig and 55 psig systems that could have been implemented for an alternative site at Naval Station Newport.

Locations	Town	Pressure Systems	Existing main to extend from	Size of Main Extension	Length of Main Extension (approx. miles)	Reg Pit? 99 to 55 psig	Volume of Portable Gas (Dth/hr)
Tank Farm 5 Greene Lane (from Navy Base)	MDT	99 PSIG	12 inch CS	12 inch PL	2	No	310
Tank Farm 5 Greene Lane (From Maple @ W Main)	MDT	99 PSIG	8 inch PL	12 inch PL	3	No	279
Tank Farm 5 Greene Lane (from Navy Base)	MDT	99 PSIG	12 inch CS	16 inch steel	2	No	396
Tank Farm 5 Greene Lane (From Maple @ W Main)	MDT	99 PSIG	8 inch PL	16 inch steel	3	No	343
Tank Farm 5 Greene Lane (from Navy Base)	MDT	99 PSIG	12 inch CS	12 inch PL	2	Yes	443
Tank Farm 5 Greene Lane (From Maple @ W Main)	MDT	99 PSIG	8 inch PL	12 inch PL	3	Yes	412
Tank Farm 5 Greene Lane (from Navy Base)	MDT	99 PSIG	12 inch CS	16 inch steel	2	Yes	528
Tank Farm 5 Greene Lane (From Maple @ W Main)	MDT	99 PSIG	8 inch PL	16 inch steel	3	Yes	477
Tank Farm 3 Greene Lane (from Navy Base)	Portsmouth	99 PSIG	connects to 12" CS	12 inch PL	3.8	No	381
Tank Farm 3 Greene Lane (From Maple @ W Main)	Portsmouth	99 PSIG	connects to 8" PL	12 inch PL	4.5	No	350
Tank Farm 3 Greene Lane (from Old Mill Ln)	Portsmouth	99 PSIG	connects to 16" CS	12 inch PL	6.5	No	41
Tank Farm 3 Greene Lane (from Navy Base)	Portsmouth	99 PSIG	connects to 12" CS	12 inch PL	3.8	Yes	463
Tank Farm 3 Greene Lane (From Maple @ W Main)	Portsmouth	99 PSIG	connects to 8" PL	12 inch PL	4.5	Yes	432
Tank Farm 3 Greene Lane (from Old Mill Ln)	Portsmouth	99 PSIG	connects to 16" CS	12 inch PL	6.5	Yes	122
Tank Farm 3 Greene Lane (from Navy Base)	Portsmouth	99 PSIG	connects to 12" CS	16 inch steel	3.8	No	487
Tank Farm 3 Greene Lane (From Maple @ W Main)	Portsmouth	99 PSIG	connects to 8" PL	16 inch steel	4.5	No	436
Tank Farm 3 Greene Lane (from Old Mill Ln)	Portsmouth	99 PSIG	connects to 16" CS	16 inch steel	6.5	No	94
Tank Farm 3 Greene Lane (from Navy Base)	Portsmouth	99 PSIG	connects to 12" CS	16 inch steel	3.8	Yes	569
Tank Farm 3 Greene Lane (From Maple @ W Main)	Portsmouth	99 PSIG	connects to 8" PL	16 inch steel	4.5	Yes	519
Tank Farm 3 Greene Lane (from Old Mill Ln)	Portsmouth	99 PSIG	connects to 16" CS	16 inch steel	6.5	Yes	172

NOTES:

Tank Farm 5 - Max vaporization rate = 528 Dth/hr

Tank Farm 3 - Max vaporization rate = 569 Dth/hr

Old Mill Lane - Max vaporization rate - 750 Dth/hr (limited by vaporizer size)