

April 17, 2018

Debra Howland Executive Director and Secretary  
New Hampshire Public Utilities Commission  
21 S. Fruit Street, Suite 10  
Concord New Hampshire 03301  
RE: DG 17-198 Granite Bridge Pipeline and LNG liquefaction and storage facility  
Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities

Thank you for accepting my comments and questions on the Granite Bridge pipeline project and associated LNG facility to be sited in Epping, NH.

I attended the pre-hearing conference on March 9, 2018 and have submitted one comment relative to transparency, one questioning the need for the pipeline capacity, and one questioning the size and cost of the LNG facility. I continue to have questions after reading the filing documents, transcript, testimony in other relevant dockets, and Liberty's annual reports. Since I only have access to publicly available documents, I hope that those who are authorized to receive answers to my questions or correct my comments will kindly check into issues where my information may be incomplete.

**Is Granite Bridge only a segment of a larger project plan?**

From the beginning, Granite Bridge has been promoted as offering an alternate source of supply. But where is the evidence of a supply source from PNGTS?

From page 56 of 62 of [https://www.puc.nh.gov/Regulatory/Docketbk/2017/17-152/INITIAL%20FILING%20-%20PETITION/17-152\\_2017-10-02\\_ENGI\\_LCIRP.PDF](https://www.puc.nh.gov/Regulatory/Docketbk/2017/17-152/INITIAL%20FILING%20-%20PETITION/17-152_2017-10-02_ENGI_LCIRP.PDF)

"Given the Company's growing Design Day and peak period demand requirements discussed in Section IV, the Company also incorporated the following assumptions in its SENDOUT® analysis to determine the incremental resources and associated capacity levels to meet the projected demand requirements:

☐ EnergyNorth assumed a contract with ENGIE for combination liquid/vapor service delivered to the Company's city-gates or LNG facilities with an MDQ of up to 7,000 Dth/day would be available for the five-year forecast horizon to help meet the Company's projected Design Day shortfall (see Table 35 above).

☐ The Company assumed that an extension of its system would be capable of accessing incremental deliveries of natural gas supplies to serve incremental demand requirements.

☐ The Company included the following gas supply resource options in the Resource Mix module to determine the most cost-effective mix of resources and capacity levels (see Section V.C.3 above):

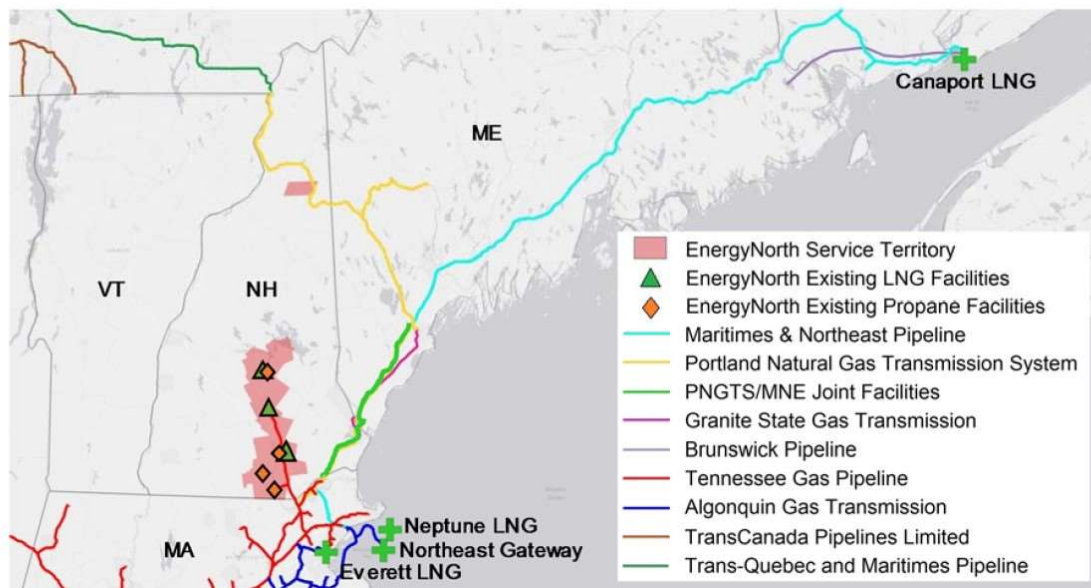
- o Repsol delivered service to Dracut, Massachusetts and/or directly to its distribution system, with an MDQ of up to 150,000 Dth/day of winter service; and

- o Pipeline transportation capacity from the Dawn Hub on the TCPL Mainline and PNGTS pipeline systems to Dracut, Massachusetts and/or directly to its distribution system, with an MDQ of up to 150,000 Dth/day.

The SENDOUT® model produces an optimization solution for each planning scenario according to a least-cost economic dispatch of supplies, given the constraints on supply availability, storage or transportation capacity, which are always honored to avoid penalties and to ensure reliability of supply. Table 36 below summarizes the results of the Resource Mix runs in SENDOUT® for the various planning scenarios and identifies the location of the detailed SENDOUT® output for each scenario in Appendix 6."

Here's the infrastructure map from page 37 of 62 of the 2017 LCIRP.

**Figure 5: Liberty Utilities Service Territory and Infrastructure Map**



“With respect to upstream capacity, EnergyNorth has firm transportation contracts on TGP (106,833 Dth/day) and PNGTS (1,000 Dth/day) to provide a total daily deliverability of 107,833 Dth/day to its citygate stations from three natural gas supply sources (i.e., Canadian supply, domestic supply from production and market area regions, and underground storage in Pennsylvania and New York).”

Currently, Liberty only receives 1,000 Dth/day from PNGTS. Where will this 150,000 DTH/Day come from? What other infrastructure will need to be built to source this new supply?

Referring to the PNGTS website, <http://www.pngts.com/about-2/>

“PNGTS is regulated by the Federal Energy Regulatory Commission (FERC). It is currently authorized to move 168 million cubic feet of natural gas per day on its 295 miles of high-strength buried steel pipeline. This is enough energy to heat 573,000 New England homes each day. PNGTS is currently seeking authority to expand its service capability by 42 million cubic feet a day, an increase of 25 percent in the amount of natural gas available to customers via the pipeline.”

It doesn't seem at all reasonable that PNGTS would assign 150,000 DTH/Day to a single shipper, leaving only 18,000 DTH/Day (or 60,000 DTH/Day) to honor all other contracts.

The Gas Nomination website, <http://www.gasnom.com/ip/pngts/> lists all existing contracts for PNGTS. A total of 279,840 DTHs appear to be contracted as of April, 2018. 201,304 DTHs are “Winter Only,” 78,300 DTHs are contracted between April 2018 and October 2018 (6 month contracts?), 118,436 DTHs in contracts are set to expire in 2019, and 82,404 DTHs in contracts are set to expire in 2032. It's hard to see how the available PNGTS capacity would accommodate unrestricted access to 75,000 DTH or 150,000 DTH/Day for Liberty.

**TSP Name:** Portland Natural Gas Transmission System  
**TSP:** 159747872

**Index of Customers**

Pipeline Name	Pipeline ID Code	Report Date	Original/ Revised Indicator	First Day of Calendar Quarter					Unit of Measurement for Transportation MDQ	Unit of Measurement for Storage MDQ	Contact Person & Phone Number	Footnote ID
Shipper Name	Shipper ID	Shipper Affiliation Indicator	Rate Schedule	Contract Number	Contract Effective Date	Contract Primary Term Expiration Date	Days Unit Next Possible Contract Expiration	Negotiated Rates Indicator	For Transportation, Max Daily Quantity	For Storage, Max Daily Quantity	Footnote ID	
Agent or Asset Manager Name	Agent or Asset Manager Affiliation Indicator			Footnote ID								
Point Identifier/Point Name Code	Point Identification Code Qualifier			Point Identification Code		Zone Name		For Transportation Maximum Daily Quantity		For Storage Maximum Daily Quantity	Footnote ID	
Footnote, Footnote Number, Footnote Text												
H	Portland Natural Gas Transmission System	C001217	04/02/2018	O	04/01/2018				T	T		
D	Bay State Gas Company	69340214		N	FT Transportation	FT-1997-001	03/10/1999	03/09/2019	432	N	4900	
P	MQ Dracut MA - TGP	95				272132		na			4900	
P	M2 Pittsburg Interconnect	95				247231		na			4900	
D	Bay State Gas Company	69340214		N	FT Transportation	FT-1997-002	03/10/1999	03/09/2019	432	Y	40600	01
P	MQ Haverhill MA - TGP	95				255295		na			40600	
P	M2 Pittsburg Interconnect	95				247231		na			40600	
D	DTE Energy Trading, Inc.	806708806		N	FT Transportation	FT-1997-005	03/10/1999	03/09/2019	432	N	30000	
P	MQ Dracut MA - TGP	95				272132		na			30000	
P	M2 Pittsburg Interconnect	95				247231		na			30000	
D	TransCanada Energy Ltd.	253892756		Y	FT Transportation	FT-2010-001	07/01/2010	03/09/2019	432	N	12767	
P	MQ Dracut MA - TGP	95				272132		na			12767	
P	M2 Pittsburg Interconnect	95				247231		na			12767	
D	Wausau Paper Mills, LLC	802740753		N	FT Transportation	FT-1997-007	10/01/1999	09/30/2019	637	N	4600	
P	MQ Dracut MA - TGP	95				272132		na			4600	
P	M2 Pittsburg Interconnect	95				247231		na			4600	
D	WestRock MW, LLC	1095041		N	FT Transportation	FT-1998-002	03/10/1999	03/09/2019	432	N	4702	
P	MQ Rumford ME - Mead Oxford	95				253051		na			3000	
P	MQ Dracut MA - TGP	95				272132		na			1702	
P	M2 Pittsburg Interconnect	95				247231		na			4702	
D	H.Q. Energy Service (U.S.) Inc.	24888722		N	FT Transportation	FT-1999-002	05/01/1999	03/09/2019	432	N	12767	
P	MQ Dracut MA - TGP	95				272132		na			12767	
P	M2 Pittsburg Interconnect	95				247231		na			12767	
D	AltaGas Marketing (U.S.) Inc.	007921120		N	FT Transportation	FT-2015-005	04/01/2016	10/31/2019	668	Y	8100	
P	MQ Westbrook M&N	95				274152		na			8100	
P	M2 Pittsburg Interconnect	95				247231		na			8100	
D	Bay State Gas Company	69340214		N	FT Transportation	FTN-BSG-0003	12/01/2017	11/30/2032	5447	N	16000	1
P	MQ Dracut MA - TGP	95				272132		na			16000	
P	M2 Pittsburg Interconnect	95				247231		na			16000	
D	Irving Oil Terminals Operations LLC	189991701		N	FT Transportation	FTN-IOT-0004	12/01/2017	11/30/2032	5447	N	25401	1
P	MQ Dracut MA - TGP	95				272132		na			25401	
P	M2 Pittsburg Interconnect	95				247231		na			25401	
D	Liberty Utilities (Energy/North Natural Gas) Corp.	194387015		N	FT Transportation	FTN-ENH-0005	12/01/2017	11/30/2032	5447	N	1000	1
P	MQ Berlin	95				265955		na			1000	
P	M2 Pittsburg Interconnect	95				247231		na			1000	
D	Northern Utilities Inc.	49286305		N	FT Transportation	FTN-NUH-0001	12/01/2017	11/30/2032	5447	N	40003	1
P	MQ Newington NH - Granite State	95				247229		na			40003	
P	M2 Pittsburg Interconnect	95				247231		na			40003	
D	Emera Energy Services, Inc.	101069293		N	FT Transportation	SFD-EEI-0015	04/01/2018	10/31/2018	213	N	20000	1
P	MQ Dracut MA - TGP	95				272132		na			20000	
P	M2 Pittsburg Interconnect	95				247231		na			20000	
D	Morgan Stanley Capital Group, Inc.	130198013		N	FT Transportation	SFD-MSC-0014	04/01/2018	10/31/2018	213	N	10000	1
P	MQ Dracut MA - TGP	95				272132		na			10000	
P	M2 Pittsburg Interconnect	95				247231		na			10000	
D	Twin Eagle Resource Management, LLC	965177889		N	FT Transportation	SFD-TER-0016	04/01/2018	10/31/2018	213	N	5000	1
P	MQ Dracut MA - TGP	95				272132		na			5000	
P	M2 Pittsburg Interconnect	95				247231		na			5000	
D	DTE Energy Trading, Inc.	806708806		N	FT Transportation	SFD-DTE-0019	04/01/2018	04/30/2018	30	N	1600	1
P	MQ Westbrook M&N	95				274152		na			1600	
P	M2 Pittsburg Interconnect	95				247231		na			1600	
D	DTE Energy Trading, Inc.	806708806		N	FT Transportation	SFD-DTE-0020	04/01/2018	04/30/2018	30	N	10700	1
P	MQ Dracut MA - TGP	95				272132		na			10700	
P	M2 Westbrook M&N	95				274152		na			10700	
D	Repsol Energy North America Corporation	805486276		N	FT Transportation	SFD-REN-0018	04/01/2018	04/30/2018	30	N	5000	1
P	MQ Westbrook M&N	95				274152		na			5000	
D	Repsol Energy North America Corporation	805486276		N	FT Transportation	SFD-REN-0018	04/01/2018	04/30/2018	30	N	5000	1
P	MQ Westbrook M&N	95				274152		na			5000	
P	M2 Pittsburg Interconnect	95				247231		na			5000	
D	Repsol Energy North America Corporation	805486276		N	FT Transportation	SFD-REN-0017	04/01/2018	10/31/2018	213	N	9000	1
P	MQ Westbrook M&N	95				274152		na			9000	
P	M2 Pittsburg Interconnect	95				247231		na			9000	
D	Freepoint Commodities, LLC	001024195		N	FT Transportation	SFD-FPC-0021	04/01/2018	10/31/2018	213	N	17000	1
P	MQ Dracut MA - TGP	95				272132		na			17000	
P	M2 Westbrook M&N	95				274152		na			17000	
F	1 winter only contract											

However, there is another project proposed on the PNGTS website, <http://www.pngts.com/expansion/>

“Portland Natural Gas Transmission System (PNGTS) is proposing Portland XPress to increase New England’s supply of energy without construction of new underground facilities. Added to existing capacity, Portland XPress will be capable of transporting 0.2 billion cubic feet a day (Bcf/d) to areas where it is in great demand.

This increase in much-needed natural gas access for New England will be achieved via modifications to the existing compressor station in Westbrook Maine and horsepower addition to the existing compressor station in Eliot, Maine. Both sites are jointly owned by PNGTS and Maritimes and Northeast Pipeline (MNE).

The proposed project will be built in three phases, with the last expected to go into service by November 2020. All work will be conducted on existing property.

Investment in new pipeline infrastructure will help meet New England's growing energy needs and ensure long-term, firm delivery service of natural gas to homes and businesses in the region."

Actually, in the Staff report on page 30 of 49 from IR 15-124, PNGTS refers to much more ambitious plans, <https://www.puc.nh.gov/Regulatory/Docketbk/2015/15-124/LETTERS-MEMOS-TARIFFS/15-124%202015-09-15%20STAFF%20REPORT.PDF>

"PNGTS is in the early stages of developing a new expansion of its system that would be in addition to the capacity added as a result of its recent Continent-to-Coast (C2C) expansion project. By efficiently expanding its existing pipeline system, PNGTS believes it can offer EDCs a competitive alternative to the Access Northeast and NED projects. PNGTS is presently considering two scenarios. The first scenario is a scalable medium-sized project with incremental firm capacity up to 0.6 Bcf/day over a level that includes the C2C project. The new expansion would run from Pittsburg, New Hampshire to either Westbrook, Maine or Dracut, Massachusetts depending on the delivering points selected by expansion customers and provide firm transportation service to EDCs, LDCs and other markets in New England through the addition of three new compressor stations. The second scenario is a large expansion project up to 0.9 Bcf/day of incremental firm capacity over a level that includes the C2C project. This project would serve the same markets as the smaller project and would be based on the addition of two new compressor stations and 130 miles of looping of the existing 24" line. PNGTS states that any expansion of the Joint Facilities would depend on an analysis of existing facilities performed in conjunction with other changes proposed by co-owner Maritimes.

In addition to the above mentioned improvements on the PNGTS pipeline, incremental capacity would be required upstream on the TransCanada and Iroquois pipelines. TransCanada will add compressor and pipeline facilities from its interconnection with Iroquois at Waddington, New York to Pittsburgh, New Hampshire. Under the 0.6 Bcf/day scenario, TransCanada will add new compressors at 5 locations but looping would not be necessary. Under the 0.9 Bcf/day scenario, TransCanada will add new compressors at 5 locations and 143 miles of 30 inch looping."

Proposing a pipeline solution and calculating benefits to customers based on unrestricted access of up to 150,000 DTH/Day, from a source that does not yet exist, appears to be the ultimate example of project segmentation. Although the Granite Bridge pipeline won't face eminent domain or significant environmental challenges, the supply to that pipeline on one end will most definitely face those challenges in siting compressor stations and many miles of looping pipeline in other parts of the State and in Maine. How is the PUC supposed to approve a 150,000 DTH/Day pipeline that only has 5,000 DTH/Day of delivery available today and be comfortable that ratepayers won't face stranded costs if the Portland Xpress project never gets built?

On page 99 of 104 of Killeen & Stephens, [https://www.puc.nh.gov/Regulatory/Docketbk/2017/17-198/TESTIMONY/17-198\\_2018-04-10\\_ENGI\\_REV\\_PDTESTIMONY\\_KILLEEN\\_STEPHENS.PDF](https://www.puc.nh.gov/Regulatory/Docketbk/2017/17-198/TESTIMONY/17-198_2018-04-10_ENGI_REV_PDTESTIMONY_KILLEEN_STEPHENS.PDF)

“Q. Does the PNGTS service require expansion of existing pipeline facilities or any other construction requirements?”

A. Yes, it does. As part of the approximately \$80 million Portland XPress Project, PNGTS will need to develop and construct certain enhancements to existing infrastructure, including upstream capacity expansions.<sup>71</sup> These facility additions are relatively minor and, in the case of PNGTS, are upgrades at certain compressor stations. Given the relatively minimal construction required, the capacity associated with the PNGTS precedent agreement is likely subject to minimal development risk.”

<sup>71</sup>

And, on page 54 of 62 of the 2017 LCIRP,

“Mix module of its SENDOUT® analysis discussed in Section V.D.

An open season has been conducted for firm transportation on the TCPL Mainline from the Dawn Hub to East Hereford in conjunction with the proposed downstream expansion on PNGTS.<sup>48</sup> Specifically, the proposed PNGTS Portland XPress project is an expansion of the PNGTS system, which will provide firm transportation of up to 122,900 Dth/day of gas supplies from the East Hereford interconnect with TCPL Mainline to Westbrook, Maine (i.e., the interconnect with MNE-US) and Dracut, Massachusetts (i.e., the interconnect with Tennessee), or other potential delivery points as discussed below.<sup>49</sup> The Portland XPress project involves construction of compression only on both the TCPL Mainline and PNGTS/MNE Joint Facilities, and will be phased-in over three years beginning on November 1, 2018.<sup>50</sup> Capacity on the TCPL/PNGTS systems would provide the Company with access to the Dawn Hub, which is one of the most liquid gas supply points in North America with access to numerous suppliers and significant storage capacity. The Company has also included the TCPL/PNGTS capacity as a potential option in the Resource Mix module of its SENDOUT® analysis discussed below in Section V.D.

<sup>48</sup> See, TransCanada’s Firm Transportation, New Capacity Open Season, dated August 31, 2017.

<sup>49</sup> See, Portland XPress Project Binding Open Season, dated August 30, 2017.

<sup>50</sup> See, PNGTS, presentation at the Northeast LDC Forum, June 6, 2017.”

Searches for links for footnotes 48 and 49 did not return any results. Footnote 50 leads to a password protected site to access presentations. Access to the information in these footnotes would be very helpful in assessing how far the 122,900 DTH/Day increase in PNGTS capacity will stretch to meet the criteria used in the SENDOUT analysis.

The statement by Mr. Ritchie in the testimony from March 9, 2018, should give the Commission pause in considering the feasibility of the project, [https://www.puc.nh.gov/Regulatory/Docketbk/2017/17-198/TRANSCRIPTS-OFFICIAL%20EXHIBITS-CLERKS%20REPORT/17-198\\_2018-03-26\\_TRANSCRIPT\\_03-09-18.PDF](https://www.puc.nh.gov/Regulatory/Docketbk/2017/17-198/TRANSCRIPTS-OFFICIAL%20EXHIBITS-CLERKS%20REPORT/17-198_2018-03-26_TRANSCRIPT_03-09-18.PDF)

Page 55, Mr. Ritchie

“Liberty’s contract with Portland Natural Gas Transmission is one of several between PNGTS and other local distribution companies that are part of PNGTS’s project that will provide the capacity Liberty needs to utilize the Granite Bridge pipeline. The other companies have signed contracts of much -- for much larger volumes. Approval of those contracts, filed in Massachusetts shortly before Liberty filed this docket, is expected within a few weeks. Thus, substantial delay in obtaining approval here may cause the other parties to proceed without Liberty, which would cause Liberty to have to renegotiate the

agreements likely at far less favorable terms, all to ultimate detriment of customers.

We have communicated with other parties in advance of this prehearing conference and has suggested an admittedly aggressive procedural schedule. We respectfully request the Commission's support for a schedule that would allow the Commission order by midsummer."

Liberty's 2017 Annual Report has just been published. I plan to revise some of my comments to reflect this new information.

Thank you very much for accepting my comments and questions.

Patricia A Martin  
17 Farrar Road  
Rindge, NH 03461