

July 23, 2019

Debra Howland, Executive Director and Secretary  
New Hampshire Public Utilities Commission  
21 S. Fruit Street, Suite 10  
Concord, NH 03301

RE: DG17-198 Granite Bridge Pipeline and LNG liquefaction and storage facility  
Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities  
DG 17-152 Least Cost Integrated Resource Plan

Dear Ms. Howland:

Please accept the following comments, urging the non-acceptance of the proposed Granite Bridge Pipeline, based on claims regarding demand and cost.

**I. The question of demand**

DG 17-152 states “the Company has prepared forecasts of Planning Load requirements under a Base Case scenario and under a range of weather and growth scenarios.”

However, the University of New Hampshire’s Carsey School of Public Policy study “New Hampshire’s Electricity Future: Cost, Reliability, and Risk” states, “there is no immediate need for New Hampshire to expand natural gas pipeline infrastructure” (May 10, 2017, *Carsey Perspectives*). A January 3, 2018 CNN post from Concord, NH states, “Despite the ongoing cold weather in New Hampshire, there’s no shortage of heating oil.”

Given that methane gas is used to generate electricity, as well as to heat homes, I corresponded with the lead author of the Carsey study, to determine whether methane sufficiency applied to the power grid generally, or if it specifically addressed home heating needs. Dr. Wake responded, “we don’t need any more pipelines, we just need the flow of natural gas to be better managed (which is already happening)” (July 16, 2019 email correspondence, Cameron P. Wake, PhD, Research Professor, Earth Systems Research Center, University of NH).

Furthermore, in their 2018 annual report, Liberty Utilities shows an OVERsupply of 62.3%, or over 11,000,000 extra DTHs were available in 2018 (<https://www.puc.nh.gov/Gas-Steam/annualreports.html>, last column, bottom of page 52 of 54). There were NO shortages of gas—there was actually a 63% surplus of gas in 2018.

Although Liberty Utilities asserts that households not currently using gas would choose to convert, once a pipeline were built. There is no money in the GBP proposal to pay for metering stations and distribution lines to feed communities along the path of the pipeline. Further, it seems unlikely that NH households would invest the approximate \$7,000 for access to the pipeline, plus the cost of new heating equipment (these costs would be born by the consumer, not by Liberty Utilities). Thus a consumer-driven demand for new gas heating hook-ups does not seem probable.

Looking to the future, as more renewable sources of electricity generation (wind, solar) become available, there will be less competition for the gas coming through NH pipelines as a power source. Electricity can rely on renewable sources, and gas resources would all be dedicated to home heating. Union of Concerned Scientists asks,

“Will building more windfarms mean less need for natural gas and natural gas pipelines? Yes. . . . ISO-NE look(ed) at wind data, electric demand and natural gas used in power plants for the cold weather period of December 24, 2017 through January 8, 2018. This provides some impressive results. If 800 MW of offshore wind (the amount currently in permitting for delivery to Massachusetts), were in place, the ISO-NE study found, that amount alone would have avoided 9% of the natural gas used for electricity generation in that period.”

(January 8, 2019, Mike Jacobs, Union of Concerned Scientists, “Wind vs. Gas: Winter Wind Beats New Pipelines”)

New Hampshire is currently investigating offshore wind power possibilities. Have we really considered all the paths we might yet choose? We are making gains with heat pumps, thermal storage, household efficiency and weatherization. Soon our need for any fossil fuels may be greatly diminished:

“... the distance from fossil fuels to a clean energy economy is much shorter than previously anticipated.... Analyses by UCS, the Energy Department’s National Renewable Energy Laboratory and others have demonstrated that the United States can reliably and affordably ramp up to 80 to 90 percent renewable electricity by 2050 with today’s available technology.”

(June 2016, Union of Concerned Scientists, “Is Natural Gas a Good ‘Bridge’ Fuel While Better Options Are Developed?”)

Now is not the time to commit to a new fossil fuel infrastructure that would last for decades, and that would make it difficult if not impossible to meet the fossil fuel reduction goals set forth in the New Hampshire Energy Policy, RSA 378:37.

## II. Best cost option

Will the towns and/or ratepayers be responsible for the \$432 million pricetag of pipeline and LNG tank? Will we still be paying this off, decades later, when we otherwise have minimal fossil fuel use-- in compliance with New Hampshire Energy Policy RSA 378:37? What about stranded costs? There is the example of the town of Bow, which had to pay back the cost of a scrubber that was no longer being used. Meanwhile, Liberty Utilities will be assured a 9-10% rate of return on its infrastructure.

Additionally, ratepayers would be paying for the cost of any gas being delivered to their home or business. This is usually quite variable and cannot now be known with certainty. However, in aggregate the state of New Hampshire pays 9 or 10% of its GDP, \$6.1 billion, for fossil fuels we import. Renewable fuels are more dependable – construction, maintenance, labor – and present the possibility of export to other areas, as well as creating a larger number of ongoing jobs.

As for the cost to the company, *Carsey Perspectives* notes:

“The total estimated cost for the natural gas expansion scenario from 2017 to 2030 was \$1.3 billion... This produces a simple return on investment over the period of \$1.30 for every dollar spent. The total estimated cost of the energy efficiency and solar energy scenario from 2017 to 2030 was \$1.1 billion... This produces a simple return on investment of \$2 for every dollar spent.”

(May 10, 2017, UNH Carsey School of Public Policy)

Here are more recent cost projections:

“The cost of renewable energy has tumbled even further over the past year... These figures are contained in the latest *Renewable Power Generation Costs* report, released today (May 29, 2019) by the Abu Dhabi-based International Renewable Energy Agency (IRENA), an inter-governmental body with around 160 members.

All this suggests IRENA was on the right track when it predicted early last year that renewable energy should be consistently cheaper than traditional fossil fuels by 2020.... IRENA says these trends are likely to continue over the next decade, particularly for solar and wind power technologies. According to the organisation's database, over 75% of the onshore wind and 80% of the solar PV capacity due to be commissioned next year will produce power at lower prices than the cheapest new coal, oil or natural gas options. “Crucially, they are set to do so without financial assistance,” it noted.

(May 29, 2019, *Forbes*, Dominic Dudley, “Renewable Energy Costs Take Another Tumble, Making Fossil Fuels Look More Expensive Than Ever”)

Finally, we should factor in costs incurred through climate change, due to greenhouse gas emissions. Our tourism suffers, as maple trees decline and winter snow is unreliable; the estimated 123 annual deaths due to carbon pollution cost the public over \$1 billion (October 14, 2018, *Nashua Telegraph*, Dan Weeks, “To chart N.H.’s energy future, learn from our conservative past”). And then there is the cost when 20% of NH’s seacoast towns are chronically flooded by king tides, sea rise, and extraordinary rain events; inland roads are swamped, and water sources are polluted (June 18, 2018, *Concord Monitor*, David Brooks, “Report: Rising sea will flood \$645 million worth of N.H. property”).

As we consider saving a few dollars on home heating fuel, we should consider the future billions that can be lost to all our citizens – investors, insurers, businesses, property owners, asthma-sufferers, farmers -- due to greenhouse gas-induced climate change. The Granite Bridge Pipeline is too costly a proposal.

Thank you for your consideration,  
Susan Richman  
16 Cowell Drive  
Durham 03824  
603-868-2758

Enc: Liberty Utilities Annual Report, 2018

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas ) Corp.	This Report Is: (1) Original X (2) Revised	Date of Report March 29th, 2019	Year of Report December 31st, 2018
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**Table 50 Summary of Gas Plant Operations**

**I. Natural Gas Volumes Transported by Company and Others Through Interstate Pipelines, Received by Company and Retained by Pipelines as Fuel Retention**

Month	Volumes Purchased and Shipped by Company on Interstate Pipelines	Volumes Purchased and Delivered for Company on Interstate Pipelines	Volumes Injected Into Contracted Underground Storage Capacity	Volumes Withdrawn from Contracted Underground Storage Capacity	Competitive Natural Gas Supplier Volumes Received at City Gates for Unbundled Customers	Interstate Pipeline Compressor Fuel Retention Amount of Company Purchased and Storage Withdrawn Volumes	Total Delivered Pipeline Natural Gas Volumes to City Gates
	+ Dth	+ Dth	- Dth	+ Dth	+ Dth	- Dth	+ Dth
1							
2	January	-	2,984,831	(47,718)	467,380	958,978	4,411,189
3	February	-	2,156,518	(50,020)	316,880	697,066	3,170,464
4	March	-	2,040,370	284	466,047	793,466	3,299,893
5	April	-	1,830,106	(178,187)	53,112	589,105	2,472,323
6	May	-	954,052	(261,131)	2,240	376,138	1,332,430
7	June	-	829,755	(220,332)	-	336,377	1,166,132
8	July	-	757,868	(269,881)	-	329,867	1,087,735
9	August	-	795,823	(284,874)	-	364,418	1,160,241
10	September	-	866,339	(242,746)	1,013	390,146	1,256,498
11	October	-	1,599,589	(198,375)	3,949	617,971	2,221,509
12	November	-	2,330,515	(39,137)	95,814	792,290	3,218,619
13	December	-	1,775,715	(10,128)	349,788	845,601	2,971,104
14							
15	Total Natural Gas	-	18,920,480.4	(1,802,225.0)	1,756,223.0	7,091,423.0	27,766,126

**II. On-Site Peakshaving Gas Volumes**

Month	LNG Volume Used	LNG Volume Received	LNG Volume on Hand at End of Month	LPG Volume Used	LPG Volume Received	LPG Volume on Hand at End of Month	Interstate Pipeline Compressor Fuel Retention Amount of Company Purchased and Storage Withdrawn Volumes	Total LNG and LPG Volumes used
	+ MMBtu	+ MMBtu	+ MMBtu	+ MMBtu	+ MMBtu	+ MMBtu	+ MMBtu	
1								
2	January	84,228	67,197	11,540	292,842	229,137	208,449	357,070
3	February	26,588	23,457	8,409	197,012	168,459	209,897	223,600
4	March	19,529	23,263	12,143	197,798	154,434	166,570	217,327
5	April	3,147	1,662	10,658	142,259.0	117,740	142,051	145,406
6	May	1,925	839	9,572	56,962.0	40,928	126,019	59,887.0
7	June	1,731	2,657	10,498	45,723	51,377	131,672	47,454
8	July	2,712	2,001	9,788	42,228	33,470	122,914	44,940
9	August	1,480	2,955	11,162	47,255	262,199	337,658	48,735
10	September	1,984	50	9,228	50,945	92,435	379,348	52,929
11	October	2,503	5,408	12,134	130,528	85,979	361,799	133,031
12	November	41,254	40,168	11,048	184,838	199,281	376,241	226,092
13	December	27,971	28,632	11,709	219,595	178,653	335,300	247,566
14								
15	Total On-Site Peakshaving	195,062	198,189	127,889	1,607,985	1,644,092	2,898,117	1,803,037

**III. Annual Demand-Supply Summary**

Month	Total Distribution Pipeline Natural Gas, LNG and LPG Gas Available	Total Sales Customer Demand	Total Unbundled Transportation Customer Demand	Total Volumes Used by Company	Total Unbilled Volumes	Total Unaccounted For Volumes	Total Distribution Sendout Volumes	Total Pipeline Supply Over/(Under) Delivery Cashout Imbalance	
	+ Dth	+ Dth	+ Dth	+ Dth	+/- Dth	+/- Dth	+ Dth	+/- Dth	
1									
2	January	4,768,259	2,074,710	957,679	9,787	1,821,733	54,411	3,098,587	1,671,672
3	February	3,394,064	1,839,436	883,885	5,989	1,266,152	40,596	2,769,686	624,378
4	March	3,517,210	1,466,271	707,553	4,674	1,313,660	41,275	2,219,773	1,297,437
5	April	2,617,729	1,349,223	727,055	3,783	838,360	30,056	2,109,118	508,611
6	May	1,391,317	736,692	538,127	1,366	254,631	13,198	1,269,381	101,936
7	June	1,213,566	301,163	388,165	603	243,036	11,032	700,963	512,623
8	July	1,132,675	219,297	352,282	384	205,664	9,792	581,755	550,921
9	August	1,208,976	175,014	323,897	320	235,289	10,267	510,467	698,479
10	September	1,309,427	188,909	345,841	418	277,330	11,379	546,548	762,979
11	October	2,354,540	272,405	390,754	818	817,231	24,008	667,985	1,666,555
12	November	3,444,711	752,694	593,286	2,535	1,454,425	33,139	1,381,653	2,083,058
13	December	3,218,670	1,473,738	804,976	4,366	1,619,455	39,479	2,322,559	896,111
14									
15	Total Annual Volume	29,571,163	10,849,553	7,013,300	35,022	10,344,966	318,630	18,216,505	11,354,669
16									
17	Percent of Sendout	162.3%	59.8%	38.5%	0.2%	56.8%	1.7%	100.0%	62.3%
18									
19									
20									
21									