

ATTACHMENT “A”

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities

DG 17-152
Least Cost Integrated Resource Plan

Clark Data Requests - Set 5

Date Request Received: 8/16/19
Request No. Clark 5-9

Date of Response: 8/23/19
Respondent: Paul J. Hibbard

REQUEST:

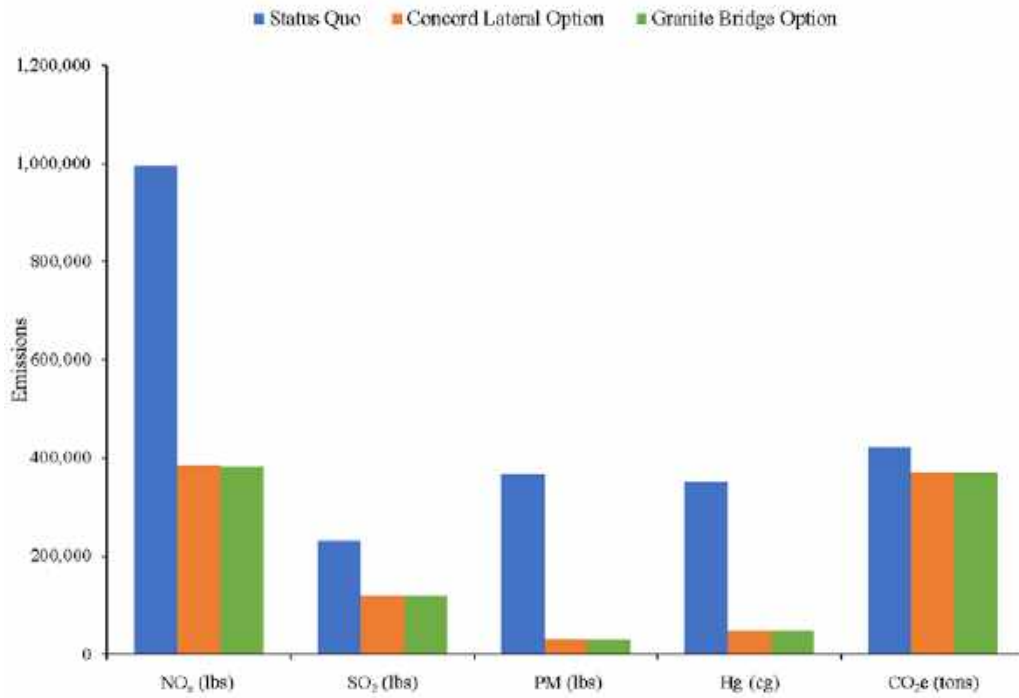
Please state how, if at all, the use of a GWP of 84 for methane for all of Paul J. Hibbard's emissions calculations and assessments would change them (including relevant tables and figures) and Mr. Hibbard's conclusions.

RESPONSE:

Mr. Hibbard recognizes there is some disagreement over GWP factors used in calculations of CO₂ equivalent emissions. However, Mr. Hibbard considers it most relevant and appropriate to apply a GWP of 25 for methane - which is a 100-year GWP - as it is the standard and default for policy and regulatory proceedings to use 100 year GWPs. See the sources under Table 10a of EPA's March 2018 "Emission Factors for Greenhouse Gas Inventories," available here, https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf. Also see the description of the 24.5 GWP of methane on page 70 of the New Hampshire Climate Action Plan, prepared by the New Hampshire Department of Environmental Services, March 2009, available at https://www.des.nh.gov/organization/divisions/air/tsb/tps/climate/action_plan/documents/nhcap_final.pdf.

Nevertheless, a calculation may be performed as a sensitivity using a different GWP for methane. In this case, the use of a 20-year GWP for methane of 84 as a sensitivity changes the magnitude of CO₂ equivalent emissions in Mr. Hibbard's results, but does not qualitatively change the outcome and would not affect the conclusions of Mr. Hibbard's analysis. Even with the use of an 84 GWP potential for methane, the Granite Bridge Option is still advantageous relative to the Concord Lateral and Status Quo options. See the figures and tables reporting CO₂ equivalent emissions in Mr. Hibbard's testimony reproduced using an 84 GWP for methane, below:

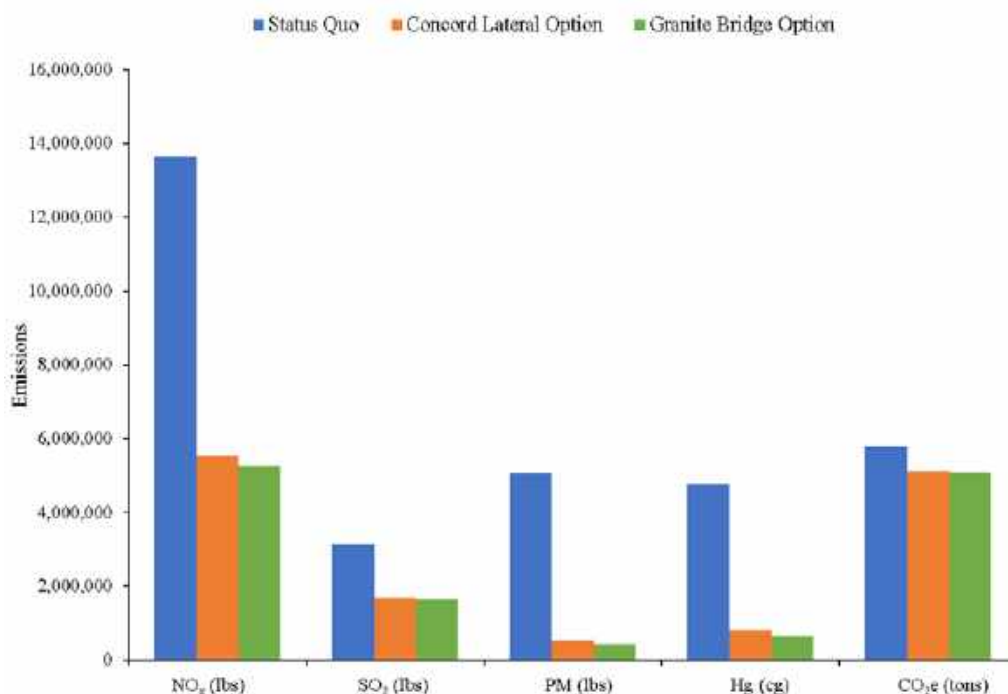
Sensitivity Figure 2: Short-run emissions impacts associated with total additional customers under IRP planning period - GWP of 84 for methane emissions.



Backup Table to Sensitivity Figure 2: Total short-run emissions from customers remaining on existing heating technologies compared to switching to natural gas heating technologies under the IRP planning period - GWP of 84 for methane emissions.

<i>IRP</i>	Status Quo	Granite Bridge Option	Concord Lateral Option
NO_x (lbs)	995,514	383,102	385,690
SO₂ (lbs)	230,746	118,962	119,453
PM (lbs)	367,469	30,779	31,795
Hg (cg)	351,316	47,762	49,140
CO₂e (tons)	421,976	371,199	371,417

Sensitivity Figure 3: Long-run emissions impacts associated with total additional customers under long-term Granite Bridge Pipeline planning period - GWP of 84 for methane emissions.



Sensitivity Table 2: Total long-run emissions from customers remaining on existing heating technologies compared to switching to natural gas heating technologies under the Granite Bridge or Concord Lateral Expansion options - GWP of 84 for methane emissions.

<i>GB-LR</i>	Status Quo	Granite Bridge Option	Concord Lateral Option
NO _x (lbs)	13,629,053	5,250,732	5,521,009
SO ₂ (lbs)	3,157,123	1,630,470	1,681,805
PM (lbs)	5,062,057	421,858	527,957
Hg (cg)	4,768,887	654,623	798,470
CO ₂ e (tons)	5,771,166	5,087,590	5,110,354

Sensitivity Table 4: Annual reductions in emissions associated with reduced delivery truck traffic - GWP of 84 for methane emissions (estimates in pounds).

	235 trucks	300 trucks
CO ₂ e (CO ₂ + CH ₄)	49,603.8	63,324.0
NO _x	285.7	364.7
PM _{2.5}	6.7	8.5

ATTACHMENT “B”

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Outages & Emergencies: 1-855-327-7758

Liberty Utilities Announces New Solution to Preserve Energy Choices for NH Consumers

2020-07-31

Londonderry, NH -- Liberty Utilities filed supplemental testimony with the NH Public Utilities Commission (PUC) today, replacing the company's Granite Bridge proposal with a request to approve a 20-year contract for capacity on the existing gas transmission pipeline known as the Concord Lateral, serving Liberty's New Hampshire customers. By making use of newly-available capacity on existing infrastructure, Liberty Utilities would be able to allow New Hampshire families and businesses to choose clean, low-cost natural gas into the future, without the need to construct the Granite Bridge project. The new proposal could enable New Hampshire to eliminate more than 1 million tons of greenhouse gas emissions while preserving energy choice for New Hampshire consumers.

Liberty Utilities provides natural gas service to a growing customer base of more than 96,000 homes and businesses in 35 New Hampshire communities, including the cities of Manchester, Nashua, Concord, Laconia, Franklin, and surrounding towns. With more than 1,000 customers annually signing up for gas service in recent years, new customer load has been outpacing the gas system's capacity to meet peak demand. If approved, the solution Liberty announced today is expected to relieve the near-term system constraints threatening to cut off access to natural gas service for thousands of Granite Staters.

Granite Bridge was proposed in 2017 in response to the imminent threat of a natural gas capacity shortfall in New Hampshire. Additional capacity was not available on the Concord Lateral at the time, so Liberty identified the most cost-effective solution to allow customers continued access to natural gas. Granite Bridge would have made more efficient use of in-state infrastructure by linking two existing natural gas pipelines and would have included a state-of-the-art storage facility to increase supply diversity and resiliency while reducing customer exposure to extreme volatility in natural gas prices.

Recently, Liberty was able to negotiate for newly available capacity on the Concord Lateral at the lowest possible cost, presenting an opportunity to address forecasted demand without building Granite Bridge. Thanks to the rigorous review process at the PUC and a collaborative effort between PUC staff, the Office of the Consumer Advocate, other parties, and Liberty Utilities, a new solution was identified and proposed, providing enhanced value for Liberty Utilities' customers and for the State of New Hampshire.

Sue Fleck, President of Liberty-NH, issued the following statement:

“Liberty’s customer-centric mission means we are constantly working to maximize value for our customers and for New Hampshire’s communities. That’s why we proposed the Granite Bridge project in the first place – to ensure natural gas service would be available for customers who want it with minimal impact to host communities. We always strive to put our customers and our communities first, and our new filing today reflects that.

Making sure natural gas is available for customers who want it is critical not only for New Hampshire’s economy and for families’ pocketbooks, but also to enable the deepest, fastest, and most achievable pathway for decarbonizing our economy and taking action on climate change. Customers choosing cleaner natural gas over dirtier fuels in Liberty’s service territory alone could result in 1 million tons of greenhouse gases emission reductions over the next 20 years. But we know we must go even further to achieve the kind of emissions reductions necessary to avoid the worst effects of climate change. That’s why Liberty is committed to expanding energy efficiency, developing local sources of net-zero or carbon-negative fuels like Renewable Natural Gas and hydrogen from renewable electricity, and other innovative solutions to keep Granite Staters warm in the winter and fuel our economy while enabling immediate, deep decarbonization.

Liberty is proud to be part of the Algonquin Power & Utilities Corp. family, and we are honored to be ranked #10 on the Global 100 list of the planet’s most sustainable companies.¹ Sustainability guides everything we do, including our company-wide support for the Intergovernmental Panel on Climate Change’s goals to limit planetary warming through decarbonization. We look forward to continuing to work toward a sustainable future for New Hampshire.”

About Liberty Utilities

Liberty Utilities Co. and its affiliates owns and operates regulated water, wastewater, natural gas and electric transmission and distribution utilities in 13 states and 1 Canadian province, delivering responsive and reliable essential services to over 805,000 customers across the United States and Canada. With a local approach to management, service and support, we deliver efficient, dependable services to meet the needs of our customers. Liberty Utilities provides a superior customer experience through walk-in customer centers, locally focused conservation and energy efficiency initiatives, and programs for businesses and residential customers. We measure our performance in terms of service reliability, an enjoyable customer experience, and an unwavering dedication to public and workplace safety. Liberty Utilities currently operates in Arizona,

Arkansas, California, Georgia, Illinois, Iowa, Kansas, Massachusetts, Missouri, New Hampshire, New York, Oklahoma, Texas, and the Province of New Brunswick. For more information, please visit www.LibertyUtilities.com.

Caution Regarding Forward-Looking Information

Certain statements included in this news release constitute "forward-looking information" within the meaning of applicable securities laws in each of the provinces of Canada and the respective policies, regulations and rules under such laws and "forward-looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 (collectively, "forward-looking statements"). The words "will", "intends", "expects" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Specific forward-looking statements contained herein include, but are not limited to statements regarding future growth and capacity; reduction of greenhouse gas emissions; forecasted demand and system constraints; potential impacts and benefits to customers; and plans regarding sustainability, including potential energy sources. These statements are based on factors or assumptions that were applied in drawing a conclusion or making a forecast or projection, including assumptions based on historical trends, current conditions and expected future developments. Since forward-looking statements relate to future events and conditions, by their very nature they require making assumptions and involve inherent risks and uncertainties. Liberty Utilities cautions that although it is believed that the assumptions are reasonable in the circumstances, these risks and uncertainties give rise to the possibility that actual results may differ materially from the expectations set out in the forward-looking statements. Other than as specifically required by law, Liberty Utilities undertakes no obligation to update any forward-looking statements to reflect new information, subsequent or otherwise.

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¹ See Corporate Knights 2020 Global 100 ranking: <https://www.corporateknights.com/reports/2020-global-100/2020-global-100-ranking-15795648/>

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