

August 8, 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 call the Public Utilities Commission's attention to a misleading claim on the Granite Bridge website page under the "Benefits" drop-down tab. Please refer to the Reduced Air Emissions chart under the graphic for ENVIRONMENTAL BENEFITS at <https://www.granitebridgenh.com/benefits>



ENVIRONMENTAL BENEFITS

- Use of NHDOT right-of-way along RT101 minimizes environmental disturbances
- Provides more residents and businesses with access to award winning energy efficiency programs
- Reduced air and greenhouse gas emissions

REDUCED AIR EMISSIONS ▼

Sulfur (SO _x)	100%
Particulate matter (PM)	90%
Nitrogen Dioxide (NO _x)	90%
Carbon Dioxide (CO ₂)	35%

*compared to home heating oil

I find the claim of 35% reduced CO2 emissions can only result from an error in logic when doing the math.

According to the eia.gov website, <https://www.eia.gov/tools/faqs/faq.php?id=73&t=11> CO2 emissions from home heating oil equal 161.3 pounds per million BTU. Natural gas produces 117 pounds per million BTU.

If the claim on the "Benefits" website is true, then switching from oil to natural gas should reduce CO2 emissions by 35%. Another way of saying this is that natural gas should produce only 65% of the CO2 that heating with oil does. Yet, 65% of 161.3 pounds of CO2 is 104.84 pounds of CO2.

In fact, the correct number is a reduction of roughly 27% in CO2 emissions. And, 73% of 161.3 is around 117 pounds of CO2 per million BTU.

It is misleading claims like these that I find especially distressing in the presentation of the Granite Bridge project to the people of New Hampshire.

Sure, I know how they arrived at the 35% number. They are playing a little trick with numbers. If you look at how much MORE CO2 that heating oil emits than natural gas, it comes out to about 38% more.

But, and this is important, we aren't talking about switching people from natural gas to heating oil.

It took me a long time to figure out what was wrong with this number and why their reasoning is faulty.

I doubt most people are going to bother going to the eia.gov website to check their math. Liberty should be forced to take this claim down immediately or explain why physics, chemistry and math no longer matter in New Hampshire.

Thank you very much for accepting my comments and questions.

Patricia A Martin
17 Farrar Road
Rindge, NH 03461