

## NORTHEAST ENERGY DIRECT

### NEW HAMPSHIRE POWER LINE ALTERNATIVE

#### Benefits to New Hampshire

November 2014

#### **Overview of Proposed New Hampshire Facilities**

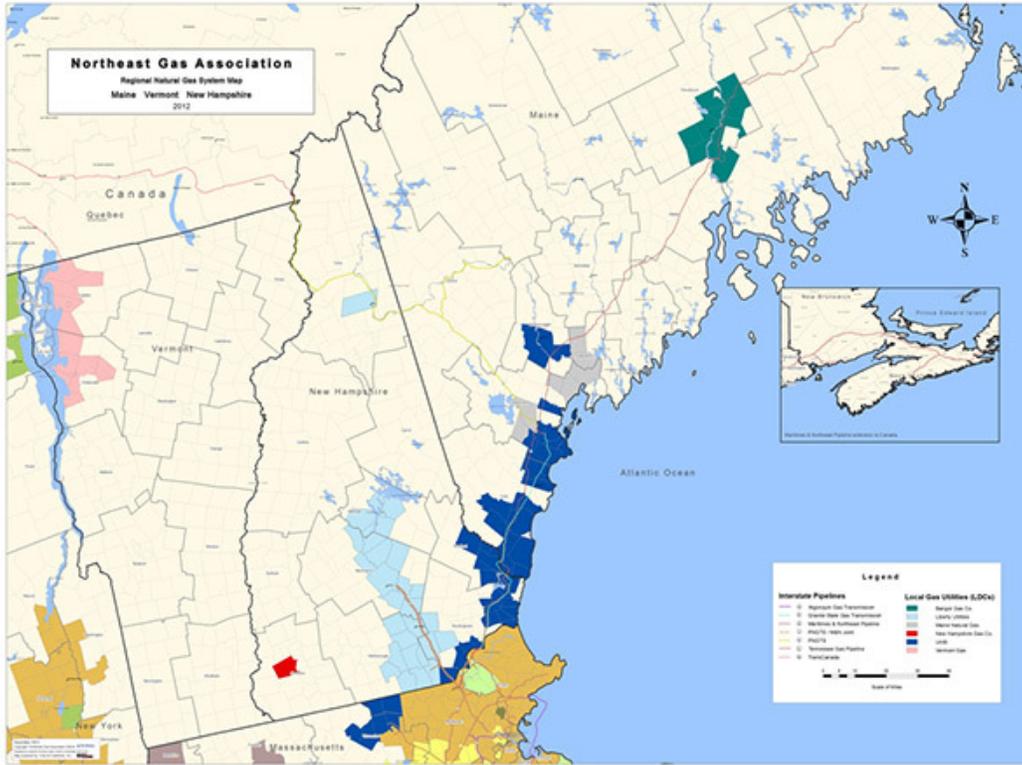
If the proposed pipeline were to be routed in New Hampshire, the proposed pipeline would follow the ROW of an existing power line in New Hampshire, which would minimize the impacts to the environment and landowners. The proposed power line route would be approximately 70 miles of 36-inch mainline routed through Southern New Hampshire with approximately 64 miles being co-located with an existing 345 kV power line corridor. The correspondingly required station facilities in New Hampshire involve an 80,000 HP compressor station consisting of 3 Titan 250 units, and also a 50,000 dth/d meter station. Of the 70 miles of mainline, 29 miles will be located in Cheshire County, 36 miles in Hillsborough County, and 5 miles in Rockingham County. Both the compressor station and meter station will be sited in Hillsborough County.

#### **Market Opportunities & Economic Stability**

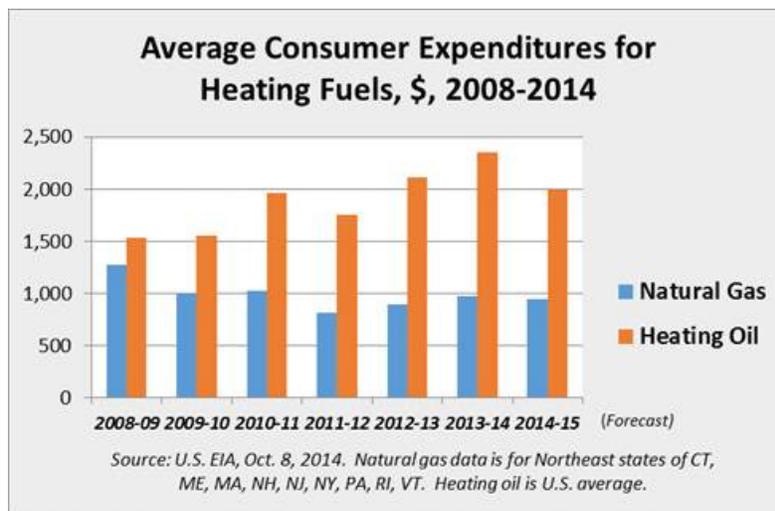
Tennessee Gas Pipelines' proposed Northeast Energy Direct Pipeline (NED) will provide New Hampshire with additional access to lower cost, clean, abundant and domestic natural gas supplies enabling the development of gas distribution systems to serve communities and industries where natural gas is not available today. The availability of a low cost energy source is critical to attracting new industries which can bring jobs and economic growth to the state. Conversely, lower cost natural gas is also critical in keeping existing industries in New Hampshire and their associated jobs either from conversion from higher cost fuels to natural gas or lowered electricity rates pursuant to power plants converting to lower cost natural gas. As reflected in the map below, natural gas service is currently not available in most areas of New Hampshire. Because of its close proximity, the NED New Hampshire Power Line Alternative would provide the opportunity for gas service to some of the following towns: Keene, Swanzey, Rindge, Jaffrey, and New Ipswich among others.<sup>1</sup>

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<sup>1</sup> Kinder Morgan currently does not own or operate local distribution systems, and this is not in our business model; however, the construction of an interstate pipeline does allow the opportunity for municipalities and local distribution companies to develop natural gas distribution systems where previously not feasible.



Since fuel oil is currently one of the primary fuels used to heat New Hampshire homes, residents would greatly benefit from the cost advantage of natural gas, as reflected in the graph below.



A large scale pipeline expansion like NED is required to have a significant impact on high energy prices in the region, thereby benefiting families and businesses across New Hampshire. New England gas prices in the winter of 2014 were the highest in the nation, a direct result of natural gas transportation constraints caused by insufficient pipeline infrastructure in New England resulting in consumers in the region spending at least \$3 billion dollars per year for electricity. This annual cost paid by New England

consumers for electricity would pay for the additional pipeline infrastructure needed in just one year and would meet the energy needs of the region for years to come.

### ***Environmentally Friendly Fuel***

Fuel oil is used to heat approximately 50% of New Hampshire homes, propane is used in approximately 10% and natural gas meets approximately 20% of New Hampshire's residential heating needs. The balance of the residential heating needs, are met by electricity, wood, kerosene, coal and others fuels.

New England remains the most oil-reliant region in the nation. Natural gas is the cleanest fossil fuel available today as it has one-half the CO<sub>2</sub> effect of burning oil and 10% of the particulate emissions. Natural gas produces less sulfur dioxide (a primary precursor of acid rain), less nitrogen oxide (a primary precursor of smog) and less particulate matter (tiny soot that affects healthy and visibility) than fuel oil or coal. In addition to being a more environmentally friendly fuel, natural gas is abundant and domestic and will play a continuing key role in our country's efforts to make a positive impact on our environment while still meeting our energy needs.

### ***Power Plants***

TGP currently serves the Granite Ridge Plant in New Hampshire. NED would provide the opportunity for new natural gas fired generation to be developed in New Hampshire to replace coal, oil and nuclear generation that is being retired in New England increasing the reliability of the electric grid. In addition to NED lowering natural gas prices, it will also lower electric prices since 52% of the New England electric grid is currently fueled by natural gas.

### ***LNG/CNG Expansion Opportunities***

TGP has received inquiries from developers of Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) fueling stations facilities proposed in New Hampshire. In addition, TGP has received inquiries from "CNG virtual pipeline" developers that utilize high capacity CNG delivery trailers designed to deliver natural gas to its customers that are not located close to an interstate pipeline.

TGP currently serves Clean Energy, a Compressed Natural Gas fueling station (CNG) in Pembroke, New Hampshire. The use of LNG to supplant liquid fuels such as diesel and propane is making rapid inroads in the nation's transportation industry. NED would provide more opportunities for the development of these types of facilities to fuel vehicles, including heavy-duty commercial fleets in New Hampshire with a cleaner, more environmentally friendly energy source.

Natural gas fuel costs up to \$1.50 less per gallon than gasoline or diesel, depending on local market conditions. Natural gas fuel reduces operating costs for vehicles, and also reduces greenhouse gas emissions up to 30% in light-duty vehicles and 23% in medium to heavy-duty vehicles. NED would enable the development of more CNG and LNG facilities in New Hampshire, and residents and businesses could realize the economic benefits of a less expensive fuel source for transportation.

### ***New Hampshire Local Distribution Companies***

Liberty Utilities (EnergyNorth) is an Anchor Shipper on NED. The NH Power Line Alternative project provides Liberty with access to additional gas to meet their growth needs and the opportunity to expand their distribution system and convert more residences and businesses to a lower cost, cleaner more environmentally friendly fuel.

NED will also provide Unutil (Northern Utilities) the opportunity to meet their growth needs and the opportunity to expand their distribution systems.

New Hampshire Gas Corp. (Iberdrola) serves approximately 1,142 customers in Keene, NH with propane air gas. With the pending acquisition of New Hampshire Gas Corp. by Liberty Utilities, the opportunity to convert and expand the existing propane air system to natural gas will be an option.

### ***Taxes***

Estimated property taxes in first year after project goes in service:

Taxes paid to towns: \$11.1MM

Taxes paid to the state for local school taxes (distributed back to local school districts by the state): \$5.7MM

Total estimated taxes to be paid statewide: \$16.8MM

### ***Employment***

The construction of the above facilities will bring an influx of temporary and permanent jobs to the state of New Hampshire. It is estimated that a total of 520 temporary jobs will be needed to construct the New Hampshire portion of NED. This includes construction contractors, pipeline traffic control, security, and local businesses, among others. It is expected that local restaurants and hotels will see an increase in revenue due to the large number of workers present in the area. Local fuel sales, entertainment, goods, and services are expected to flourish as well. Permanent headcount for Kinder Morgan in New Hampshire will need to be increased to serve the newly built infrastructure in the state (estimated 3 permanent positions).

### **Environmental Efforts**

Mitigation through the project offers the potential for increased growth in community restoration and preservation. For instance, impacts to wetlands/water bodies/uplands/sensitive areas can be mitigated by purchasing lands for preservation, or enhancing lands that have been impacted by other activities such as clear cutting, or by donations to worthy conservation organizations within the project area.

Other mitigation measure can include donations to local schools to fund environmental activities such as trout in the classroom, or the donation of trees for Arbor Day celebrations. Local communities can benefit from mitigation by receiving money or left over construction materials for the creation of parks, preservations of parks, restoration of local habitats, or the restoration of local culturally important sites. Many of the permitting agencies will require mitigation for impacts to migratory birds or Indiana bats,

both of which generally involve the preservation of land. This type of mitigation is generally very beneficial to local communities as the land would be put into a conservation easement.

One final mitigation measure that can be employed along the right of way is to revegetate the right of way with native local plants that increase the ecological benefit of the right of way for insects and other forest animals.

Tennessee Gas will work with all the federal, state, and local governments to develop a comprehensive mitigation plan for the pipeline impacts which can be accomplished in a multitude of ways.