



Town of Epping

157 Main Street
Epping, New Hampshire 03042-2440

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July 17, 2018

Michael Sheehan, Esq.
Senior Counsel
Liberty Utilities
15 Buttrick Road
Londonderry, NH 03053

**Re: Request for Proposals
Natural Gas Distribution Services in Epping, NH**

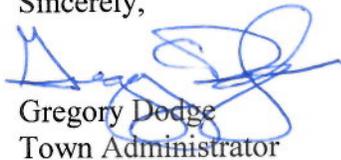
Dear Attorney Sheehan:

Attached is a Request for Proposals for the Town of Epping for Natural Gas Distribution Services. The Epping Selectmen believe the best way to evaluate which gas utility company is best positioned, in the long run, to provide natural gas service to Epping's residential, commercial and industrial customers is for the Town of Epping to solicit requests for proposals from the two companies that have publicized their interest in providing natural gas service in Epping. The Selectmen are looking to evaluate and compare what Liberty Utilities and Northern Utilities can offer Epping's businesses and residents.

The deadline for responses is August 31, 2018. Kindly direct the responses to the Epping Board of Selectmen.

Thank you for your consideration.

Sincerely,



Gregory Dodge
Town Administrator

**REQUEST FOR PROPOSALS
NATURAL GAS DISTRIBUTION SERVICES
TOWN OF EPPING, NH**

The Town of Epping is seeking proposals from qualified public utilities to provide retail natural gas distribution services to the Town's residential, commercial and industrial properties. The Town is seeking the information necessary to allow it to recommend a particular company for utility franchise rights in its streets and public rights-of-way and expects to make that recommendation to its citizens and the New Hampshire Public Utilities Commission as to what company, under what terms, can best provide natural gas services to Epping over the long term.

Each proposal is requested to include at least the following:

1. Company identification including:
 - a. Full name and official address of the company submitting the proposal, as well the organization chart of itself and related parties;
 - b. Identify the counties and states that the company or its related parties operate in; and
 - c. Does the company or its related parties file a FERC Form 1 or FERC Form 2? If so, provide the company name for each entity filing the reporting.
2. Company profile to include, at a minimum the following:
 - a. Current operating statistics:
 - i. quantity in miles of existing natural gas mains network;
 - ii. total number of current natural gas customers;
 - iii. identify each NH town currently served;
 - iv. total quantity of natural gas sold;
 - v. quantity of gas sold by customer class – residential, commercial, and industrial;
 - vi. total cost of natural gas sold; and
 - vii. cost of natural gas sold by customer class – residential, commercial, and industrial.
 - b. Summary of the company's:
 - i. current rate structure to include the customer rates by customer class;
 - ii. pass through gas cost per dekatherm per customer class;
 - iii. total annual operations cost;
 - iv. total annual maintenance cost;
 - v. total annual general and administrative cost;
 - vi. current depreciation rate schedule;
 - vii. total depreciation reserves by FERC account number;
 - viii. overall rate of return on rate base;
 - ix. overall return on equity;
 - x. cost of debt; and
 - xi. debt to equity ratio.
 - c. Most recent annual report made to the NH PUC (Form F-16).
 - d. Most recent report to NH PUC of customer satisfaction metrics.
 - e. Plans and budgets for planned improvements and replacements to the company's existing New Hampshire gas distribution systems.
3. Description of the proposed Epping service area to include:
 - a. identification of the geographic areas to be served including a map;
 - b. Identification of specific residential, commercial and industrial areas or customers expected to be included in the proposed service area;
 - c. timetable for construction;
 - d. marketing study and conclusions;

**REQUEST FOR PROPOSALS
NATURAL GAS DISTRIBUTION SERVICES
TOWN OF EPPING, NH**

- e. marketing plan to address potential residential, commercial, and industrial customers;
 - f. density requirements – minimum developed density to initiate service for residential, commercial, and/or industrial customers;
 - g. anticipated customer mix and timeframe to execute the mix - number of potential residential, commercial, and industrial customers; and
 - h. estimated customer investment for each customer class, e.g. scope of work and expense that the customer will be required to pay to connect to the natural gas service.
4. Details of the design and construction of the distribution pipe extensions and include:
 - a. map showing pipe specification in the intended routes and service areas;
 - b. construction specifications and techniques to be utilized for the pipe installation;
 - c. construction plans, anticipated cutting permits, and project supervision;
 - d. anticipated materials and specifications of pipe to include at a minimum the sizes of mains, types of pipes, and maximum allowable operating pressure ratings; and
 - e. estimated cost by pipe size by foot including all indirect costs.
 5. Specified procedures for disruption of public and private roadways and drives, traffic control, and reconstruction of all disrupted areas.
 6. Planned and anticipated community outreach programs to incentivize customers to connect to the natural gas service.
 7. Planned and anticipated financial assistance programs to be provided by the company for the cost of conversion to natural gas and assistance with customer's stranded costs.

Responses are due by August 24, 2018.



Proposal to Provide Natural Gas Distribution Service to the Town of Epping

August 17, 2018

Executive Summary

Liberty Utilities is New Hampshire's largest natural gas provider. We are proud to serve more than 92,000 customers in 31 communities throughout the Granite State. On December 4, 2017, we announced the Granite Bridge project, which is a proposed 27 mile natural gas pipeline, which would be constructed completely within the New Hampshire Department of Transportation right-of-way along Route 101, between Stratham and Manchester, and a liquefied natural gas (LNG) storage facility, which would be located at an abandoned quarry in Epping. The Granite Bridge would allow Liberty Utilities to provide natural gas service to the residents and businesses of Epping off of the proposed line.

To provide natural gas service to Epping, Liberty Utilities proposes to construct a single meter station, or connection, with the Granite Bridge pipeline at the proposed LNG storage facility location, west of Exit 6, on the south side of Route 101 East. From that station Liberty Utilities would build out a new underground distribution system to provide natural gas service to the residents and businesses in both Epping and Raymond. Locating the meter station at this location would allow for greater availability of natural gas service to residential customers in Epping, as we extend the underground system along Route 27, to serve the businesses and plazas located at Exit 7.

Natural gas is a very competitively priced heating option for both residential and commercial customers, which can be used for a variety of services including heating, hot water, laundry, cooking, industrial process, vehicle fueling, and combined heat and power systems, without the need for onsite storage. Liberty Utilities has among the lowest natural gas distribution rates in New England and we have a number of incentive programs, energy efficiency programs, and innovative rate structures to reduce the cost of conversion from other fuel options to natural gas and save our customers money.

If awarded the natural gas franchise to serve the Town of Epping Liberty Utilities would also create a new \$500,000 natural gas conversion assistance fund, which would be used to help the residents of Epping reduce any upfront costs to convert their existing heating equipment, and to help reduce or eliminate any contributions-in-aid-of-construction that may be required to run natural gas mains and services to customers. This fund would be set aside for the exclusive use by the residents of Epping, and would be paid by Liberty Utilities' shareholders, not customers.

Liberty Utilities is committed to providing safe, reliable natural gas service to our customers at the lowest cost. We work hard to develop strong relationships with our customers and the communities we serve. We believe in having an active and engaged local presence. As the only utility in New Hampshire to offer full service walk-in centers where customers can pay bills, ask questions, and talk to customer service representatives face to face, we understand the importance of engaging our customers. We believe we are well suited to provide natural gas service to Epping and become a member of the community.

Liberty Utilities provides the following information in response to the Town of Epping's July 17, 2018, Request for Proposals, and will be happy to provide any additional information upon request of the Town.

Company Identification and Profile

Liberty Utilities is a wholly owned subsidiary of Algonquin Power & Utilities Corporation (APUC). APUC is a diversified generation, transmission, and distribution utility with \$9 billion of total assets. Through our two business groups (Liberty Utilities and Liberty Power), APUC provides natural gas, water, and electricity generation, transmission, and distribution utility services to over 750,000 customers in the United States, and is committed to being a global leader in the generation of clean energy through our portfolio of long term contracted wind, solar, and hydroelectric generating facilities, representing more than 1,600 MW of installed capacity.

In New Hampshire, Liberty Utilities provides more than 92,000 customers with natural gas service and 44,000 customers with electricity service, making Liberty Utilities the second largest energy utility and largest gas utility in New Hampshire. Our corporate headquarters is located in Londonderry and we have 350 employees throughout the state.

Liberty Utilities is committed to investing in, and growing our distribution systems. We have a dedicated sales and marketing team located in Manchester focused on meeting the needs of our existing and potential customers. We believe in having a strong local presence in the communities we serve. We are the only utility in New Hampshire to have full-service walk-in centers, which allows our customers to interact with representatives regarding their services. These walk-in centers are located in Londonderry, Concord, Salem, and Lebanon.

We operate three liquefied natural gas (LNG) storage facilities in Manchester, Concord, and Tilton, and five propane storage facilities in Nashua, Amherst, Manchester, Tilton, and Keene. We have natural gas operations yards in Nashua, Manchester, and Tilton, electric operations yards in Salem, Lebanon, and Charlestown.

Our experienced, professional team works hard to grow, operate, and maintain our supply and distribution systems. Many of our employees have decades of experience working in the utility business. They stand ready to bring their knowledge and expertise to provide exceptional, low-cost natural gas service to the residents of Epping.

1. Company Identification

a. Full name and official address of the company submitting the proposal, as well the organization chart of itself and related parties

- Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities;
- 15 Buttrick Road, Londonderry, New Hampshire 03053;
- Please see Appendix 1.a - Organizational Chart

b. Identify the counties and states that the company or its related parties operate

- Liberty Utilities and Liberty Power have operations in the United States and Canada. Below is a complete list of the states and provinces in each country where we have utility or power generation operations:

United States

Arizona	Kansas	New Hampshire
Arkansas	Maine	Nevada
California	Maryland	Oklahoma
Connecticut	Massachusetts	Pennsylvania
Georgia	Michigan	Texas
Illinois	Minnesota	
Iowa	Missouri	

Canada

Alberta	New Brunswick
Manitoba	Saskatchewan

c. Does the company or its related parties file a FERC Form 1 or FERC Form 2? If so, provide the company name for each entity filing the reporting.

- The following Liberty Utilities affiliates file a FERC Form 1:
 - Liberty Utilities (Granite State Electric) Corp.
 - The Empire District Electric Company
 - Liberty Utilities (CalPeco Electric) LLC – in process of filing its first FERC Form 1
- The following Liberty Utilities affiliates file a FERC Form 2:
 - Liberty Utilities (Midstates Natural Gas) Corp.
 - The Empire District Gas Company

2. Company Profile

a. Current operating statistics:

i. Quantity in miles of existing natural gas mains network

- Liberty Utilities operated 1,395 miles of natural gas and 31 miles of propane gas mains in the state of New Hampshire in 2017

ii. Total number of current natural gas customers

- 92,044 customers, as of 2017

iii. Identify each NH town currently served

- Liberty Utilities provides the following towns in New Hampshire with natural gas distribution service. Keene is served via an underground air/propane distribution system:

Allenstown	Franklin	Manchester
Amherst	Gilford	Merrimack
Auburn	Goffstown	Milford
Bedford	Hollis	Nashua
Belmont	Hooksett	Northfield
Berlin	Hudson	Pelham
Boscawen	Laconia	Pembroke
Bow	Litchfield	Sanbornton
Canterbury	Londonderry	Tilton
Concord	Loudon	Winnisquam
Derry		

iv. Total quantity of natural gas sold

- 16,180,056 dekatherms of natural gas were sold in 2017.

v. Quantity of gas sold by customer class- residential, commercial, and industrial

- Residential - 5,794,076 dekatherms. Please see line 2 of page 27 of the 2017 NH PUC Annual Report provided in response to item 2.c.
- Commercial / Industrial Sales Customers – 3,526,669 dekatherms. Please see line 4 of page 27 of the 2017 NH PUC Annual Report provided in response to item 2.c
- Commercial / Industrial Transportation Customers – 6,859,311 dekatherms. Please see line 140 of page 31 of the 2017 NH PUC Annual Report provided in response to item 2.c

vi. Total cost of natural gas sold

- \$116,307,576 in 2017. Please see line 12 of page 27 of the 2017 NH PUC Annual Report provided in response to item 2.c

vii. Cost of natural gas sold by customer class-residential, commercial, and industrial

- Residential – \$75,557,486 in 2017. Please see line 2 of page 27 of the 2017 NH PUC Annual Report provided in response to item 2.c
- Commercial / Industrial - \$38,561,842 in 2017. Please see line 4 of page 27 of the 2017 NH PUC Annual Report provided in response to item 2.c

b. Summary of the Company's:

i. Current rate structure to include the customer rates by customer class

- Please see Appendix 2.b.i. – August 2018 Rate Schedules

ii. Pass through gas cost per dekatherm per customer class

- Please see Appendix 2.b.ii. – Customer Class Cost Breakdown

iii. Total annual operations cost

- Total annual operations costs for 2017 were \$78,198,732. Please see line 4 of page 11 of the 2017 NH PUC Annual Report provided in response to item 2.c.

iv. Total annual maintenance cost

- Total annual maintenance costs for 2017 were \$2,926,039. Please see line 5 of page 11 of the 2017 NH PUC Annual Report provided in response to item 2.c.

v. Total annual general and administrative cost

- Total annual general and administrative costs for 2017 were \$9,661,517. See line 270 of page 39 of the 2017 NH PUC Annual Report provided in response to item 2.c. Please note that the \$9,661,517 of general and administrative costs are included in the total operations costs of \$78,198,732 included in the response to item 2.b.iii above.

vi. Current depreciation rate schedule

- Please see Appendix 2.b.vi. – Approved Depreciation Rates for the rates that were approved in the recently completed rate case, NHPUC Docket No. DG 17-048.

vii. Total depreciation reserves by FERC account number

- Please see Appendix 2.b.vii. – Accumulated Depreciation as of 12-31-17

viii. Overall rate of return on rate base

- For the 12 months ended December 31, 2017, the earned overall rate of return (including weather normalized sales) was 7.28%. Without the weather normalized sales, the actual earned was 6.56%. The last approved overall rate of return at the time was 7.16% using a 50/50 debt-to-equity capital structure.
- In the recently completed rate case, NHPUC Docket No. DG 17-048, the approved overall rate of return was 6.80%.

ix. Overall return on equity

- For the 12 months ended December 31, 2017, the earned return on equity (including weather normalized sales) was 9.90%. Without the weather normalized sales, the actual earned was 8.46%. The last approved return on equity was 9.67% (NHPUC Docket No. DG 10-017).

- In the recently completed rate case, NHPUC Docket No. DG 17-048, the approved return on equity was 9.30%.

x. Cost of debt

- The weighted average cost of debt is 4.42% as calculated below:

	Amount	Term	Rate	Weight
Debt	21,818,181.82	15.0000	4.8900%	0.67%
	8,181,818.18	15.0000	4.8900%	0.25%
	41,818,181.82	10.0000	4.4900%	1.18%
	87,781,818.18	15.0000	4.2200%	2.32%
Total	159,600,000.00			4.42%

xi. Debt to equity ratio

- The approved capital structure in the recently completed rate case, NHPUC Docket No. DG 17-048 is provided below (slight difference due to rounding):

	Capital Structure
Common Stock	49.21%
Long-Term Debt	49.85%
Short-Term Debt	0.95%
Total	100.01%

c. Most recent annual report made to the NH PUC (Form F-16).

- Please see Appendix 2.c – 2017 Annual Report Form F-16

d. Most recent report to NH PUC of customer satisfaction metrics.

- Please see Appendix 2.d – Customer Satisfaction Survey

e. Plans and budgets for planned improvements and replacements to the company's existing New Hampshire gas distribution systems.

- Liberty Utilities has a Cast Iron/Bare Steel (“CIBS”) program to remove and replace old leak prone pipe in its system, which is mostly located where the Company and its predecessors have provided service for more than a century in the Cities of Nashua, Manchester, and Concord. Each year, we target sections of CIBS pipes to be removed, with the goal of having all of the CIBS pipe removed by 2024.
- The thirty-eight projects completed during the 2017-2018 CIBS program eliminated 11.6 miles of older infrastructure, and included replacing 831 services, of which 364 were bare steel. The 2017-2018 CIBS program year increased the amount of CIBS pipe replaced or abandoned compared to the prior year, 11.6 miles versus 10.3 miles in 2016-2017.

- In addition to the CIBS program, Liberty Utilities also works alongside municipalities as they replace or repair their water and sewer mains, taking advantage of the opportunity to remove additional older infrastructure. In the 2017-18 season, Liberty Utilities replaced another 2.95 miles of cast iron and bare steel in cooperation with these municipal projects, for a total of almost 15 miles of CIBS removed in the 2017-2018 program year.
- For the 2018-2019 season, Liberty Utilities has planned approximately 32 separate projects to remove 13.8 miles of pipe replacement through the CIBS program and 2.0 miles of pipe through municipal projects, a planned total of almost 16 miles.
- We are on pace to fulfill the commitment made five years ago to eliminate all of this older infrastructure by 2024. As of the start of the 2018-2019 program year, there were 78.7 miles of CIBS pipe remaining in the Company's system.
- Please see Appendix 2.e – CIBS Report, for a more detailed overview and budgets associated with the CIBS program.

Epping Service Proposal

Liberty Utilities would provide Epping's residents with natural gas service off of the proposed 16-inch Granite Bridge pipeline. We would interconnect with the Granite Bridge pipeline through a meter station, to be located at the LNG storage facility, which is proposed to be constructed in an abandoned quarry west of Exit 6, on the south side of Route 101. A meter station is an interconnection point that monitors the flow of natural gas and regulates the pressures to enable natural gas to flow to customers through a distribution system.

Connecting with the Granite Bridge pipeline at this location provides a number of advantages for the community. The cost of the meter station would be shared by customers in both Raymond and Epping, lowering the overall cost of the distribution system. In addition, a greater number of residential customers, initially in West Epping, will be able access natural gas for their heating needs. As we build out the underground distribution system along Route 27 towards the commercial properties located at Exit 7, a greater portion of Epping will be able to access natural gas as a heating option.

3. Description of the proposed Epping service area

a. Identification of the geographic areas to be served including a map

- Please see Appendix 3.a – Service Area Map

b. Identification of specific residential, commercial and industrial areas or customers expected to be included in the proposed service area

Phase 1: The distribution system will initiate from the proposed gate station with a directional bore under Route 101 onto Holt Road. This bore location will require final approval from NHDOT. The distribution system will continue north on Holt Road passing and providing access to Hickory Hill Road and Norris Court. At Mill Pond Road the system continues north to Route 27 (Pleasant Street), as well as southeast continuing on Mill Pond Road. On Route 27 the system will head west and cross into Raymond. In Raymond the system will turn south onto Prescott Road continuing to the Walmart Distribution Center. This section of the system will allow gas access to the neighborhood in the southwest corner of Epping. Starting from the intersection of Mill Pond Road and Route 27 the system will also head east towards Route 125. At Route 125 the system will proceed south toward Brickyard Plaza. The streets included, or with potential access to natural gas, include:

Holt Rd	Hickory Hill Rd.	Norris Ct.
Mill Pond Rd.	Friend St.	Pleasant St.
Peninsula Dr.	Riverview Ct.	Joshua Ln.
Shannon Dr.	Wilson Dr.	Black Jack Ct.
San Antonio Dr.	Midnight Sun Dr.	Hunter Dr.
Algay Dr.	Whitey Ct.	School St.
Depot Rd.	Colt Ln.	Crown Ct.
Gable Dr.	Jeness Rd.	Hackett Ct.
Fuller Ln.	Old State Rd.	Page Ln.
Winslow Way	Ledgewood Ln.	Gatchell Way
Franks Way	Lamprey Village Dr.	Hutch Ct.

Phase 2: This section of the distribution system will commence from piping installed during Phase 1 on Route 125 and Route 27. From the intersection of Route 27 and Main Street the system will head north along Main Street toward, and inclusive of, the Epping School Complex. This portion of the system includes High Street, Cate Street, and Elm Street. From the intersection of Route 125 and Main Street the system also extends east along Water Street to Route 125. This section also includes Mill Street. From the intersection of Main Street and Route 27 heading south along Main Street the system will include a distribution main on St. Laurent Street, Church Street, Railroad Avenue, and a portion of Fremont Road. Streets included, or with potential access to natural gas, in this Phase 2 include:

Main St.	Bartlett St.	High St.
Center Ct.	Academy St.	Cate St.
Elm St.	Bennington Ct.	Mill St.
Pearson Way	Pike St.	Water St.
Moore St.	Church St.	Jannell Ct.
St Laurent St.	Fremont Rd.	Leddy Dr.
Exeter Rd.		

Phase 3: This phase would originate at the intersection of Route 27 and Blake Road. The system would continue north along Blake Road to Prescott Road. From Blake Road the system would connect to Prescott Road and Old Bridge Lane. This phase of construction would most likely require contributions-in-aid-of-construction (CIACs) from customers to receive service, unless more development occurs before construction begins. CIACs are estimated to be less than \$1,500 per customer. Streets included or with potential access to natural gas in this phase include:

Blake Rd.	Shepherd Ln.	Wood Dr.
Old Bridge Ln.	Saddle Brook Ln.	Molly Way
Anthony Ln.	Prescott Rd.	Rosewood Ct
Ironwood Dr.	Debbie Ln.	Orchard Hill Rd
Cider St.	MacIntosh Ln.	Apple Way
Cortland Dr.		

c. Timetable for construction

- Construction for the Epping distribution system is dependent on three regulatory approvals. The first two are the NH Public Utilities Commission (NHPUC) and NH Site Evaluation Committee (NHSEC) approvals for the Granite Bridge project. The third would be PUC approval of a franchise petition to serve the Town of Epping. If Liberty Utilities were to be selected through this RFP process we would immediately file a petition with the NHPUC for the franchise rights to serve Epping.

- In late 2017, Liberty Utilities filed its request for approval of the Granite Bridge project with the NHPUC, and is planning to file for approval with the NHSEC in early 2019.
- Liberty Utilities anticipates that any franchise award for Epping would be conditioned on an NHSEC approval of Granite Bridge. Construction of the Granite Bridge pipeline and the Epping distribution system would be begin simultaneously. The Company expects the Granite Bridge pipeline construction along with the initial phases of construction for the Epping distribution system could be completed in 2022, depending on the length of NHSEC review.

d. Marketing study and conclusion

- Liberty Utilities identified Epping and Raymond as potential franchise areas for natural gas service prior to the Granite Bridge project initiative. However, serving Epping would have required an extension of the Company’s existing distribution system along an unserved area of Auburn and through Candia. This route proved uneconomic due to the distance, pipe size requirements, and lack of potential customers along that particular route. When Liberty Utilities began evaluating the Granite Bridge project as a potential solution for its customer’s capacity requirements the Company was also in the process of evaluating growth potential within its existing franchise areas and potential expansion areas. Liberty Utilities hired ICF International to construct a database of potential customers within our existing franchise areas, as well as potential new franchise areas. The database is known as the SIMS dashboard (Strategic Intelligence Management System). For the Scope of Work provided by ICF please see Appendix 3.b – ICF Scope of Work Shortly after entering into this contract Liberty Utilities signed a contract amendment (Appendix 3.b – ICF Epping Amendment, dated 5/17/2016) which added the Town of Epping to the Statement of Work. Below is a synopsis of potential customers located in Epping.

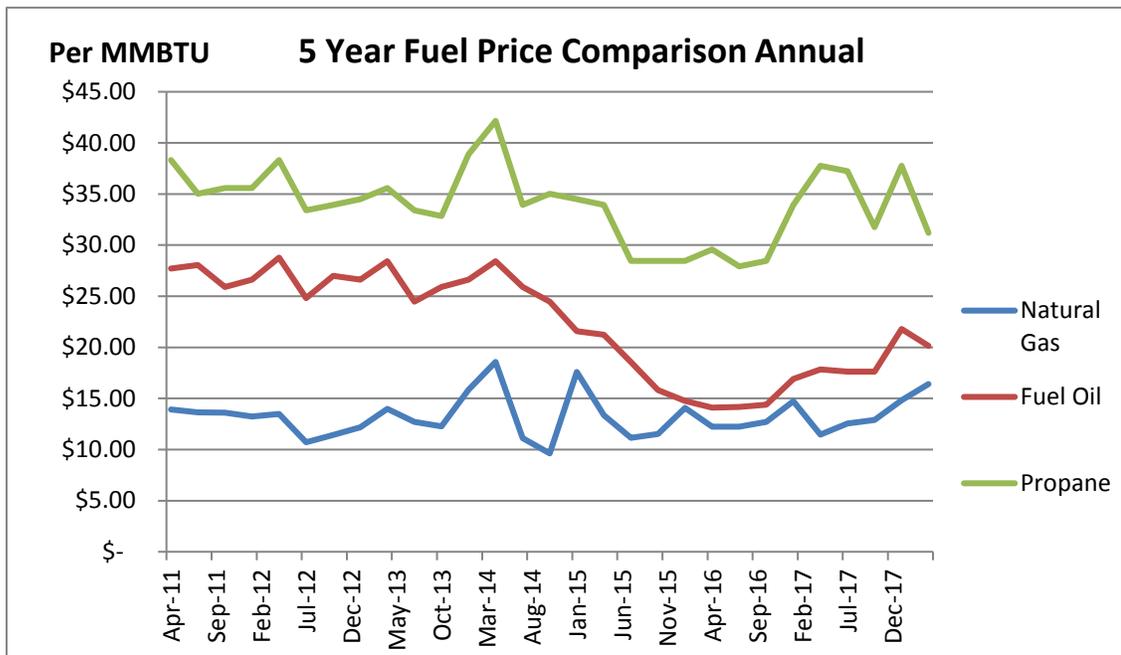
		Total Prospect Count	Usage Metrics (therms/mo)		Estimated Annual Load (therms)
			Median	Average	
Epping	Residential	2,456	63	69	2,033,568
	Commercial	403	357	1,182	5,716,152

- Liberty Utilities also engaged ScottMadden Associates (SMA) for consultation and analysis of the Granite Bridge project. Included in these services are the development of customer growth models to determine the appropriate size and scope of the pipeline and LNG tank. SMA utilized an econometric model of growth that includes regional and local trends, as well as the Company’s actual compounded annual growth rates. The SMA analysis confirmed our projection of growth within these communities.

e. Marketing plan to address potential residential, commercial, and industrial customers

- Liberty Utilities will utilize a marketing plan that has proven successful since the Company acquired the EnergyNorth assets from the predecessor company. Prior to Liberty Utilities' ownership, new customer additions were approximately 600 per year. Since the acquisition in 2012, Liberty Utilities has more than doubled this annual growth and expects to triple that growth rate in the near future. Liberty Utilities has accomplished this by investing in its employees and systems. The Company has grown from having only three in-state employees performing sales functions in 2012 to its current staffing level of eight full time employees. We have also developed a talented internal marketing team capable of delivering location and customer specific templates. Current marketing strategies include digital and social media, Liberty website tools, direct mailings, community and Town Hall events, and community advertising.
- Please see Appendix 3.e – Marketing Materials for examples of customer outreach and marketing materials that would be customized and designed to reach potential customers in Epping.
- Liberty Utilities also tracks comparisons between the delivered price of natural gas versus the delivered price of competing fuels such as oil and propane. Over the past seven years, natural gas has been the lowest cost fuel for Liberty Utilities customers. Please see the chart below for a comparison. Natural gas prices include the monthly Customer Charge, distribution rates, and the cost of the commodity. Prices for propane and fuel oil were obtained from the NH Office of Strategic Initiatives (OSI).
- For a comparison of the most recent 12-month total annual bills for natural gas versus fuel oil and propane please see Appendix 3.e. – Sample Residential and Commercial Bills. These bills represent standard and Managed Expansion Program (MEP)¹ residential rates as well as standard and MEP rates for small commercial customers. Liberty believes these rate classifications will represent more than 90% of the customers served in the Town of Epping.

¹ MEP, or Managed Expansion Program, rates are designed for customers who otherwise would have to pay a substantial CIAC to receive service, usually because they are too far from a distribution main. Instead of having to pay a large CIAC, customers located in a designated MEP rate project pay a 30% higher distribution rate for 10 years which, in effect, spreads the CIAC over that period of time. Even under MEP rates, Liberty Utilities' overall customer bills remain price-competitive with propane and fuel oil.



f. Density requirements-minimum developed density to initiate service for residential, commercial, and/or industrial customers

- Liberty Utilities does not have a density requirement to initiate service. Rather, we provide a “Standard Offer” of a free 100 foot service line extension from an existing natural gas main. For customers that require a main extension and a service line extension, our tariff contains a Service and Main Extension Policy that compares the cost of building the new main and services with the expected revenue that will be received from the new residential customers over an 8 year period (or over 6 years for commercial customers). If the expected revenues over that 8-year (or 6-year) period is greater than the direct construction costs, then the customers will not have to make any payment to receive service. If the expected revenues are less than the construction costs, then the customers would have to make up the difference with a contribution in aid of construction, or CIAC payment.
- Understanding that CIACs pose a barrier to conversion and limit expansion opportunities outside of areas with direct access to the distribution system, Liberty Utilities petitioned the NHPUC, and was granted approval, for an innovative new rate design called the MEP, or Managed Expansion Program, mentioned above. This change created a new rate structure which allows customers to pay a 30% higher distribution rate for 10 years, instead of paying a high up-front CIAC. The additional charge only applies to the distribution rate component of a customer’s bill, all other components that make up a customer’s bill (the Local Distribution Adjustment Clause and the Cost of Gas), are identical to normal customer rates.

- Another enhancement to the Service and Main Extension Policy within Liberty Utilities' tariff, which was incorporated through the MEP approval, was the ability to look at projects as a portfolio with reasonable assumptions for customer commitments built into the evaluation model. The Liberty Utilities sales team can now evaluate an entire street or neighborhood as a single project that assumes a 60% saturation rate built into the model. This allows the Company to assume it will receive distribution revenues from 60% of all customers along the proposed route to be credited towards direct construction costs of the project. The service lines required to serve those customers are to be included in the project costs. If the project is greater than \$1M, a Discounted Cash Flow (DCF) analysis will be undertaken which needs to produce a positive net present value (NPV) for the project. If the project passes this "hurdle rate," Liberty Utilities can begin construction after securing 6- and 8-year annual distribution revenues that meet or exceed 25% of the direct construction costs.
 - Liberty Utilities is in the third year of using MEP rate and it is having a very positive impact on new customer additions. The Company believes the MEP structure will allow for an accelerated build-out of the Epping distribution system. Another recent tariff enhancement approved by the NH PUC which allows for a customer to receive a free 100 foot service by converting any appliance to natural gas as long as they initiate service when a new or replacement main is being installed in front of their home or business. This allows the customer to put off the more costly conversion of heating equipment until they are ready or when the existing equipment is approaching the end of its life-cycle. By taking advantage of this offer, it reduces construction costs for Liberty Utilities and ensures the service line and meter are in place if an emergency heating installation is required during winter when new construction is not possible. Since the Epping system will be an entirely new construction project, the Liberty Sales and Marketing team will work closely with all potential customers to make them aware of this offer. Another benefit of this offer is the ability to take care of street restoration in a timely and efficient manner.
- g. Anticipated customer mix and timeframe to execute the mix- number of potential residential, commercial, and industrial customers**
- Conservative estimates show a potential residential prospect target count of 2,456 and a prospective commercial count of 403. Since the majority of the commercial prospects are located along the proposed routes of the initial phases, the Company anticipates a higher saturation rate within the commercial customer class initially, but expects the residential count to climb as the build-out continues. Liberty Utilities serves approximately 92,044 customers in New Hampshire; 87% of those served are residential customers.

- h. Estimated customer investment for each customer class, e.g. scope of work and expense that the customer will be required to pay to connect to the natural gas service**
- During Phase 1 and Phase 2 identified above, based upon preliminary engineering estimates Liberty Utilities believes there will be a mix of regular and MEP rate structures, which are not expected to require additional customer CIACs. Phase 3, identified above, will most likely require some level of contributions from prospective customers in the form of a CIAC payment.
- 4. Details of the design and construction of the distribution pipe extensions**
- a. Map showing pipe specification in the intended routes and service areas**
- Please see Appendix 3.a – Service Area Map.
- b. Construction specifications and techniques to be utilized for the pipe installation**
- Liberty Utilities maintains its own Operations and Maintenance (O&M) manual which incorporates all local, state, and federal regulations. This O&M manual is electronic and is updated annually on April 1st of each year. Subject matter experts within the Company ensure that any changes are consistent with all local, state, and federal guidelines. All internal Liberty Utilities' and external contractor crews performing work are required to follow the procedures stated in the approved O&M manual. Topics include material specifications, design of pipelines, weld processes, joining material other than by welding, construction requirements for mains and transmission lines, customer meters and service lines, corrosion control, test requirements, uprating, etc. Prior to implementing any changes to the O&M manual, all internal and external crews are required to go through an annual training, which encompasses existing and changed processes, as well as manual navigation.
 - Liberty Utilities current O&M manual is available for review, if requested.
- c. Construction plans, anticipated cutting permits, and project supervision**
- Please see response to 4 f.
- d. Anticipated materials and specifications of pipe to include at a minimum the sizes of mains, types of pipes, and maximum allowable operating pressure ratings**
- The preliminary engineering design performed by the Liberty Utilities calls for the installation of HDPE 4710 SDR 9, with a maximum allowable operating pressure (MAOP) of 124 PSIG. Sizes will vary from 2" IPS to 12" IPS. Please see Appendix 3.a – Service Area Map for location of different size pipe.

e. Estimated cost by pipe size by foot including all indirect costs

- Please see the following chart for a breakdown of the approximate cost per foot based upon pipe diameter:

Pipe Size	Cost per foot
2"	\$40.00
4"	\$49.00
6"	\$61.00
8"	\$73.00
12"	\$110.00

- These estimates are based on over 1000' main extension, primarily installed off-pavement (does not include services). These are approximate estimates based upon preliminary engineering, material costs and average installation costs.

f. Specified procedures for disruption of public and private roadways and drives, traffic control, and reconstruction of all disrupted areas.

- Prior to the commencement do any natural gas main installation or replacement project, Liberty Utilities sends notifications to property owners along the proposed route. We will then submit a road opening permit to the Town requesting permission to dig within the right of way. A pre-construction walkthrough is then completed between the area Liberty Utilities' Supervisor, the contractor who will perform the gas line installation, and a Town representative. During this walkthrough the location of the new gas line is agreed upon by all parties and any traffic disruptions are discussed ahead of the planned construction.
- Once a permit is granted, Liberty Utilities will begin construction of the new natural gas line. Traffic control is set up each day on site to comply with the U.S Department of Transportation's Manual on uniform traffic control devices (MUTCD). Depending on Epping's requirements, typically there will be either a flagger or police officer on site to assist with traffic control. Once the new gas main is in and live with natural gas, service lines to new customers are installed. Temporary restoration is performed each day over the new natural gas line using a layer of sand, native soil, 12 inches of processed gravel, and completed with 4 inches of binder course. Each layer is compacted and tested daily using a dynamic cone penetrometer. Throughout the entire project Liberty Utilities has a qualified inspector on site to ensure that all Liberty Utilities, local, state, and federal requirements are being met during construction.

- After construction of the main and service lines is complete, restoration of the impacted areas begins. Areas off pavement, including work within and outside the right of way, are restored using loam and seed. Depending on local requirements, Liberty Utilities will either restore the impacted roadway using a “1 foot cut back” or through the “grind and inlay” process. The “1 foot cut back” process involves waiting 30 days after temporary pavement has settled and then peeling and removing existing asphalt 1 foot on either side of the gas trench (a natural gas trench is typically 2 feet wide). 2.5 inches of binder followed by 1.5 inches of top is installed in the 4 foot wide area. The “grind and inlay” process involves waiting through the entire winter before coming back to remove the temporary pavement the following year and fully restore the gas trench. This allows the gas trench to go through a freeze/thaw cycle, which enhances the durability of the restored pavement. The following spring Liberty Utilities grinds 1.5 inches off the top of the asphalt (2 feet on either side of the gas trench). 1.5 Inches of top course is then installed where the 1.5 inches was ground off. Once all restoration within and outside the right of way is complete, a Liberty Utilities inspector will visit the project to ensure that restoration was completed to Liberty Utilities’ and local standards.

Community Outreach & Incentive Programs

Liberty Utilities believes in a local, hands-on approach to our community outreach and relationships with our existing and potential customers. Our dedicated sales and marketing team is located in Manchester. They live and work in the communities we serve. They work hard to develop deep relationships with developers and commercial customers, so that we can meet a community's natural gas needs. We work with residential and commercial customers every step of the way, answering questions, addressing concerns, and making sure that our customers and their contractors have what they need, when they need it to make a conversion or new development as quick and easy as possible.

Through our innovative rate designs, like our managed expansion rates, which pay down up-front contributions-in-aid-of-construction (CIAC) over time, and our award winning energy efficiency programs we believe that Liberty can offer exceptional service to the largest number of residents in Epping.

Along with our normal rebates and incentives, we also commit to create a \$500,000 natural gas conversion assistance fund to help reduce upfront equipment or construction costs that Epping residents may incur when choosing natural gas.

5. Planned and anticipated community outreach programs to incentivize customers to connect to the natural gas service

- Please see response to 4 f.

6. Planned and anticipated financial assistance programs to be provided by the company for the cost of conversion to natural gas and assistance with customer's stranded costs

- If awarded the natural gas franchise to serve the Town of Epping, Liberty Utilities commits to create a natural gas conversion assistance fund to assist in reducing up-front costs customers may incur when switching to natural gas for their heating needs. Liberty Utilities would allocate \$500,000 for the fund, which would be available exclusively to residents of Epping. This fund would be administered by Liberty Utilities' Sales and Marketing staff and various conversion incentives would be developed with input from Epping officials. The fund may be used to reduce any upfront cost to convert customers' existing heating equipment or purchase new equipment, and help reduce or eliminate any contributions-in-aid-of-construction that may be required to run natural gas mains and services to customers. This fund will be paid by Liberty Utilities' shareholders, not customers.
- Energy efficiency is a top priority for Liberty Utilities and is a key strategy for building a modern and sustainable energy future. Since 2003, we have delivered a comprehensive portfolio of energy efficiency programs to our customers in New Hampshire, and in partnership with the other New Hampshire natural gas and electric utilities, known as NHSaves. During this period, our customers have saved over 235 million therms of natural gas over the life of the energy efficiency measures installed. The energy savings from the programs have resulted in avoided customer costs of over \$207 million and have reduced greenhouse gas emissions equivalent to the carbon dioxide of 266,865² passenger vehicles driven for one year.

² United States Environmental Protection Agency (2018). Greenhouse Gas Equivalencies Calculator. Retrieved from <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>. Returned value based on entry of 235,054,831 therms of natural gas.

Program Offerings

Liberty Utilities offers a suite of efficiency solutions designed to meet the varied needs of our customers, including helping homeowners to retrofit and reinsulate their existing homes as well as helping them build more efficient new homes, helping businesses install more efficient boilers, water heating and control systems, and helping municipalities and school districts better manage their energy systems:

NHSaves Program Offerings		
Program	Measure-Level Examples	Incentives
<i>Residential Sector</i>		
ENERGY STAR Homes	New construction measures beyond current building code standards	Builder training and verification of code+ measure installations
ENERGY STAR Products	High-efficient heating, water heating and control systems	Varies by product: \$150 up to \$1,500
Home Energy Assistance	Low income air sealing, weatherization and electrical measures	No cost service; up to \$8,000 in services plus heating system replacements
Home Energy Reports	Individual home comparative energy usage analysis	Free
Home Performance with ENERGY STAR	Audit, air sealing and weatherization measures	50% rebate up to \$4,000 Low interest financing Free visual audit offering
<i>Non-Residential Sector</i>		
Small Business	Lighting, refrigeration, compressed air, controls, electric hot water heating	Up to 75% of project costs
Large Business	Process manufacturing, custom controls, retro-commissioning, VFDs	Up to 50% of project costs

Liberty Utilities' energy efficiency programs are adaptable to unique efficiency opportunities and provide turnkey solutions to help identify savings opportunities for customers and assist with each energy efficiency measure installed. The programs also include education and workforce training and we engage with numerous market actors, such as architects, builders, distributors, installers, product manufacturers and retailers, to help encourage customers to take advantage of our energy efficiency offerings.

History of Innovation

Liberty Utilities is proud of its long history of energy efficiency program innovation and exploring new opportunities for customer savings. For example:

- In 2012, we began piloting the first Wi-Fi smart thermostat incentive program in the state and later introduced incentives for early boiler retirement measures.
- In 2014, Liberty Utilities deployed the first natural gas residential home energy reports program in the state, geared toward providing residential customers a detailed analysis of their home energy usage and how it compares to other residential natural gas customers.
- In 2014, we helped pilot a first-of-its-kind test project of a commercial polymer bead washing machine system with a large commercial laundry facility in the state. The polymer bead washing machine system is a breakthrough technology that requires no hot water and virtually no laundry detergent. Since the initial pilot, we have assisted numerous customers in the state with the deployment of this successful technology.
- In 2017, Liberty Utilities introduced an incentive for an innovative pre-rinse spray valve for beauty salons that can significantly reduce the amount of hot water used within these facilities.
- In 2018, the Company deployed a new visual audit offering to complement its existing Home Performance with ENERGY STAR program, a free offering that allows customers who do not qualify for its full weatherization program to still obtain simple, low-cost energy efficiency measures.
- Looking beyond 2018, Liberty Utilities has plans to introduce an on-bill financing program to help facilitate broader investments in energy efficiency amongst our residential and non-residential customers.

Customer Benefits

Some of the ways the Liberty Utilities energy efficiency programs are currently benefiting customers include:

- Working with Home Energy Raters and private builders to incent the construction of highly efficient homes using 15-20% less energy compared to a standard new home.
- Incentivizing investments in air-sealing and weatherization in existing homes performed by qualified private contractors to reduce homeowner's heating costs by more than 15%.
- Helping income-qualified customers receive insulation, air-sealing and other weatherization work, saving them about \$350 per year on energy costs, through our collaboration with the New Hampshire Office of Energy and Planning's Weatherization Assistance Program and the Community Action Agencies around the state.
- Helping customers invest in highly efficient natural gas products, saving 10-20% of the energy used if they had purchased standard models, by working with equipment distributors, suppliers and heating system contractors across the state to on education, incentive and training programs.

- Helping small, large business and non-profit agencies identify and install more efficient natural gas controls, heating and water heating equipment, as well as industrial process equipment. These energy efficiency improvements are implemented in partnership with private contractors throughout the state who help the business sector reduce energy use and save significantly on energy bills, resulting in more money being available to invest in their businesses and agencies.
- Focusing special attention on energy savings opportunities with municipalities which helps to save energy in public buildings, reducing overall costs to taxpayers.
- Working with local financial institutions to introduce a private lending program to assist customers in making energy efficiency investments and helping better address the up-front cost of projects.

In addition to the direct benefits to customers, the programs also result in:

- Reducing emissions – energy efficiency measures help decrease energy consumption, which reduces carbon dioxide emissions, airborne mercury, and other harmful pollutants that drive climate change and create harmful health impacts. This reduction in emissions helps create various health and well-being benefits including reduced symptoms of respiratory and cardiovascular conditions, rheumatism, arthritis and allergies as well as fewer injuries.
- Creating jobs – Spending on energy-efficient technologies and services supports the local workforce. According to a study from the Political Economy Research Institute (PERI) of the University of Massachusetts at Amherst (2012)³, every million dollars spent on energy-efficient measures, such as building retrofits, supports 7 direct jobs and 4.9 indirect jobs. Using this calculation, we have helped support 547 full time equivalents (FTEs) or 1.1 million work hours (using 2,080 hours for each FTE).
- Other Non-Energy Impacts - Those who participate in Liberty Utilities' energy efficiency programs also realize benefits such as improved air quality, increased comfort, improved performance and productivity, reduced maintenance costs, improved building value, and healthier and more comfortable buildings in which to live and work (Figure X). These benefits are particularly important to income-eligible and moderate income customers, who spend higher portions of their household budgets on energy and housing costs.

³ Burr, A., Majerski, C., Stellberg, S., Garrett-Peltier, H. (2012, March). "Analysis of Job Creation and Energy Cost Savings". Retrieved from http://www.peri.umass.edu/fileadmin/pdf/other_publication_types/PERI-IMT-2012-Analysis_Job_Creation.pdf

Improved indoor & outdoor environment

- more comfortable temperatures indoors
- improved air quality and health
- quieter surroundings
- less air pollution
- better lighting
- less light pollution

Improved business parameters

- increased productivity and sales
- better preservation of goods and materials
- reductions in construction costs and waste

Improved property parameters

- reduced insurance costs
- increased rents and occupancy
- tenant retention

Impact of Energy Efficiency on Energy Consumption

From 2003 through 2017, we have made over \$50 million in energy efficiency investments, resulting in over 235 million lifetime therm savings at a benefit value of over \$207 million.

NHSaves Program Results – Liberty Utilities, 2003 - 2017					
Year	Annual MMBtu Savings	Lifetime MMBtu Savings	EE Measures/ Participants	Utility Costs (000's)	Benefits (000's)
2003	37,668	577,895	2,959	\$929	\$5,085
2004	72,609	1,113,961	3,594	\$1,584	\$9,803
2005	75,700	1,161,377	6,198	\$1,740	\$10,220
2006	84,366	1,294,334	6,396	\$1,830	\$11,390
2007	152,840	2,344,840	5,578	\$1,628	\$20,634
2008	96,930	1,487,083	2,666	\$2,652	\$13,086
2009	120,588	2,095,844	4,110	\$2,485	\$19,000
2010	78,227	1,499,657	4,192	\$3,584	\$16,933
2011	75,747	1,257,675	2,050	\$3,338	\$11,906
2012	148,267	2,046,801	3,214	\$6,226	\$14,659
2013	115,340	1,647,299	2,765	\$4,589	\$16,898
2014	116,946	1,757,567	2,627	\$5,314	\$13,375
2015	144,485	1,878,813	31,180	\$5,177	\$13,976
2016	110,177	1,773,980	31,093	\$4,980	\$16,079
2017	101,646	1,568,358	44,786	\$4,502	\$14,030
2003 - 2017	1,531,537	23,505,483	153,408	\$50,556	\$122,825

Liberty Utilities has saved MMBtus at an average cost of \$0.32 cents⁴ per lifetime therm as compared to the current average Tier 2 retail price per therm of \$0.85, as of August 9, 2018, (New Hampshire Office of Strategic Initiatives). This represents a simple benefit cost ratio on program investments of 2.7.

NHSaves Programs Results – Liberty Utilities, 2017					
Sector/Program	Annual MMBtu Savings	Lifetime MMBtu Savings	EE Measures / Participants	Utility Expenditures (000's)	Benefits (000's)
Residential Sector					
ENERGY STAR Homes	2,103	52,587	44	111	489
ENERGY STAR Products	11,846	207,528	1,398	990	2,003
Home Energy Assistance	4,476	93,955	227	826	945
Home Energy Reports	9,708	33,878	38,000	224	431
Home Performance with ENERGY STAR	3,508	76,319	93	354	727
Residential Total	31,642	464,267	39,762	2,505	4,595
Commercial & Industrial Sector					
Large Business	44,189	707,968	172	1,119	6,000
Small Business	25,815	396,122	4,811	853	3,435
C&I Education	-	-	-	25	-
C&I Total	70,004	1,104,091	4,983	1,996	9,435
Overall Total	101,645	1,568,358	44,745	4,502	14,030

The 2017 annual MMBtu savings (101,645) are approximately 1.09% of Liberty Utilities' total billed delivery MMBtu sales in 2017 (9,320,745). The average life of the installed energy efficiency measures is 15.4 years. As a result, the savings associated with the measures installed in 2017 will continue well into the future and the cumulative impact of the programs will become more significant over time.

⁴ Value calculated by dividing the total program costs and utility performance incentive (\$4,738,933 + \$237,145) by (Lifetime MMBtu savings achieved (1,568,358) x 10 to convert MMBtus to Therms).

Looking Ahead

On August 2, 2016,⁵ the New Hampshire Public Utilities Commission (“Commission”) approved an Energy Efficiency Resource Standard (“EERS”) that defined energy savings targets for the state’s electric and gas utilities for the period 2018 through 2020 and a framework that will allow New Hampshire to achieve those goals. During this period, Liberty Utilities will be investing over \$23 million in energy efficiency with the goal of reducing customer energy usage by over 58 million lifetime therms of natural gas, which translates into a rate of investment per customer of \$256⁶ and a rate of savings of 639 therms per customer⁷.

Liberty Utilities is also the first utility, gas or electric, to offer true weather normalized decoupling along with the appropriate rate structure. We believe this will lead to even more support of our award winning energy efficiency programs as well as encourage more energy conservation, help provide consistency in customer bills and reduce weather-related volatility, which can create uncertainty and hardship for customers.

⁵ New Hampshire Public Utilities Commission (2016, August 8), Order No. 25,932, “Energy Efficiency Resource Standard – Order Approving Settlement Agreement”. Retrieved from <http://www.puc.state.nh.us/Regulatory/Orders/2016orders/25932e.pdf>

⁶ Based on 2018-2020 Energy Efficiency program budget of \$23,478,361 and 91,614 customers as of December 31, 2017.

⁷ Based on 2018-2020 Energy Efficiency program lifetime therms savings of 58,512,686 and 91,614 customers as of December 31, 2017.

Conclusion

Liberty Utilities is pleased to submit this proposal for natural gas service for the Town of Epping consideration. We believe that our experience, expertise, focus on investment, presence in the communities we serve, innovative and low-cost rate structures, financial incentive programs, award-winning energy efficiency programs and proposed system design all make Liberty an exceptional fit to meet the community's needs.

We believe that our proposal to serve Epping will allow for the greatest number of residents have the option to use natural gas, because we will be able to interconnect with the Granite Bridge pipeline at a strategically advantageous location, and because we are committed to providing a \$500,000 conversion assistance fund, which will help reduce barriers to usage and lower energy costs. Liberty Utilities will work hand-in-hand with town officials, business leaders, and residents to plan, design, and build a natural gas distribution system that serves the specific needs of this unique community.

Thank you for consideration and please contact us for any additional information needs.

**LIBERTY UTILITIES
ORGANIZATION CHART
AS OF JANUARY 15, 2018**

NOTES

1. Unless otherwise indicated, the ownership of all entities is 100%.
2. Defined terms have the meaning ascribed to them in Algonquin Power & Utilities Corp's ("Algonquin") most recent Annual Information Form.
3. "Non-Algonquin" means that the entity in question would not satisfy the definition of an "APCo Entity" in Algonquin's credit agreement.
4. The highlighted boxes denote facilities/assets that are owned by the legal entities, not the legal entity.

KEY

1. Corporation or LLC 
2. Partnership 
3. Note / Paper Based Asset 
4. Facility or Asset 

Chart A

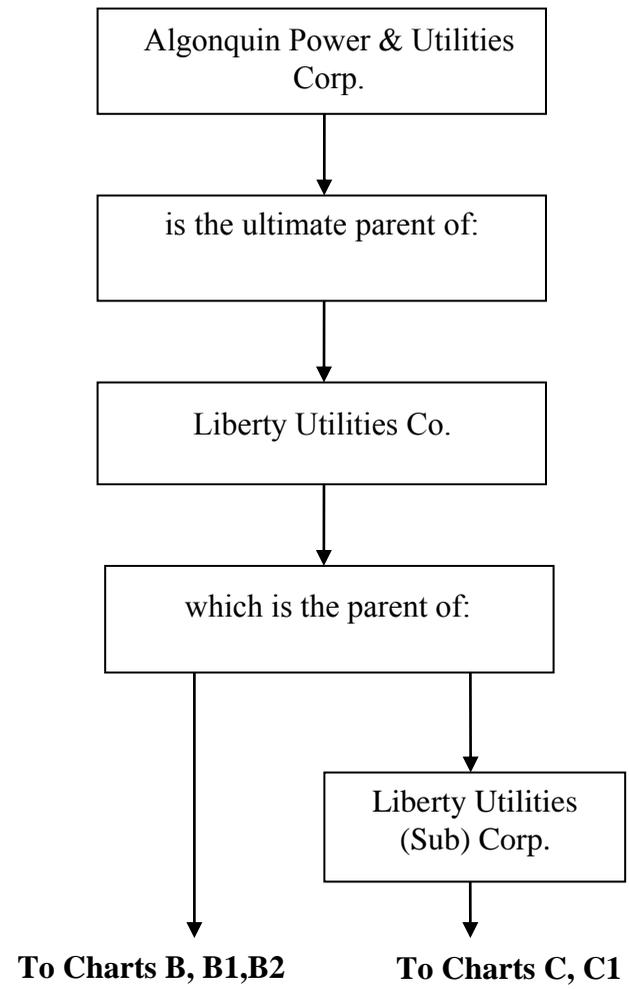


Chart B
(Continued on Charts B1, B2)

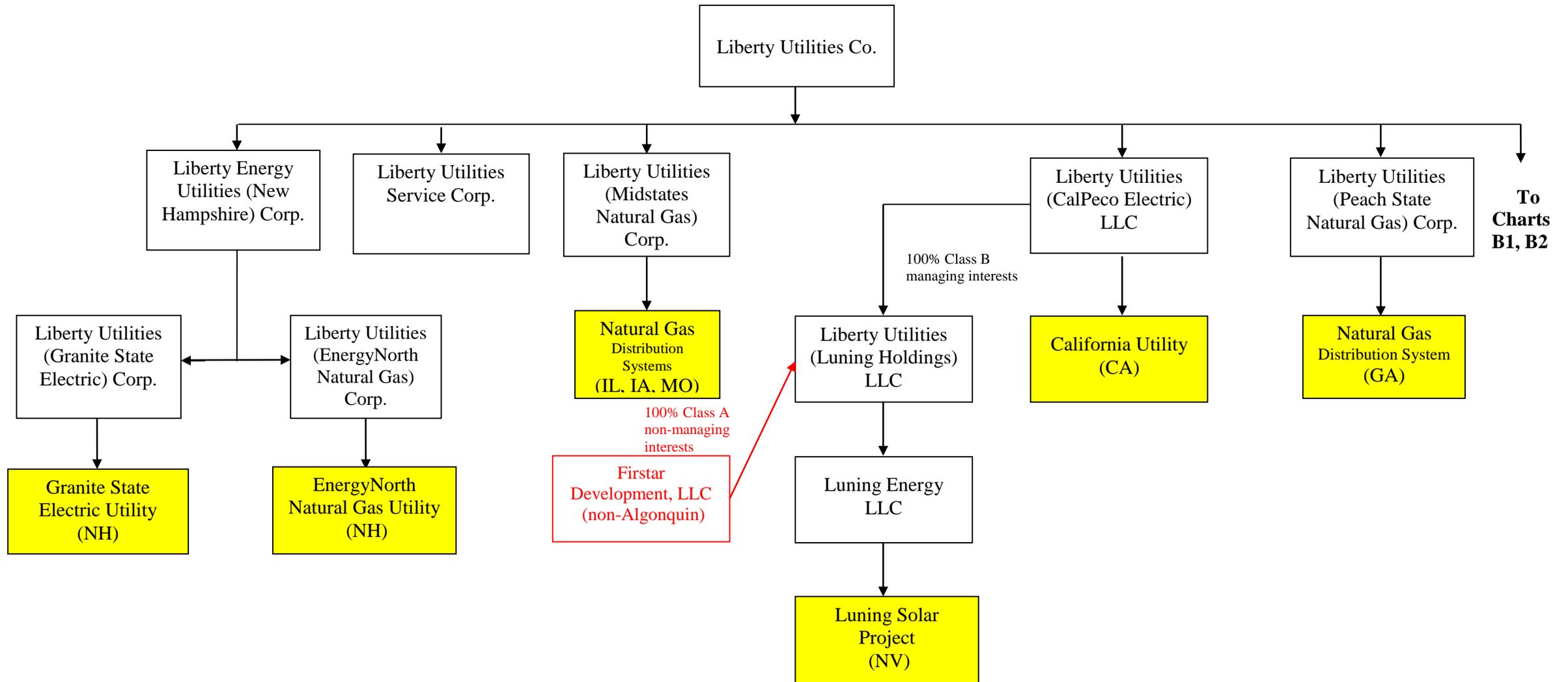
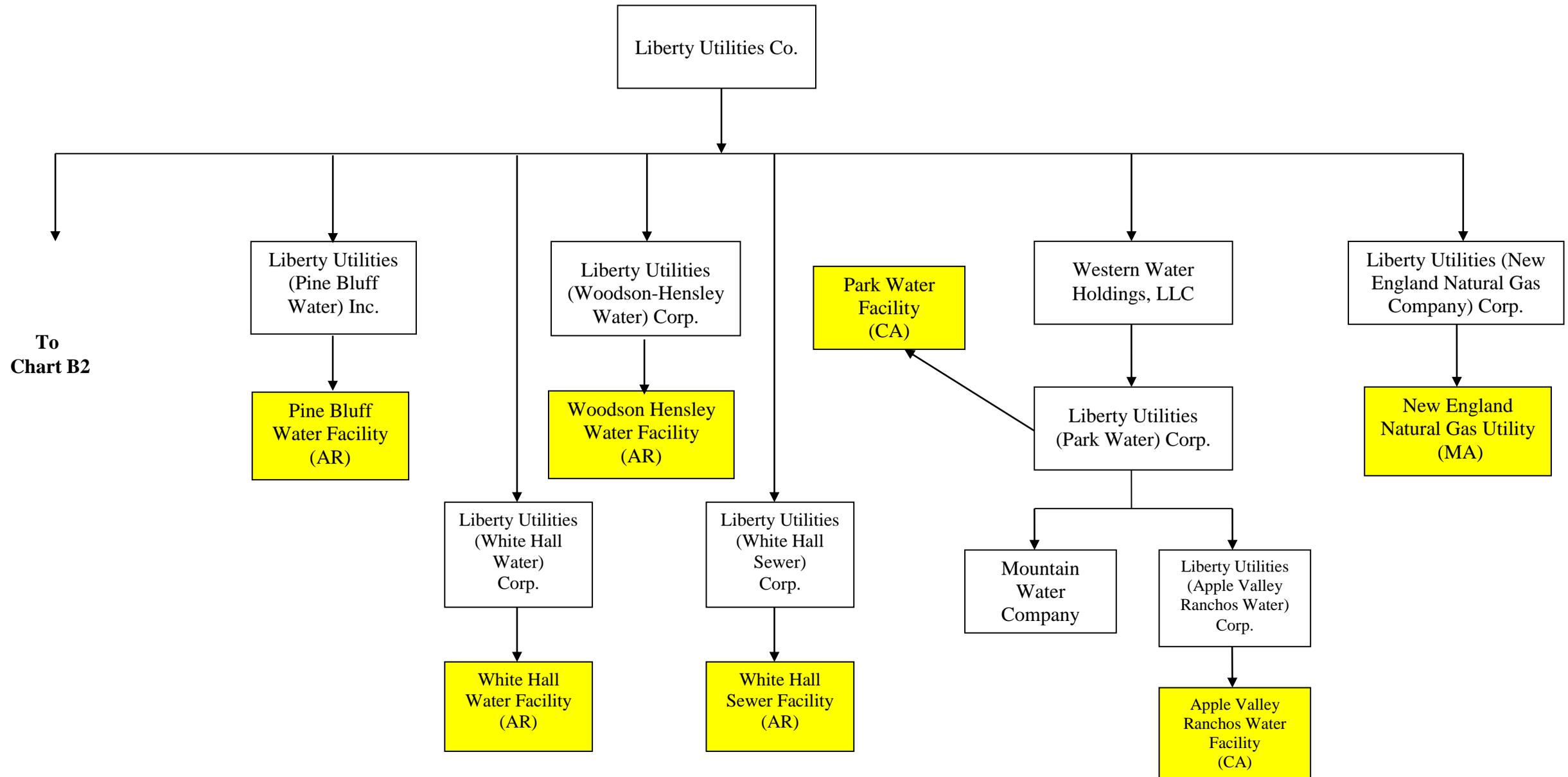


Chart B1



To
Chart B2

Chart B2

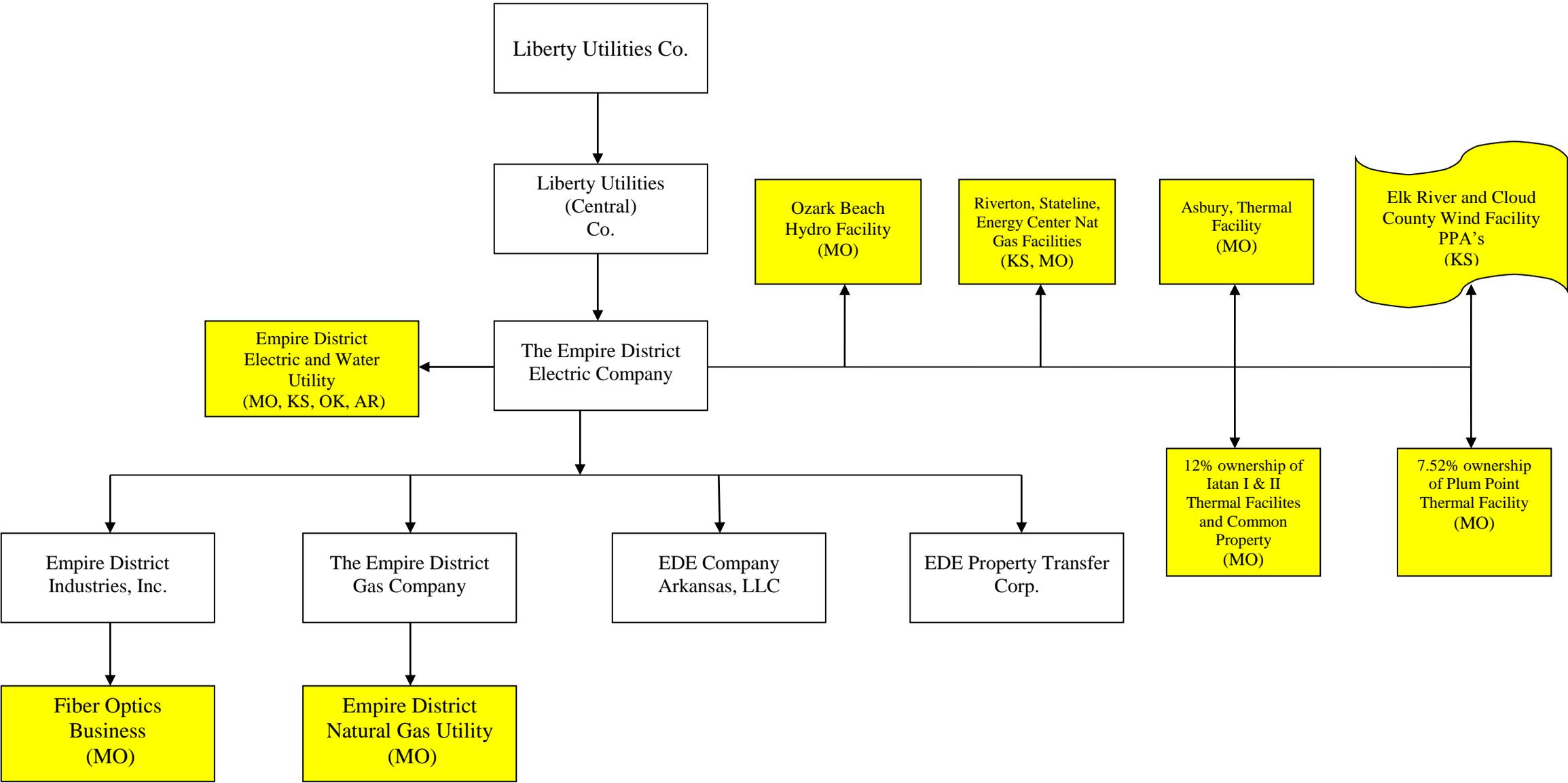
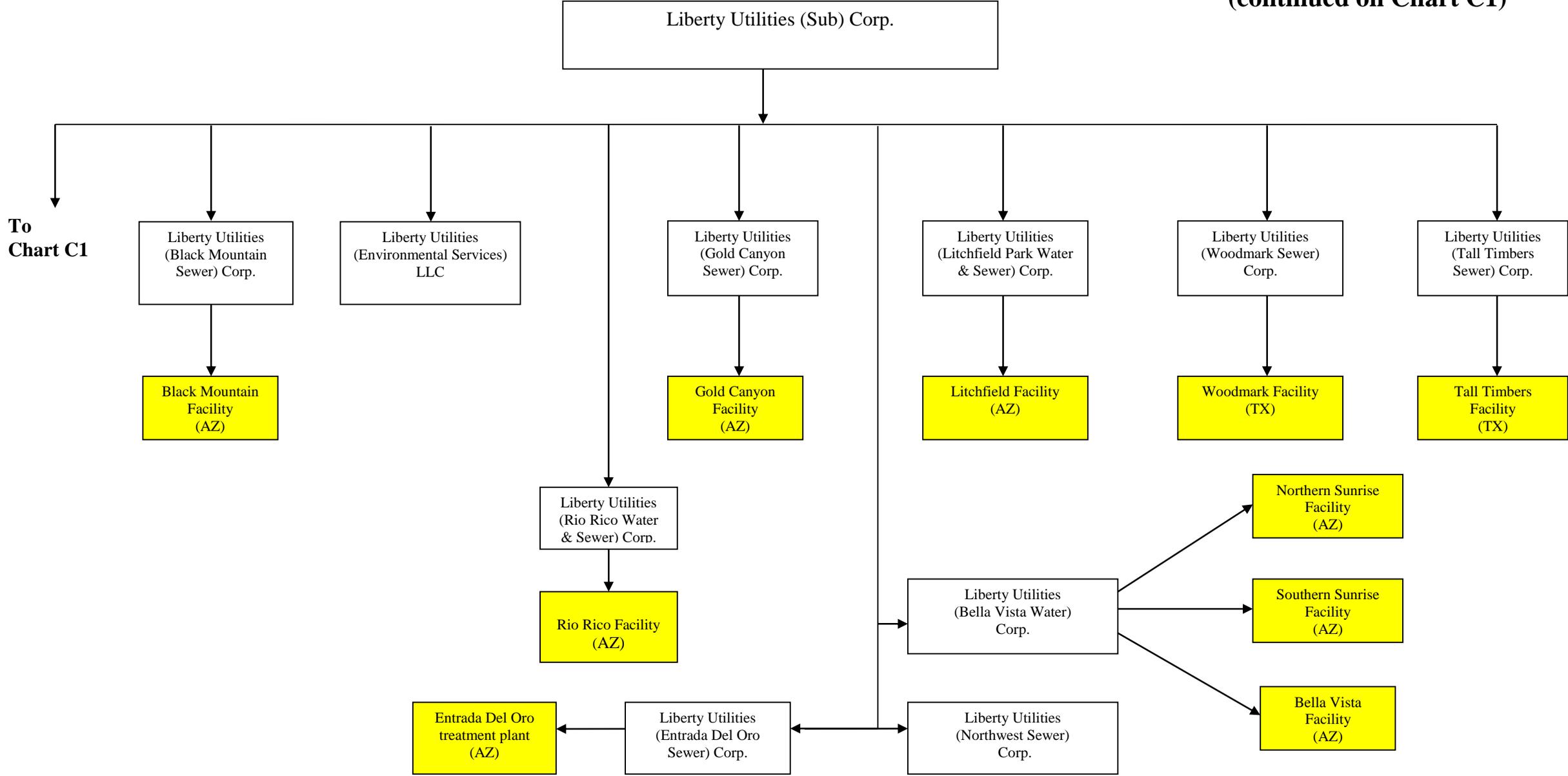
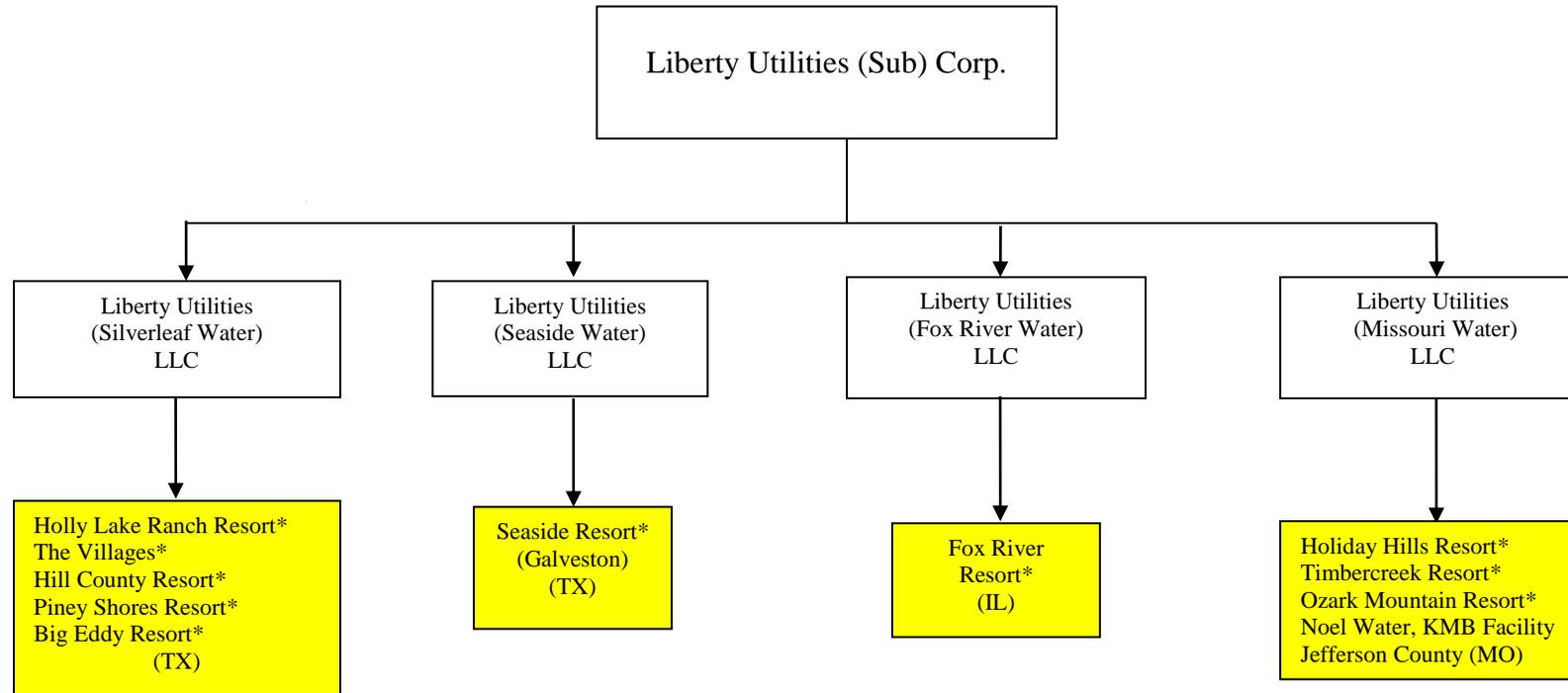


Chart C
(continued on Chart C1)



To
Chart C1

Chart C1



* Algonquin owns water treatment plants, water wells, lines, wastewater collection systems, rest line wastewater treatment plants and certain other assets located at these resorts.

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LIBERTY UTILITIES

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22 FIRM RATE SCHEDULES EXCLUDING KEENE CUSTOMERS

	Rates effective March 1, 2018 - April 30, 2018				Rates Effective August 1, 2018 - October 31, 2018			
	Winter Period				Summer Period			
	<u>Delivery Charge</u>	<u>Cost of Gas Rate Page 92</u>	<u>LDAC Charge</u>	<u>Total Rate</u>	<u>Delivery Charge</u>	<u>Cost of Gas Rate Page 89</u>	<u>LDAC Page 97</u>	<u>Total Rate</u>
<u>Residential Non Heating - R-1</u>								
Customer Charge per Month per Meter	\$16.88			\$16.88	\$ 15.02			\$ 15.02
All therms	\$0.2231	\$0.8056	\$0.0856	\$1.1143	\$ 0.3938	\$ 0.3665	\$ 0.0945	\$0.8548
<u>Residential Heating - R-3</u>								
Customer Charge per Month per Meter	\$24.43			\$24.43	\$ 15.02			\$ 15.02
Size of the first block	100 therms				all therms			
Therms in the first block per month at	\$0.3863	\$ 0.8056	\$ 0.0856	\$ 1.2775	\$ 0.5631	\$ 0.3665	\$ 0.0945	\$ 1.0241
All therms over the first block per month at	\$0.3197	\$ 0.8056	\$ 0.0856	\$ 1.2109				
<u>Residential Heating - R-4</u>								
Customer Charge per Month per Meter	\$9.77			\$9.77	\$ 6.00			\$ 6.00
Size of the first block	100 therms				all therms			
Therms in the first block per month at	\$0.1545	\$ 0.8056	\$ 0.0856	\$ 1.0457	\$ 0.2252	\$ 0.3665	\$ 0.0945	\$0.6862
All therms over the first block per month at	\$0.1278	\$ 0.8056	\$ 0.0856	\$ 1.0190				
<u>Commercial/Industrial - G-41</u>								
Customer Charge per Month per Meter	\$53.45			\$53.45	\$ 56.58			\$ 56.58
Size of the first block	100 therms				20 therms			
Therms in the first block per month at	\$0.4383	\$ 0.8041	\$ 0.0674	\$ 1.3098	\$ 0.4639	\$ 0.3604	\$ 0.0763	\$0.9006
All therms over the first block per month at	\$0.2944	\$ 0.8041	\$ 0.0674	\$ 1.1659	\$ 0.3116	\$ 0.3604	\$ 0.0763	\$0.7483
<u>Commercial/Industrial - G-42</u>								
Customer Charge per Month per Meter	\$160.36			\$160.36	\$ 169.75			\$ 169.75
Size of the first block	1000 therms				400 therms			
Therms in the first block per month at	\$0.3986	\$ 0.8041	\$ 0.0674	\$ 1.2701	\$ 0.4219	\$ 0.3604	\$ 0.0763	\$0.8586
All therms over the first block per month at	\$0.2655	\$ 0.8041	\$ 0.0674	\$ 1.1370	\$ 0.2811	\$ 0.3604	\$ 0.0763	\$0.7178
<u>Commercial/Industrial - G-43</u>								
Customer Charge per Month per Meter	\$688.20			\$688.20	\$ 728.47			\$ 728.47
All therms over the first block per month at	\$0.2449	\$0.8041	\$0.0674	\$1.1164	\$ 0.1185	\$ 0.3604	\$ 0.0763	\$0.5552
<u>Commercial/Industrial - G-51</u>								
Customer Charge per Month per Meter	\$53.45			\$53.45	\$ 56.58			\$ 56.58
Size of the first block	100 therms				100 therms			
Therms in the first block per month at	\$0.2642	\$ 0.8200	\$ 0.0674	\$ 1.1516	\$ 0.2796	\$ 0.3873	\$ 0.0763	\$0.7432
All therms over the first block per month at	\$0.1717	\$ 0.8200	\$ 0.0674	\$ 1.0591	\$ 0.1817	\$ 0.3873	\$ 0.0763	\$0.6453
<u>Commercial/Industrial - G-52</u>								
Customer Charge per Month per Meter	\$160.36			\$160.36	\$ 169.75			\$ 169.75
Size of the first block	1000 therms				1000 therms			
Therms in the first block per month at	\$0.2268	\$ 0.8200	\$ 0.0674	\$ 1.1142	\$ 0.1740	\$ 0.3873	\$ 0.0763	\$0.6376
All therms over the first block per month at	\$0.1511	\$ 0.8200	\$ 0.0674	\$ 1.0385	\$ 0.0989	\$ 0.3873	\$ 0.0763	\$0.5625
<u>Commercial/Industrial - G-53</u>								
Customer Charge per Month per Meter	\$708.24			\$708.24	\$ 749.68			\$ 749.68
All therms over the first block per month at	\$0.1585	\$0.8200	\$0.0674	\$1.0459	\$ 0.0805	\$ 0.3873	\$ 0.0763	\$0.5441
<u>Commercial/Industrial - G-54</u>								
Customer Charge per Month per Meter	\$708.24			\$708.24	\$ 749.68			\$ 749.68
All therms over the first block per month at	\$0.0605	\$0.8200	\$0.0674	\$0.9479	\$ 0.0347	\$ 0.3873	\$ 0.0763	\$0.4983

DATED: July 24, 2018

ISSUED BY: /s/Susan L. Fleck

Susan L. Fleck

EFFECTIVE: August 01, 2018

TITLE: President

Authorized by NHPUC Order No. 26,066 dated October 31, 2017 in Docket No. DG 17-135

NHPUC No.10 GAS
LIBERTY UTILITIES

Fourth Revised Page 86
Superseding Third Revised Page 86

**24 FIRM RATE SCHEDULES EXCLUDING KEENE CUSTOMERS- MANAGED
EXPANSION PROGRAM**

		II RATE SCHEDULES FIRM RATE SCHEDULES							
		Rates effective March 1, 2018 - April 30, 2018				Rates Effective August 1, 2018 - October 31, 2018			
		Winter Period				Summer Period			
	Delivery Charge	Cost of Gas Rate Page 92	LDAC Charge	Total Rate	Delivery Charge	Cost of Gas Rate Page 89	LDAC Page 97	Total Rate	
Residential Non Heating - R-5									
Customer Charge per Month per Meter	\$21.94			\$21.94	\$ 19.52			\$ 19.52	
All therms	\$0.2900	\$0.8056	\$0.0856	\$1.1812	\$ 0.5119	\$ 0.3665	\$ 0.0945	\$ 0.9191	
Residential Heating - R-6									
Customer Charge per Month per Meter	\$31.76			\$31.76	\$ 19.52			\$ 19.52	
All therms					\$ 0.7320	\$ 0.3665	\$ 0.0945	\$ 1.1392	
Size of the first block	100 therms								
Therms in the first block per month at	\$0.5022	\$ 0.8056	\$ 0.0856	\$ 1.3934					
All therms over the first block per month at	\$0.4156	\$ 0.8056	\$ 0.0856	\$ 1.3068					
Residential Heating - R-7									
Customer Charge per Month per Meter	\$12.70			\$12.70	\$ 7.81			\$ 7.81	
All therms					\$ 0.2928	\$ 0.3665	\$ 0.0945	\$ 0.7000	
Size of the first block	100 therms								
Therms in the first block per month at	\$0.2009	\$ 0.8056	\$ 0.0856	\$ 1.0921					
All therms over the first block per month at	\$0.1661	\$ 0.8056	\$ 0.0856	\$ 1.0573					
Commercial/Industrial - G-44									
Customer Charge per Month per Meter	\$69.49			\$69.49	\$ 73.56			\$ 73.56	
Size of the first block	100 therms				20 therms				
Therms in the first block per month at	\$0.5698	\$ 0.8041	\$ 0.0674	\$ 1.4413	\$ 0.6031	\$ 0.3604	\$ 0.0763	\$ 0.9860	
All therms over the first block per month at	\$0.3827	\$ 0.8041	\$ 0.0674	\$ 1.2542	\$ 0.4051	\$ 0.3604	\$ 0.0763	\$ 0.7880	
Commercial/Industrial - G-45									
Customer Charge per Month per Meter	\$208.47			\$208.47	\$ 220.68			\$ 220.68	
Size of the first block	1000 therms				400 therms				
Therms in the first block per month at	\$0.5182	\$ 0.8041	\$ 0.0674	\$ 1.3897	\$ 0.5485	\$ 0.3604	\$ 0.0763	\$ 0.9314	
All therms over the first block per month at	\$0.3452	\$ 0.8041	\$ 0.0674	\$ 1.2167	\$ 0.3654	\$ 0.3604	\$ 0.0763	\$ 0.7483	
Commercial/Industrial - G-46									
Customer Charge per Month per Meter	\$894.66			\$894.66	\$ 947.01			\$ 947.01	
All therms over the first block per month at	\$0.3184	\$0.8041	\$0.0674	\$1.1899	\$ 0.1540	\$ 0.3604	\$ 0.0763	\$ 0.5369	
Commercial/Industrial - G-55									
Customer Charge per Month per Meter	\$69.49			\$69.49	\$ 73.56			\$ 73.56	
Size of the first block	100 therms				100 therms				
Therms in the first block per month at	\$0.3434	\$ 0.8200	\$ 0.0674	\$ 1.2308	\$ 0.3635	\$ 0.3873	\$ 0.0763	\$ 0.7733	
All therms over the first block per month at	\$0.2232	\$ 0.8200	\$ 0.0674	\$ 1.1106	\$ 0.2363	\$ 0.3873	\$ 0.0763	\$ 0.6461	
Commercial/Industrial - G-56									
Customer Charge per Month per Meter	\$208.47			\$208.47	\$ 220.68			\$ 220.68	
Size of the first block	1000 therms				1000 therms				
Therms in the first block per month at	\$0.2949	\$ 0.8200	\$ 0.0674	\$ 1.1823	\$ 0.2262	\$ 0.3873	\$ 0.0763	\$ 0.6360	
All therms over the first block per month at	\$0.1964	\$ 0.8200	\$ 0.0674	\$ 1.0838	\$ 0.1286	\$ 0.3873	\$ 0.0763	\$ 0.5384	
Commercial/Industrial - G-57									
Customer Charge per Month per Meter	\$920.72			\$920.72	\$ 974.59			\$ 974.59	
All therms over the first block per month at	\$0.2061	\$0.8200	\$0.0674	\$1.0935	\$ 0.1047	\$ 0.3873	\$ 0.0763	\$ 0.5145	
Commercial/Industrial - G-58									
Customer Charge per Month per Meter	\$920.72			\$920.72	\$ 974.59			\$ 974.59	
All therms over the first block per month at	\$0.0786	\$0.8200	\$0.0674	\$0.9660	\$ 0.0451	\$ 0.3873	\$ 0.0763	\$ 0.4549	

DATED: July 24, 2018

ISSUED BY: /s/Susan L. Fleck
Susan L. Fleck

EFFECTIVE: August 01, 2018

TITLE: President

Authorized by NHPUC Order No. 26,066 dated October 31, 2017 in Docket No. DG 17-135

	<u>Rates per therm</u>				<u>Rates per Dekatherm</u>		
	Residential (1)	C&I High Winter (2)	C&I Low Winter (3)		Residential	C&I High Winter	C&I Low Winter
Nov-17	\$0.6445	\$0.6433	\$0.6560	Nov-17	\$6.4450	\$6.4330	\$6.5600
Dec-17	\$0.6445	\$0.6433	\$0.6560	Dec-17	\$6.4450	\$6.4330	\$6.5600
Jan-18	\$0.6445	\$0.6433	\$0.6560	Jan-18	\$6.4450	\$6.4330	\$6.5600
Feb-18	\$0.8056	\$0.8041	\$0.8171	Feb-18	\$8.0560	\$8.0410	\$8.1710
Mar-18	\$0.8056	\$0.8041	\$0.8200	Mar-18	\$8.0560	\$8.0410	\$8.2000
Apr-18	\$0.8056	\$0.8041	\$0.8200	Apr-18	\$8.0560	\$8.0410	\$8.2000
May-18	\$0.3133	\$0.3084	\$0.3299	May-18	\$3.1330	\$3.0840	\$3.2990
Jun-18	\$0.3916	\$0.3855	\$0.4124	Jun-18	\$3.9160	\$3.8550	\$4.1240
Jul-18	\$0.3127	\$0.3066	\$0.3335	Jul-18	\$3.1270	\$3.0660	\$3.3350
Aug-18	\$0.3665	\$0.3604	\$0.3873	Aug-18	\$3.6650	\$3.6040	\$3.8730
Sep-18	\$0.3665	\$0.3604	\$0.3873	Sep-18	\$3.6650	\$3.6040	\$3.8730
Oct-18	\$0.3665	\$0.3604	\$0.3873	Oct-18	\$3.6650	\$3.6040	\$3.8730

- (1) All residential customer classes pay the same COG rate.
- (2) Commercial & Industrial customers with weather dependent consumption.
- (3) Commercial & Industrial customers with flat annual consumption.

FERC Account		Average Service Lives (Years)	Net Salvage Value (%)	Depreciation Rate
303	Intangible Plant (Amort.)			
	3-Year	3	N/A	33.33%
	5-Year	5	N/A	20.00%
	10-Year	10	N/A	10.00%
	<u>Production Plant</u>			
305	Structures and Improvements	35	0.0	2.86%
311	Liquid Petroleum Gas Equipment	35	0.0	2.86%
319	Gas Mixing Equipment	20	0.0	5.00%
320	Other Equipment - LNG	35	0.0	2.86%
320.1	Other Equipment - Production	35	0.0	2.86%
	<u>Storage Plant</u>			
361	Structures and Improvements - LNG	35	0.0	2.86%
363.5	Other Equipment - LNG	35	0.0	2.86%
	<u>Distribution Plant</u>			
375.2	Structures and Improvements	35	0.0	2.86%
375.3	Structures and Improvements	35	0.0	2.86%
376	Mains	60	-15.0	1.92%
378	Measuring and Regulating Station Equipment	35	0.0	2.86%
380	Services	45	-60.0	3.55%
381	Meters	32	0.0	3.13%
381.1	Meters - Instrument	32	0.0	3.13%
381.2	Meters - ERTs	15	0.0	6.67%
382	Meter Installations	32	0.0	3.13%
387	Other Equipment	19	0.0	5.26%
	<u>General Plant</u>			
390	Structures and Improvements	35	0.0	2.86%
391	Office Furniture and Equipment	18	5.0	5.28%
391.1	Office Furniture and Equipment - Computers	10	0.0	10.00%
391.2	Office Furniture and Equipment - Laptop Comp.	5	0.0	20.00%
392	Transportation Equipment	5	0.0	20.00%
393	Stores Equipment	30	0.0	3.33%
394	Tools, Shop and Garage Equipment	19	0.0	5.26%
394.1	Tools, Shop and Garage Equipment-CNG Station	19	0.0	5.26%
396	Power Operated Equipment	5	0.0	20.00%
397	Communications Equipment	10	0.0	10.00%
398	Miscellaneous Equipment	15	0.0	6.67%

<u>FERC Acct</u>	<u>Accum. Depr. & Amort.</u> <u>12/31/2017</u>
8840-3030 INT-Capital Software	7,149,149.16
8840-3050 PRD-Structures-Improvements	1,352,917.55
8840-3110 PRD-Structures-Improvements	66,482.25
8840-3200 PRD-Prod other Equipment-LNG	429,100.06
8840-3201 PRD-Prod other Equipment	7,540,332.92
8840-3610 STO-Structure Improvement-LNG	10,917.41
8840-3635 STO-Other Equipment-LNG	1,604.48
8840-3662 T&D-Structures Improv-M&R STA	183,387.95
8840-3663 T&D-Structures Improv-Other	285,765.74
8840-3670 T&D-Mains-STL-PLST-CI-Mixed	58,157,610.38
8840-3690 T&D-M&R Station Equipment	2,051,530.89
8840-3800 T&D-Gas Services-Mixed	64,752,679.70
8840-3801 T&D-Gas Services-Stubs	35,457.77
8840-3810 T&D-Gas Meters	5,484,952.14
8840-3811 T&D-Gas Meters-Instrument	35,303.58
8840-3812 T&D-Gas Meters-ERTS	1,576,671.89
8840-3820 T&D-Meter Installations	2,869,453.12
8840-3870 T&D-Other Equipment	363,267.51
8840-3900 GEN-Structure Improvements	3,844,632.74
8840-3910 GEN-Office Furniture-Equipment	37,515.53
8840-3911 GEN-Office Equipt-Computers	262,021.76
8840-3912 GEN-Laptop Computers	117,287.85
8840-3920 Gen-Transportation -auto van	1,102,819.08
8840-3930 GEN-Stores Equipment	29,280.71
8840-3940 GEN-Tools-Shop-Garage Equip	522,406.50
8840-3941 GEN-Tools-Eqpt-CNG-STA	186,625.97
8840-3960 Gen-Power Op equip<=12,000lb	202,904.93
8840-3961 Gen-Power Op equip>=12,000 lb	177,393.13
8840-3970 GEN-Communication Equipment	235,678.43
8840-3980 GEN-Miscellaneous Equipment	170,860.60
8840-3760 T&D-Mains-STL-PLST-CI-Mixed	17,851.40
	<hr/> 159,253,863.13
Other Adjustments to Accum. Depr. (*)	(28,327,652.67)
NH PUC Annual Report, page 9, line 05	<hr/> <hr/> 130,926,210.46

(*) The Other Adjustments predominantly relate to cost of removal charged prior to the July 2012 acquisition of EnergyNorth that would have been mostly related to mains and services, but for which a breakdown by account is not available.

ANNUAL REPORT (FORM F-16)



OF

Name ___ Liberty Utilities (EnergyNorth Natural Gas) Corp.

Address___ 15 Buttrick Road, Londonderry, NH 03053

TO THE

PUBLIC UTILITIES COMMISSION

OF THE

STATE OF NEW HAMPSHIRE

FOR THE

YEAR ENDED DECEMBER 31, 2017

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revisec X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
LIST OF CITIES AND TOWNS SERVED DIRECTLY				
Line No.	LOCATION	NUMBER OF CUSTOMERS	POPULATION as of 2016 data	
1	ALLENSTOWN	379	4,298	
2	AMHERST	546	11,244	
3	AUBURN	35	5,359	
4	BEDFORD	2,045	22,418	
5	BELMONT	86	7,275	
6	BERLIN	14	10,413	
7	BOSCAWEN	309	3,975	
8	BOW	794	7,775	
9	CANTERBURY	43	2,408	
10	CONCORD	11,236	42,904	
11	DERRY	540	33,246	
12	FRANKLIN	1,068	8,447	
13	GILFORD	107	7,155	
14	GOFFSTOWN	657	17,999	
15	HOLLIS	30	7,817	
16	HOOKSETT	2,379	14,098	
17	HUDSON	5,403	25,109	
18	LACONIA	2,172	16,470	
19	LITCHFIELD	164	8,475	
20	LONDONDERRY	1,384	25,850	
21	LOUDON	176	5,473	
22	MANCHESTER	27,188	110,506	
23	MERRIMACK	3,919	25,648	
24	MILFORD	1,132	15,299	
25	NASHUA	28,230	87,882	
26	NORTHFIELD	252	4,815	
27	PEMBROKE	974	7,118	
28	SANBORNTON	43	2,984	
29	TILTON	730	3,545	
30	WINNESQUAM	9	No Census Info Available	
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		92,044	546,005	

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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AFFILIATED INTERESTS

Include on this page, a summary listing of all affiliated interests of the respondent and its parent. Indicate the relationship to the parent and the respondent and the percentage owned by the corporate group.

Liberty Utilities(EnergyNorth Natural Gas) Corp, New Hampshire corporation, is 100% owned by Liberty Energy Utilities (New Hampshire) Corp., Delaware Corporation, which is 100% owned by Liberty Utilities Co, Delaware corporation, which is 100% owned by Liberty Utilities (America) Holdco, Inc. , Delaware corporation, which is 100% owned by Liberty Utilities (America) Holdings LLC, a Delaware limited liability company, which is 100% owned by Liberty Utilities (America) Co. Delware Corporation, which is 100% owned by Liberty Utilities (Canada) Corp., Canada Corporation, which is 100% owned by Algonquin Power & Utilities Corp, Canada Corporation which is publically traded.

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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OFFICERS

1. Report below the name, title and salary for each executive officer whose salary is \$50,000 or more. An "executive officer" of a respondent includes its president, secretary, treasurer, and vice president in charge of a principal business unit, division function (such as sales, administration or finance), and any other person who performs similarly policy-making functions.
2. If a change was made during the year in the incumbent of any position, show name of the previous incumbent, and date the change in incumbency was made.
3. Utilities which are required to file the same data with the Securities and Exchange Commission, may substitute a copy of item 4 of Regulation S-K (identified as this page). The substitute page(s) should be the same size as this page.
4. Report below any additional companies where the officer holds office along with their title.

Line No.	Title (a)	Name of Officer (b)	Other Companies Officer Of with Title (c)
1	Current		
2	President As of Sep 5,2017	Susan Fleck	President Liberty Utilities (New Hampshire) Corp., President Liberty Energy (Granite State Electric) Corp., President Liberty Sec & Treasurer Liberty Energy Utilities (New Hampshire) Corp., Sec & Treasurer Liberty Utilities (Granite State Electric)
3	Treasurer & Secretary As of Aug 30, 2016	Tisha Sanderson	
4			
5			
6			
7	Previous		
8	President to Sep 5,2017	James Sweeney	
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Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017	
DIRECTORS				
<p>1. Report below the information called for concerning each director of the respondent who held office at any time during the year. Include in column (a), abbreviated titles of the directors who are officers of the respondent.</p> <p>2. Designate members of the Executive Committee by an asterisk and the Chairman of the Executive Committee by a double asterisk.</p>				
Name (and Title) of Director (a)	Principal Business Address (b)	No. of Directors Meetings During Year (c)	Fees During Year (d)	
Ian E. Robertson Gregory Sorensen* David Pasioka Lori C. Auten Charles F. Bass W. Robert Keating * (note - Gregory Sorensen resigned from the entity, May 17, 2017)	354 Davis Rd, Oakville ON L6J 2X1 701 National Ave, Tahoe Vista, CA 96148 354 Davis Rd, Oakville ON L6J 2X1 1020 Carrington Ct., Midland GA 31820 65 Elm Hill Rd., Peterboro NH 03458 25 Oak Street, Reading MA 01867	4 4 4 4 4 4	None None None \$2,000 \$2,000 \$2,000	

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
SECURITY HOLDERS AND VOTING POWERS			
<p>1. Give the names and addresses of the 10 security holders of the respondent who, at the date of the latest closing of the stock book or compilation of the list of stockholders of the respondent, prior to the end of the year, had the highest voting powers in the respondent, and state the number of votes which each would have had the right to cast on that date if a meeting were then in order. If any such holder held in trust, give in a footnote the known particulars of the trust (whether voting trust, etc.), duration of trust and principal holders of beneficiary interests in the trust. If the stock book was not closed or a list of stockholders was not compiled within one year prior to the end of the year, or if other class of security has become vested with voting rights, then show such 10 security holders as of the close of the year. Arrange the names of the security holders in the order of voting power, commencing with the highest. Show in column (a) the titles of officers and directors included in such list of 10 security holders.</p> <p>2. If any security other than stock carries voting rights, explain in a supplemental statement</p>		<p>the circumstances whereby such security became vested with voting rights and give other important particulars (details) concerning the voting rights of such security. State whether voting rights are actual or contingent: If contingent, describe the contingency.</p> <p>3. If any class or issue of security has any special privileges in the election of directors, trustees or managers, or in the determination of corporate action by any method, explain briefly in a footnote.</p> <p>4. Furnish particulars (details) concerning any options, warrants, or rights outstanding at the end of the year for others to purchase securities of the respondent or any securities or other assets owned by the respondent, including prices, expiration dates, and other material information relating to exercise of the options, warrants, or rights. Specify the amount of such securities or assets so entitled to be purchased by any officer, director, associated company, or any of the ten largest security holders. This instruction is inapplicable to convertible securities or to any securities substantially all of which are outstanding in the hands of the general public where the options, warrants, or rights were issued on a prorata basis.</p>	
<p>1. Give the date of the latest closing of the stock book prior to the end of the year, and state the purpose of such closing:</p> <p style="text-align: center;">NA</p>		<p>2. State the total number of votes cast at the latest general meeting prior to the end of the year for election of the directors of the respondent and number of such votes cast by proxy</p> <p>Total: NA By proxy:</p>	
		<p>3. Give the date and place of such Meeting:</p> <p style="text-align: center;">NA</p>	
VOTING SECURITIES			
Number of votes as of (date): 12/31/14			
Line No.	Name (Title) and Address of Security Holder (a)	Total Votes (b)	Common Stock (c)
			Preferred Stock (d)
			Other (e)
4	TOTAL votes of all voting securities		
5	TOTAL numbers of security holders		
6	TOTAL votes of security holders listed below	120,000	120,000
7	Liberty Energy Utilities (New Hampshire) Corp.	120,000	120,000
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Name of Respondent	This Report is:	Date of Report	Year of Report			
Liberty Utilities (Energy/North Natural Gas) Corp. d/b/a Liberty Utilities	(1) Original (2) Revised	July 11, 2018	December 31st, 2017			
PAYMENTS TO INDIVIDUALS						
1. List names of all individuals, partnerships, or corporations, to whom payments totaling \$50,000 or more for services rendered were made or accrued during the year, and the amount paid or accrued to each. Where payments or accruals to the individual members of a partnership or firm together total \$50,000 or more, list each individual and the amount paid or due each.						
Line No.	Name	Street	City	State	Zip Code	Amount
(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	TENNESSEE GAS PIPELINE CO	PO BOX 2511	HOUSTON	TX	77252-2511	17,063,820.99
2	R H WHITE CONSTRUCTION CO INC	41 CENTRAL STREET	AUBURN	MA	01501	16,175,034.55
3	MEARS GROUP, INC.	PO BOX 281949	ATLANTA	GA	30384-1949	8,524,901.42
4	BP ENERGY COMPANY	201 HELIXS WAY	HOUSTON	TX	77079	8,339,227.50
5	SHELL ENERGY NORTH AMERICA (U.S., L.P.)	1000 MAIN STREET LEVEL 12	HOUSTON	TX	77002	7,321,350.99
6	MIDWAY UTILITY CONTRACTORS LLC	106 LEDGE ROAD	SEABROOK	NH	03874	7,060,628.98
7	ENGIE GAS AND LNG, LLC	1990 POST OAK BOULEVARD Suite 1900	HOUSTON	TX	77056	6,654,879.73
8	BENEFIT TRUST COMPANY	5501 COLLEGE BOULEVARD Suite 100	OVERLAND PARK	KS	66211	6,427,000.00
9	DETE ENERGY TRADING	414 S MAIN STREET	ANN ARBOR	MI	48108	5,817,344.28
10	LIBERTY UTILITIES CANADA CORP	354 DAVIS ROAD	OKVILLE	ONTARIO	L6X2X1	5,486,491.11
11	CITY OF MANCHESTER	CITY OF MANCHESTER DEPARTMENT OF PUBLIC WORKS	MANCHESTER	NH	03103	3,789,157.99
12	DIRECT ENERGY BUSINESS MARKETING, LLC	NATURAL GAS ACCOUNTING WB-8	WOODBRIDGE	NJ	07095	2,863,727.02
13	NEXTERA ENERGY POWER MARKETING, LLC	700 UNIVERSE BOULEVARD	JUNO BEACH	FL	33408	2,398,717.57
14	STATE OF NH - DEPARTMENT OF REVENUE	DOCUMENT PROCESSING DIVISION P.O.Box 637	CONCORD	NH	03302-0637	2,073,844.50
15	CONCORD STEAM CORP	123 PLEASANT STREET	CONCORD	NH	03301-0000	1,900,000.00
16	CITY OF MANCHESTER - OFFICE OF TAX COLLECTOR	PO BOX 9598 1 City Hall Plaza	MANCHESTER	NH	03108-9598	1,872,028.29
17	LIBERTY UTILITIES SERVICE CORP.	354 DAVIS ROAD	OKVILLE	ONTARIO	L6X2X1	1,704,621.79
18	ALGONQUIN POWER & UTILITIES CORP	2645 BRISTOL CIRLCE	OKVILLE	ONTARIO	L8H 7H7	1,462,414.15
19	CITY OF NASHUA NH	PO BOX 885	NASHUA	NH	03061-0885	1,406,970.89
20	TENASKA MARKETING VENTURES	11718 NICHOLAS STREET	OMAHA	NE	68154-4413	1,016,435.95
21	ENERGY FEDERATION INC	40 WASHINGTON STREET - Suite 2000	WESTBOROUGH	MA	01581-1013	999,828.22
22	EMERA ENERGY SERVICES, INC	8201 DUKE STREET	HALIFAX	NS	B3A 1N9	881,264.95
23	SEQUENT ENERGY MANAGEMENT	1200 SMITH ST	HOUSTON	TX	77002	962,523.49
24	CITY OF CONCORD, NH	REAL ESTATE TAX P.O.Box 9582	MANCHESTER	NH	03108-9582	902,728.98
25	NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION	21 SOLIN FRUIT STREET, SUITE 10	CONCORD	NH	03301-2428	826,766.99
26	NATIONAL FUEL GAS SUPPLY CORP	CHASE MANHATTAN BANK	BUFFALO	NY	11201	783,887.31
27	ELEMENT FLEET	PO BOX 100363	ATLANTA	GA	30384-0363	693,643.56
28	2008 NEW HAMPSHIRE SERVICE INC	PO BOX 5040	MANCHESTER	NH	03108	659,869.80
29	SOUTH JERSEY RESOURCES GROUP, LLC	2360 AIRPORT FREEWAY, SUITE 505	BEDFORD	TX	76022	635,000.00
30	NORTHSTAR INDUSTRIES, LLC	126 MERRIMACK STREET	METHUEN	MA	01844	573,670.40
31	SCHROEDER CONSTRUCTION MANAGEMENT, INC.	2 TOWNSEND WEST #3	NASHUA	NH	03063	555,911.97
32	TOWN OF LONDONBERRY	268 B MAMMOTH ROAD	LONDONBERRY	NH	03053	498,024.50
33	CITY OF CONCORD	FINANCE DEPT - ACCOUNTING OFFICE 41 Green Street	CONCORD	NH	03301	482,860.55
34	SCOTTMADDEN, INC.	2626 GLENWOOD AVENUE Suite 480	RALEIGH	NC	27608	474,579.94
35	TWIN EAGLE RESOURCE MANAGEMENT	3847 W SAM HOUSTON PKWY	HOUSTON	TX	77004	408,331.24
36	RISE ENGINEERING	1341 ELMWOOD AVENUE	CRANSTON	RI	02910	400,537.61
37	TOWN OF HUDSON NH	12 SCHOOL ST	HUDSON	NH	03051	379,670.79
38	TOWN OF MERRIMACK NH	8 BABOOSIC LAKE ROAD	MERRIMACK	NH	03054	351,792.21
39	DIRECT ENERGY BUSINESS, LLC	NATURAL GAS ACCOUNTING WB-8	WOODBRIDGE	NJ	07095	342,769.71
40	ILLINOIS GAS TRANSMISSION SYSTEM	ONE CORPORATE DR. Suite 600	SHELTON	CT	06484-0121	319,154.54
41	STAOIL NATURAL GAS LLC	120 LONG RIDGE RD SUITE3E01	STAMFORD	CT	06902	320,278.77
42	POWERHOUSE EQUIPMENT & ENGINEERING CO INC	240 CREEK ROAD	DELANCO	NH	08075	319,930.00
43	BRETON CONSTRUCTION INC	PO BOX 8654	LAGONIA	NH	03247	309,857.41
44	NEW ENGLAND TRAFFIC CONTROL	1024 SUNCOOK VALLEY HWY, UNIT D2	EPSOM	NH	03234	306,727.07
45	CHI ENGINEERING SERVICES INC	430 WEST ROAD	PORTSMOUTH	NH	03801	302,545.21
46	TOWN OF HOOKSETT NH	REAL ESTATE TAX 35 Main Street	HOOKSETT	NH	03106	302,377.00
47	CONCENTRIC ENERGY ADVISORS INC	793 BOSTON POST ROAD WEST SUITE 500	MAURICEVILLE	MA	01952	285,129.52
48	BRISTOL ENVIRONMENTAL, INC.	10 COOK STREET	BILLERICA	MA	01821	279,108.46
49	PORTLAND NATURAL GAS	ONE HARBOUR PLACE Suite 375	PORTSMOUTH	NH	03801	259,843.00
50	NGL SUPPLY WHOLESALE LLC	6130 SOUTH VALE Suite 905	TULSA	OK	74136	253,995.36
51	REPSOL ENERGY NORTH AMERICA CORP.	2001 TIMBERLOCH PLACE Suite 3000	THE WOODLANDS	TX	77380	239,694.70
52	TOWN OF TILTON, NH	257 MAIN STREET	TIPTON	NH	03276	237,960.00
53	EVERSOURCE	PO BOX 650047	DALLAS	TX	75265-0047	237,921.04
54	HORIZON RESIDENTIAL ENERGY SERVICES NH, LLC	75 SOUTH MAIN STREET Unit 7 PMB 185	CONCORD	NH	03301	235,829.98
55	CITY OF LACONIA	PO BOX 489 45 Beacon St East	LACONIA	NH	03247	231,398.00
56	GZA GEOENVIRONMENTAL INC	380 HARVEY ROAD	MANCHESTER	NH	03103	219,625.91
57	JDH ENERGY SOLUTIONS DBA/JDH INSPECTION SERVICE	65 PROGRESS AVENUE	NASHUA	NH	03062	213,713.28
58	MSR UTILITY MAINTENANCE CORP.	209 PLEASANT STREET	DUNSTABLE	MA	01827	204,239.85
59	EMPIRE LABS ALLOCATIONS	602 S JOPLIN AVE	JOPLIN	MO	64802	204,152.26
60	POWER, INC.	1515 N COURTHOUSE ROAD 8th Floor	ARLINGTON	VA	22201	192,000.00
61	OMARK	PO BOX 1086	BOYLSTON	MA	01505-1686	186,275.55
62	BALANCE PROFESSIONAL	3325 HOLLYWOOD BOULEVARD Suite 502	HOLLYWOOD	FL	33021	179,592.11
63	UPPER VALLEY SAND & GRAVEL	PO BOX 127	QUECHEE	VT	05059	170,000.00
64	EXCELLUS	UTICA BUSINESS PARK 12 Rhoads Drive	UTICA	NY	13502	158,314.78
65	GEMINI ELECTRIC INC D/B/A POWER UP GENERATOR SERVICE	18 PRISCILLA LANE	AUBURN	NH	03032	157,729.00
66	TOWN OF PEMBROKE	OFFICE OF THE TAX COLLECTOR 311 Pembroke Street	PEMBROKE	NH	03275	155,700.00
67	VELCRO USA INC	406 BROWN AVENUE	MANCHESTER	NH	03103	155,457.00
68	TOWN OF BOW	10 GRANDVIEW ROAD	BOW	NH	03304	153,017.00
69	SURVEILLANCE SPECIALTIES, LTD D/B/A SECURADYN	600 RESEARCH DRIVE	WILLMINGTON	MA	01887	151,363.54
70	BENESTAR/HARTFORD-6795	PO BOX 1267	BUFFALO	NY	14240-1267	150,198.50
71	BOSSANOVA SYSTEMS, INC. DBA IRESTORE	82 LASALLE ROAD STE 300	WEST HARTFORD	CT	06107	150,000.00
72	NICHOLAS DIMITRIU	79 SKY VIEW DRIVE	PELHAM	NH	03076	150,000.00
73	WHITE RIVER MOTORS INC	PO BOX 1100	BURLINGTON	VT	05402	149,274.00
74	SANBORN HEAD & ASSOCIATES, INC.	20 FOUNDRY STREET	CONCORD	NH	03301	143,231.68
75	JAMES ANDREW HAMILTON DBA STAKEHOLDER CAPITAL	136 WESTMINSTER AVE	ARLINGTON	MA	02474	139,889.45
76	ABJEH REALTY LLC	PO BOX 7840	LOUDBON	NH	03307	139,546.80
77	FISERV	PO BOX 9924	GRAPEVINE	TX	76099-9724	134,661.20
78	CITY OF FRANKLIN NH	316 CENTRAL STREET	FRANKLIN	NH	03235	128,613.44
79	ANB ENTERPRISES, INC	4711 SWEETWATER BOULEVARD #151	SUGAR LAND	TX	77478	127,413.99
80	JOE GAUCI LANDSCAPING LLC	11 SEBBINS POND DRIVE	BEDFORD	NH	03110	122,506.00
81	SIMON ROOFING & SHEET METAL CORP.	80 JEWELL ST	CLEVELAND	OH	44110	120,476.98
82	TOWN OF MILFORD	PO BOX 881038	BOSTON	MA	02298-1038	112,129.75
83	SOFTCHOICE CORPORATION	317 W SUPERIOR SUITE 301	CHICAGO	IL	60654	111,319.57
84	VITEX EXTRUSION, LLC	PO BOX 270	FRANKLIN	NH	03235	109,253.00
85	TRANSASIS INC	87 INDUSTRIAL AVE EAST	LOWELL	MA	01852-5193	107,466.66
86	HONEYVEE STORAGE CORPORATION	C/O HROX 335 Weymouth ST 12th floor	BOSTON	MA	02116	104,932.68
87	KEACH-NORDSTROM ASSOCIATES, INC.	10 COMMERCE PARK NORTH STE 3	BEDFORD	NH	03110	103,987.48
88	STATE OF NH DAS	DOCUMENT PROCESSING DIVISION P.O.Box 637	CONCORD	NH	03302-0637	103,918.00
89	ICF RESOURCES LLC	212 SOMERSTON ROAD	PORTKAITUMA HEIGHTS	NH	10596-2121	102,992.68
90	NOBS ENGINEERING, INC.	18 CHENELL DRIVE	CONCORD	NH	03301	101,560.00
91	IDEAS AGENCY INC	146 CEDAR LAKE ROAD PO Box 356	BLAIRSTOWN	NJ	07825	101,012.21
92	F W WEBB COMPANY	160 MIDDLESEX TURNPIKE	BEDFORD	MA	01730	100,000.00
93	STERI CLEAN LLC	PO BOX 1115	LONDONBERRY	NH	03053	99,494.02
94	LGHTEC INC.	37 DEPOT STREET	MERRIMACK	NH	03054	99,373.70
95	JAMES W. SEWALL COMPANY	136 CENTER STREET	OLD TOWN	ME	04488	95,350.00
96	INNOVATIVE ENGINEERING SOLUTIONS, INC.	25 SPRING STREET	WALPOLE	MA	02081-3501	95,185.44
97	YANKEE TRUCKS, LLC D/B/A NEW ENGLAND KENWORTH	24 HALL STREET	CONCORD	NH	03301	94,000.00
98	ESMI OF NH	67 INTERNATIONAL DRIVE	LOUDBON	NH	03307	90,828.00
99	STATE OF NEW HAMPSHIRE	DOCUMENT PROCESSING DIVISION P.O.Box 637	CONCORD	NH	03302-0637	86,943.50
100	PLANVIEW UTILITY SERVICES LTD.	7270 WOODBINE AVE SUITE 201	MARLBOROUGH	MA	01568	86,629.00
101	GEI CONSULTANTS, INC.	400 UNICORN PARK DRIVE, SUITE 201	WOBURN	MA	01801	84,943.84
102	BELKNAP MERRIMACK	PO BOX 1016	CONCORD	NH	03302-1016	82,307.14
103	APPLUSRTD DBA QUALITY ASSURANCE LABS, INC.	13 PROGRESS AVENUE	NASHUA	NH	03062	81,307.25
104	UNITED CONCRETE PRODUCTS, INC.	173 CHURCH STREET	VALESVILLE	CT	06492	80,821.30
105	GEMINI ELECTRIC, INC.	8 PRISCILLA LANE	AUBURN	NH	03032	77,043.51
106	THE MIDDLESEX CORPORATION	ONE SPECTACLE POND ROAD	LITTLETON	MA	01460	75,000.00
107	JP MORGAN CHASE BANK	PO BOX 4175	CAROL STREAM	IL	60197-4175	72,700.76
108	XEROS INC.	250 COMMERCIAL ST Unit 4002A	MANCHESTER	NH	03101	69,945.20
109	TOWN OF BEDFORD NH	PO BOX 9628	MANCHESTER	NH	03108-9695	67,506.00
110	TOWN OF NORTHFIELD	TAX COLLECTOR 21 Summer Street	NORTHFIELD	NH	03276	66,275.00
111	STAPLES BUSINESS ADVANTAGE	PO BOX 415256	BOSTON	MA	02241-5256	66,060.00
112	TOWN OF ALLENSTOWN	TAX COLLECTOR 16 School Street	ALLENSTOWN	NH	03275	65,384.00
113	TOWN OF GOPPSTOWN	16 MAIN STREET	GOPPSTOWN	NH	03045	64,281.06
114	E SOURCE COMPANIES LLC	1745 26TH STREET	BOULDER	CO	80301	64,069.70
115	TOWN OF DERRY	PO BOX 9673	MANCHESTER	NH	03108-9673	63,889.45
116	UNITED RENTALS (NORTH AMERICA), INC.	2 SUTTON CORP	HOOKSETT	NH	03106	60,895.76
117	CHA CONSULTING INC.	2139 SILAS DEANE HIGHWAY	ROCKY HILL	CT	06067	60,757.86
118	NEW ENGLAND GP, INC	294 EAST STREET	WEST BRIDGEWATER	MA	02137	60,213.75
119	TF MORAN INC	48 CONSTITUTION DRIVE	BEDFORD	NH	03110	59,478.75
120	NORTHEAST GAS ASSOCIATION	75 SECOND AV Suite 510	NEEDHAM	MA	02484-2824	58,936.33
121	DIG SAFE SYSTEMS INC	11 LIPTON DRIVE	WILMINGTON	MA	01887	57,165.45
122	METULFE	METULFE - Group Benefits P.O.Box 803323	Kansas City	MO	64160-3323	56,149.94
123	CARGILL INCORPORATED	9360 EXCELSIOR BLVD Mail Stop #150	HOPKINS	MN	55343	55,271.50
124	TOWN OF LOUDBON NH	TAX COLLECTOR P.O.Box 7844	LOUDBON	NH	03307	52,446.00
125	TOWN OF AMHERST - TAX COLLECTOR	122 DODGE ROAD	AMHERST	NH	03031	52,135.00
126	PURCHASE POWER (PITNEY BOWES)	PO BOX 371674	PITTSBURGH	PA	15250-7874	51,539.22
127	CONCORD FAMILY YMCA	15 NORTH STATE STREET	CONCORD	NH	03301	51,369.20
128	AVEDISIAN LANDSCAPE & IRRIGATION	70 SALEM STREET	METHUEN	MA	01844	51,136.03
129	BASTON MASONRY	236 COUNTRY ROAD	BEDFORD	NH	03110	50,753.00
TOTAL						133,717,188

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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IMPORTANT CHANGES DURING THE YEAR

<p>Give particulars (details) concerning the matters indicated below. Make the statements explicit and precise, and number them in accordance with the inquiries. Each inquiry should be answered. Enter "none" or "not applicable" where applicable. If information which answers an inquiry is given elsewhere in the report, make a reference to the schedule in which it appears.</p> <p>1. List changes in and important additions to franchise area.</p> <p>2. Acquisition of ownership in other companies by reorganization, merger, or consolidation with other companies: Give names of companies involved, particulars concerning the transactions, name of the Commission authorizing the transaction, and reference to commission authorization.</p> <p>3. Purchase or sale of an operating unit or system: Give a brief description of the property, and of the transactions relating thereto, and reference to Commission authorization, if any was required.</p> <p>4. List important leaseholds that have been acquired given, assigned or surrendered: Give effective dates, lengths of terms, names of parties, rents, and other conditions. State name of Commission authorizing lease and give reference to such authorization.</p> <p>5. Important extension or reduction of transmission or distribution system: State territory added or relinquished and date operations began or ceased and give reference to Commission authorization, if any was required.</p>	<p>6. Obligations incurred or assumed by respondent as guarantor for the performance by another of any agreement or obligation, including ordinary commercial paper maturing on demand or not later than one year after date of issue: State on behalf of whom the obligation was assumed and amount of the obligation. Give reference to Commission authorization if any was required.</p> <p>7. Changes in articles of incorporation or amendments to charter: Explain the nature and purpose of such changes or amendments.</p> <p>8. State briefly the status of any materially important legal proceedings pending at the end of the year, and the results of any such proceedings culminated during the year.</p> <p>9. Describe briefly any materially important transactions of the respondent not disclosed elsewhere in this report in which an officer, director, security holder reported on page 6, voting trustee, associated company or known associate of any of these persons was a party or in which any such person had a material interest.</p> <p>10. If the important changes during the year relating to the respondent company appearing in the annual report to stockholders are applicable in every respect and furnish the data required by instructions 1 to 9 above, such notes may be attached to this page.</p>
<p>1. In 2017, within the existing franchise territory LU added approximately 1,708 customers to our system. In the course of adding these customers, we installed approximately 13.04 miles of new main and 1005 new services. We replaced 15.10 miles of CI and BS pipe.</p>	<p>6. None</p>
<p>2. None</p>	<p>7. None</p>
<p>3. None</p>	<p>8. Liberty Utilities (EnergyNorth Natural Gas) Corp. v. City of Concord and City of Manchester - Individual cases brought against the City of Concord and the City of Manchester challenging their Roadway Fees. The cases were consolidated for trial, which was held in 2015. The trial court rejected most of the Company's arguments and largely upheld the roadway fees. The case is now on appeal before the NH Supreme Court.</p>
<p>4. None</p>	<p>9. None</p>
<p>5. LU extended 5 Miles of 12" CS distribuion main reinforcement on the 200# Concord-Tilton Hiline. On February 2, 2017, Liberty received approval from the New Hampshire Public Utilities Commission to expand its franchise area into the Towns of Pelham and Windham, New Hampshire. Construction commenced during 2017 and customers will begin receiving service during 2018.</p>	<p>10. None</p>

Name of Respondent		This Report is:	Date of Report	Year of Report	
Liberty Utilities (EnergyNorth Natural Gas) d/b/a Liberty Utilities		(1) Original (2) Revised	(Mo, Da, Yr) July 11, 2018	December 31st, 2017	
COMPARATIVE BALANCE SHEET (ASSETS AND OTHER DEBITS)					
Line No.	Title of Account (a)	Ref. Page No. (b)	Balance at Beginning of Year (c)	Balance at End of Year (d)	Increase or (decrease) (e)
UTILITY PLANT					
02	Utility Plant (101-106, 114)	17	482,126,157	528,434,798	46,308,641
03	Construction Work in Progress (107)	17	12,384,979	11,231,685	(1,153,294)
04	TOTAL Utility Plant (Enter Total of lines 2 and 3)		494,511,135	539,666,482	45,155,347
05	(Less) Accum. Prov. for Depr. Amort. Depl. (108, 111, 115)	17	(125,436,149)	(130,926,210)	(5,490,061)
06	Net Utility Plant (Enter total of line 04 less 05)	-	369,074,986	408,740,272	39,665,285
07	Utility Plant Adjustments (116)		28,151,896	28,151,896	0
08	Gas Stored Underground-Noncurrent (117)		0	0	0
OTHER PROPERTY AND INVESTMENTS					
10	Nonutility Property (121)		146,949	146,949	0
11	(Less) Accum. Prov. for Depr. and Amort. (122)		(133,284)	(133,284)	0
12	Investments In Associated Companies (123)		0	0	0
13	Investments In Subsidiary Companies (123.1)		0	3,047,227	3,047,227
14	(For Cost of Account 123.1)	-			
15	Noncurrent Portion of Allowances	-	0	0	0
16	Other Investments (124)		0	0	0
17	Special Funds (125 - 128)		0	0	0
18	Long-Term Portion of Derivative Assets (175)		0	0	0
19	Long-Term Portion of Derivative Assets - Hedges (176)	-	0	0	0
20	TOTAL Other Property and Investments (Total lines 10-13, 15-19)	-	13,665	3,060,892	3,047,227
CURRENT AND ACCRUED ASSETS:					
22	Cash (131)	-	130,801	288,565	157,764
23	Special Deposits (132-134)	-	0	0	0
24	Working Funds (135)	-	0	0	0
25	Temporary Cash Investments (136)	-	0	0	0
26	Notes Receivable (141)	-	0	0	0
27	Customer Accounts Receivable (142)		15,425,545	16,944,241	1,518,697
28	Other Accounts Receivable (143)	-	723,501	1,033,615	310,113
29	(Less) Accum. Prov. for Uncollectible Acct.-Credit (144)	-	(3,043,021)	(2,510,940)	532,081
30	Notes Receivable from Associated Companies (145)	-	0	0	0
31	Accounts Receivable from Assoc. Companies (146)	-	245,011	197,244	(47,767)
32	Fuel Stock (151)	-	0	0	0
33	Fuel Stock Expenses Undistributed (152)	-	0	0	0
34	Residuals (Elec) and Extracted Products (Gas) (153)	-	0	0	0
35	Plant Materials and Operating Supplies (154)	-	3,108,608	3,883,809	775,201
36	Merchandise (155)	-	0	0	0
37	Other Materials and Supplies (156)	-	0	0	0
38	Stores Expense Undistributed (163)	-	0	0	0
39	Gas Stored Underground - Current (164.1)		2,796,536	3,348,517	551,981
40	Liquefied Natural Gas Stored and Held for Processing (164.2-164.3)		1,046,992	998,227	(48,766)
41	Prepayments (165)		3,752,488	3,972,474	219,986
42	Advances for Gas (166-167)		0	0	0
43	Interest and Dividends Receivable (171)	-	0	0	0
44	Rents Receivable (172)		0	0	0
45	Accrued Utility Revenues (173)		13,603,195	19,610,674	6,007,479
46	Miscellaneous Current and Accrued Assets (174)		(2,781,532)	1,403,218	4,184,751
47	Derivative Instrument Assets (175)		0	0	0
48	(Less) Long-Term Portion of Derivative Instruments Assets (175)	-	0	0	0
49	Derivative Instrument Assets - Hedges (176)	-	0	0	0
50	(Less) Long-Term Portion of Derivative Instruments Assets - Hedges (176)	-	0	0	0
51	TOTAL Current and Accrued Assets (Enter Total of lines 22 thru 50)	-	35,008,123	49,169,644	14,161,520
DEFERRED DEBITS					
53	Unamortized Debt Expense (181)	-	0	0	0
54	Extraordinary Property Losses (182.1)		0	0	0
55	Unrecovered Plant and Regulatory Study Costs (182.2)		0	0	0
56	Other Regulatory Assets (182.3)	21	26,095,758	25,689,749	(406,009)
57	Prelim. Sur. and Invest. Charges (Gas) (183.1, 183.2)		1,896,961	2,723,190	826,229
58	Clearing Accounts (184)	-	(10,468)	(166,012)	(155,544)
59	Temporary Facilities (185)	-	0	0	0
60	Miscellaneous Deferred Debits (186)	22	44,104,482	51,908,648	7,804,166
61	Def. Losses from Disposition of Utility Plt. (187)	-	0	0	0
62	Research, Devel. and Demonstration Expend. (188)		0	0	0
63	Unamortized Loss on Reacquired Debt (189)	-	0	0	0
64	Accumulated Deferred Income Taxes (190)		(0)	0	0
65	Unrecovered Purchased Gas Costs (191)	-	0	0	0
66	TOTAL Deferred Debits (Enter Total of lines 53 thru 65)		72,086,733	80,155,575	8,068,842
67	TOTAL Assets and other Debits (Enter Total of lines 6, 7, 8, 20, 51, 66)		504,335,404	569,278,279	64,942,875

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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COMPARATIVE BALANCE SHEET (LIABILITIES AND CREDITS)

Line No.	Title of Account (a)	Ref. Page No. (b)	Balance at Beginning of Year (c)	Balance at End of Year (d)	Increase or (decrease) (e)
1	PROPRIETARY CAPITAL				
2	Common Stock Issued (201)		121,647,058	124,147,058	2,500,000
3	Preferred Stock Issued (204)		0	0	0
4	Capital Stock Subscribed (202, 205)		0	0	0
5	Stock Liability for Conversion (203, 206)		0	0	0
6	Premium on Capital Stock (207)		0	0	0
7	Other Paid-In Capital (208-211)		0	0	0
8	Installments Received on Capital Stock (212)		0	0	0
9	(Less) Discount on Capital Stock (213)		0	0	0
10	(Less) Capital Stock Expense (213)		0	0	0
11	Retained Earnings (215, 215.1, 216)	13	32,002,368	47,756,654	15,754,287
12	Unappropriated Undistributed Subsidiary Earnings (216.1)	13	0	0	0
13	(Less) Reacquired Capital Stock (217)		0	0	0
14	TOTAL Proprietary Capital (Enter Total of lines 2 thru 14)	-	153,649,425	171,903,712	18,254,287
15	LONG-TERM DEBT				
16	Bonds (221)	23	0	0	0
17	(Less) Reacquired Bonds (222)	23	0	0	0
18	Advances from Associated Companies (223)	23	90,000,000	159,600,000	69,600,000
19	Other Long-Term Debt (224)	23	0	0	0
20	Unamortized Premium on Long-Term Debt (225)		0	0	0
21	(Less) Unamortized Discount on Long-Term Debt-Debit. (226)		0	(438,909)	(438,909)
22	(Less) Current Portion of Long-Term Debt		0	0	0
23	TOTAL Long-Term Debt (Enter Total of lines 16 thru 22)	-	90,000,000	159,161,091	69,161,091
24	OTHER NONCURRENT LIABILITIES				
25	Obligations Under Capital Leases - Noncurrent (227)	-	0	0	0
26	Accumulated Provision for Property Insurance (228.1)	-	0	0	0
27	Accumulated Provision for Injuries and Damages (228.2)	-	556,271	50,000	(506,271)
28	Accumulated Provision for Pensions and Benefits (228.3)	-	23,870,958	18,792,909	(5,078,050)
29	Accumulated Miscellaneous Operating Provision (228.4)	-	27,643,308	32,354,069	4,710,761
30	Accumulated Provision for Rate Refunds (229)	-	0	0	0
31	TOTAL Other Noncurrent Liabilities (Enter Total of lines 25 thru 29)	-	52,070,537	51,196,978	(873,560)
32	CURRENT AND ACCRUED LIABILITIES				
33	Notes Payable (231)	-	0	0	0
34	Accounts Payable (232)	-	25,257	18,534	(6,723)
35	Notes Payable to Associated Companies (233)	-	0	0	0
36	Accounts Payable to Associated Companies (234)	44	83,956,629	52,114,581	(31,842,048)
37	Customer Deposits (235)	-	1,723,598	2,786,714	1,063,116
38	Taxes Accrued (236)	25	0	0	0
39	Interest Accrued (237)	-	9,407	9,407	0
40	Dividends Declared (238)	-	0	0	0
41	Matured Long-Term Debt (239)	-	0	0	0
42	Matured Interest (240)	-	0	0	0
43	Tax Collections Payable (241)	-	0	0	0
44	Miscellaneous Current and Accrued Liabilities (242)	-	43,925,451	46,111,664	2,186,212
45	Obligations Under Capital Leases-Current (243)	-	0	0	0
46	TOTAL Current and Accrued Liabilities (Enter Total of lines 32 thru 44)	-	129,640,342	101,040,900	(28,599,442)
47	DEFERRED CREDITS				
48					
49	Customer Advances for Construction (252)		0	0	0
50	Accumulated Deferred Investment Tax Credits (255)		0	0	0
51	Deferred Gains from Disposition of Utility Plant (256)		0	0	0
52	Other Deferred Credits (253)	26	125,624	125,624	0
53	Other Regulatory Liabilities (254)	27	0	0	0
54	Unamortized Gain on Reacquired Debt (257)		0	0	0
55	Accumulated Deferred Income Taxes (281-283)		78,849,476	85,849,975	7,000,498
56	TOTAL Deferred Credits (Enter Total of lines 49 thru 55)		78,975,100	85,975,599	7,000,498
57					
58	TOTAL Liabilities and Other Credits (Enter Total of lines 14, 23, 31 46 and 56)		504,335,405	569,278,279	64,942,875

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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STATEMENT OF INCOME FOR THE YEAR

1. Report amounts for accounts 412 and 413, Revenue and Expenses from Utility Plant Leased to Others in a similar manner to a utility department manner to a utility department. Spread the amount(s) over lines 02 thru 24 as appropriate.

2. Report amounts in account 414, Other Utility Operating Income, in the same manner as accounts 412 and 413 above.

3. Report data for lines 7,9, and 10 for Natural Gas companies using accounts 404.1,404.2,404.3, 407.1 and 407.2.

4. Use page 16 (Notes to Financial Statement) for important notes regarding the statement of income for any account thereof.

5. Give concise explanations concerning unsettled rate proceedings where a contingency exists such that refunds of a material amount may need to be made to the utility's customers or which may result in a material refund to the utility with respect to power or gas purchases. State for each year affected the gross revenues or costs to which the contingency relates and the tax ef-

fects together with an explanation of the major factors which affect the rights of the utility to retain such revenues or recover amounts paid with respect to power and gas purchases.

6. Give concise explanations concerning significant amounts of any refunds made or received during the year resulting from settlement of any rate proceeding affecting revenues received or costs incurred for power or gas purchases, and a summary of the adjustments made to balance sheet, income, and expense accounts.

7. If any notes appearing in the report to stockholders are applicable to this Statement of Income, such notes may be attached at page 16.

8. Enter on page 16 a concise explanation of only those changes in accounting methods made during the year which had an effect on net income, including the basis of allocations and apportionments from those used in the preceding year. Also give the approximate dollar effect of such changes.

9. Explain in a footnote if the previous year's figures are different from that reported in prior reports.

Line No.	Account (a)	(Ref.) Page No. (b)	TOTAL		
			Current Year (c)	Previous Year (d)	Increase or (decrease) (e)
1	UTILITY OPERATING INCOME				
2	Operating Revenues (400)	28	136,683,967	120,053,649	16,630,318
3	Operating Expenses				
4	Operation Expenses (401)	34-39	78,198,732	69,974,176	8,224,556
5	Maintenance Expenses (402)	34-39	2,926,039	2,889,738	36,301
6	Depreciation Expense (403)		12,786,243	11,610,051	1,176,192
7	Amort. & Depl. of Utility Plant (404-405)		2,173,446	2,123,142	50,305
8	Amort. of Utility Plant Acq. Adj. (406)		0	0	0
9	Amort of Property Losses, Unrecovered Plant and Regulatory Study Costs (407)		0	0	0
10	Amort. of Conversion Expenses (407)		0	0	0
11	Regulatory Debits (407.3)		409,203	409,200	3
12	(Less) Regulatory Credits (407.4)		2,537,193	2,217,552	319,641
13	Taxes Other Than Income Taxes (408.1)	25	10,963,572	10,060,520	903,052
14	Income Taxes - Federal (409.1)	25	0	0	0
15	- Other (409.1)	25	220,214	231,000	(10,786)
16	Provision for Deferred Income Taxes (410.1)		6,628,169	6,128,035	500,134
17	(Less) Provision for Deferred Income Taxes-Cr. (411.1)		0	0	0
18	Investment Tax Credit Adj. - Net (411.4)		0	0	0
19	(Less) Gains from Disp. of Utility Plant (411.6)		0	0	0
20	Losses from Disp. of Utility Plant (411.7)		0	0	0
21	(Less) Gains from Disposition of Allowances (411.8)		0	0	0
22	Losses from Disposition of Allowances (411.9)		0	0	0
23	TOTAL Utility Operating Expenses (Enter Total of lines 4 thru 22)		116,842,810	105,643,413	11,199,397
24	Net Utility Operating Income (Enter Total of line 2 less 23)		19,841,157	14,410,236	5,430,921

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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STATEMENT OF INCOME FOR THE YEAR

Line No.	Account (a)	(Ref.) Page No. (b)	TOTAL		
			Current Year (c)	Previous Year (d)	Increase or (decrease) (e)
25	Net Utility Operating Income (Carried forward from page 11)		19,841,157	14,410,236	5,430,921
26	<u>Other Income and Deductions</u>				
27	Other Income				
28	Nonutility Operating Income				
29	Revenues from Merchandising, Jobbing, and Contract Work (415)		0	0	0
30	(Less) Costs and Exp. of Merch., Job, & Contract Work (416)		0	0	0
31	Revenues From Nonutility Operations (417)		0	0	0
32	(Less) Expenses of Nonutility Operations (417.1)		0	0	0
33	Nonoperating Rental Income (418)		0	0	0
34	Equity in Earnings of Subsidiary Companies (418.1)		0	0	0
35	Interest and Dividend Income (419)		268,179	477,398	(209,219)
36	Allowance for Other Funds Used During Construction (419.1)		100,567	325,042	(224,475)
37	Miscellaneous Nonoperating Income (421)		0	0	0
38	Gain on Disposition of Property (421.1)		0	0	0
39	TOTAL Other Income (Enter Total of lines 29 thru 38)		368,746	802,440	(433,694)
40	Other Income Deductions				
41	Loss on Disposition of Property (421.2)		0	0	0
42	Miscellaneous Amortization (425)		0	0	0
43	Donations (426.1)		26,193	10,795	15,398
44	Life Insurance (426.2)		0	0	0
45	Penalties (426.3)		14,209	25,046	(10,837)
46	Expenditures for Certain Civic, Political and Related Activities (426.4)		35,060	69,086	(34,027)
47	Other Deductions (426.5)		118,042	(98,548)	216,589
48	TOTAL Other Income Deductions (Total of lines 41 thru 47)		193,503	6,379	187,124
49	Taxes Applic. to Other Income and Deductions				
50	Taxes Other Than Income Taxes (408.2)		0	0	0
51	Income Taxes - Federal (409.2)		0	0	0
52	Income Taxes - Other (409.2)		0	0	0
53	Provision for Deferred Inc. Taxes (410.2)		0	0	0
54	(Less) Provision for Deferred Income Taxes - Cr. (411.2)		0	0	0
55	Investment Tax Credit Adj. - Net (411.5)		0	0	0
56	(Less) Investment Tax Credits (420)		0	0	0
57	TOTAL Taxes on Other Inc. and Ded. (Total of 50 thru 56)		0	0	0
58	Net Other Income and Deductions (Enter Total of lines 39,48,57)		(175,243)	(796,061)	(620,818)
59	Interest Charges				
60	Interest on Long-Term Debt (427)		0	0	0
61	Amort. of Debt Disc. and Expense (428)		0	0	0
62	Amortization of Loss on Reaquired Debt (428.1)		0	0	0
63	(Less) Amort. of Premium on Debt-Credit (429)		0	0	0
64	(Less) Amortization of Gain on Reaquired Debt-Credit (429.1)		0	0	0
65	Interest on Debt to Assoc. Companies (430)		4,076,508	3,982,818	93,690
66	Other Interest Expense (431)		231,864	204,266	27,599
67	(Less) Allowance for Borrowed Funds Used During Const.- Cr.(432)		(46,262)	(149,913)	103,651
68	Net Interest Charges (Enter Total of lines 60 thru 67)		4,262,110	4,037,171	224,939
69	Income Before Extraordinary Items (Enter Total of lines 25, 58, and 68)		15,754,290	11,169,126	4,585,164
70	Extraordinary Items				
71	Extraordinary Income (434)		0	0	0
72	(Less) Extraordinary Deductions (435)		0	0	0
73	Net Extraordinary Items (Enter Total of line 71 less line 72)		0	0	0
74	Income Taxes - Federal and Other (409.3)		0	0	0
75	Extraordinary Items After Taxes (Enter Total of line 73 less line 74)		0	0	0
76	Net Income (Enter Total of lines 69 and 75)		15,754,290	11,169,126	4,585,164

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
STATEMENT OF RETAINED EARNINGS FOR THE YEAR				
<p>1. Report all changes in appropriated retained earnings, unappropriated retained earnings, and unappropriated undistributed subsidiary earnings for the year.</p> <p>2. Each credit and debit during the year should be identified as to the retained earnings account in which recorded (Accounts 433, 436-439 inclusive). Show the contra primary account affected in column (b).</p> <p>3. State the purpose and amount for each reservation or appropriation of retained earnings.</p> <p>4. List first Account 439, Adjustments to Retained Earnings, reflecting adjustments to the opening balance of retained earnings. Follow by credit, then debit items, in that order.</p> <p>5. Show dividends for each class and series of capital stock.</p> <p>6. Show separately the State and Federal income tax effect of items shown in Account 439, Adjustments to Retained Earnings.</p> <p>7. Explain in a footnote the basis for determining the amount reserved or appropriated. If such reservation or appropriation is to be recurrent, state the number and annual amounts to be reserved or appropriated as well as the totals eventually to be accumulated.</p> <p>8. If any notes appearing in the report to stockholders are applicable to this statement, attach them at page 16 (Notes to Financial Statements).</p>				
Line No.	Item (a)	Contra Primary Account Affected (b)	Amount (c)	
UNAPPROPRIATED RETAINED EARNINGS (Account 216)				
1	Balance-Beginning of Year		32,002,367	
2	Changes (Identify by prescribed retained earnings accounts)			
3	Adjustments to Retained Earnings (Account 439)			
4	Credit:			
5	Credit:			
6	Credit:			
7	Credit:			
8	Credit:			
9	TOTAL Credits to Retained Earnings (Account 439)(Enter Total of lines 4 thru 8)			
10	Debit:			
11	Debit:			
12	Debit:			
13	Debit:			
14	Debit:			
15	TOTAL Debits to Retained Earnings (Account 439)(Enter Total of lines 10 thru 14)		0	
16	Balance Transferred from Income (Account 433 less Account 418.1)		15,754,290	
17	Appropriations of Retained Earnings (Account 436)			
18				
19				
20				
21				
22	TOTAL Appropriations of Retained Earnings (Account 436)(Total of lines 18 thru 21)			
23	Dividends Declared-Preferred Stock (Account 437)			
24				
25				
26				
27				
28				
29	TOTAL Dividends Declared-Preferred Stock (Account 437)(Total of lines 24 thru 28)			
30	Dividends Declared-Common Stock (Account 438)			
31				
32				
33				
34				
35				
36	TOTAL Dividends Declared-Common Stock (Account 438)(Total of lines 31 thru 35)			
37	Transfers from Acct. 216.1, Unappropriated Undistributed Subsidiary Earnings			
38	Balance-End of Year (Total of lines 01, 09, 15, 16, 22, 29, 36 and 37)		47,756,657	
APPROPRIATED RETAINED EARNINGS (Account 215)				
State balance and purpose of each appropriated retained earnings amount at end of year and give accounting entries for any applications of appropriated retained earnings during the year.				
39				
40				
41				
42				
43				
44				
45	TOTAL Appropriated Retained Earnings (Account 215)			
APPROPRIATED RETAINED EARNINGS-AMORTIZATION RESERVE, FEDERAL (Account 215.1)				
State below the total amount set aside through appropriations of retained earnings, as of the end of the year, in compliance with the provisions of Federally granted hydroelectric project licenses held by the respondent. If any reductions or changes other than the normal annual credits hereto have been made during the year, explain such items in a footnote.				
46	TOTAL Appropriated Retained Earnings-Amortization Reserve, Federal (Account 215.1)			
47	TOTAL Appropriated Retained Earnings (Accounts 215,215.1)(Enter Total of lines 45 & 46)			
48	TOTAL Retained Earnings (Account 215,215.1,216) (Enter Total of lines 38 and 47)		47,756,657	
UNAPPROPRIATED UNDISTRIBUTED SUBSIDIARY EARNINGS (216.1)				
49	Balance-Beginning of Year (Debit or Credit)			
50	Equity in Earnings for Year (Credit) (Account 418.1)			
51	(Less) Dividends Received (Debit)			
52	Other Changes (Explain)			
53	Balance-End of Year (Total of lines 49 thru 52)		0	

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Co d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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STATEMENT OF CASH FLOWS

1. If the notes to the cash flow statement in the respondents annual stockholders report are applicable to this statement, such notes should be attached to page 16 (Notes to Financial Statements). Information about noncash investing and financing activities should be provided on page 16. Provide also on page 16 a reconciliation between "Cash and Cash Equivalents at End of Year" with related amounts on the balance sheet.
2. Under "Other" specify significant amounts and group others.
3. Operating Activities-Other: Include gains and losses pertaining to operating activities only. Gains and losses pertaining to investing and financing activities should be reported in those activities. Show on page 16 the amounts of interest paid (net of amounts capitalized) and income taxes paid.

Line No.	DESCRIPTION (See instructions for Explanation of Codes) (a)	Amount (b)
1	Net Cash Flow from Operating Activities:	
2	Net Income for Energy North (from page 12)	15,754,290
3	Noncash Charges (Credits) to Income:	
4	Depreciation and Depletion	12,786,243
5	Amortization of (Specify) Other	2,173,446
6	Prepays	(219,986)
7		
8	Deferred Income Taxes (Net)	7,000,498
9	Investment Tax Credit Adjustments (Net)	
10	Net (Increase) Decrease in Receivables	(8,494,370)
11	Net (Increase) Decrease in Inventory	(1,278,416)
12	Net Increase (Decrease) in Fuel Purchase Commitments	
13	Net Increase (Decrease) in Accounts Payable	1,056,393
14	Net (Increase) Decrease in Other Assets	(12,205,826)
15	Net Increase (Decrease) in Other Liabilities	(34,051,764)
16	(Less) Allowance for Other Funds Used During Construction	
17	(Less) Undistributed Earnings from Subsidiary Companies	
	Other: Miscellaneous	
18		
19	Net Increase (Decrease) in Accrued Interest Expense	0
20	Net (Increase) Decrease in Deferred Fuel Costs	
21	Net Cash Provided by (Used in) Operating Activities	
22	(Total of lines 2 thru 20)	(17,479,492)
23		
24	Cash Flows from Investment Activities:	
25	Construction and Acquisition of Plant (including land):	
26	Gross Additions to Utility Plant (less nuclear fuel)	(54,624,974)
27	Gross Additions to Nuclear Fuel	
28	Gross Additions to Common Utility Plant	
29	Gross Additions to Nonutility Plant	
30	(Less) Allowance for Other Funds Used During Construction	
31	Other: Cost of Removal	
32		
33		
34	Cash Outflows for Plant (Total of lines 26b thru 33)	(54,624,974)
35		
36	Acquisition of Other Noncurrent Assets (d)	
37	Proceeds from Disposal of Noncurrent Assets (d)	
38		
39	Investments in and Advances to Assoc. and Subsidiary Companies	
40	Contributions and Advances from Assoc. and Subsidiary Companies	
41	Disposition of Investments in (and Advances to)	
42	Associated and Subsidiary Companies	
43		
44	Purchase of Investment Securities (a)	
45	Proceeds from Sales of Investment Securities (a)	

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised	0	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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STATEMENT OF CASH FLOWS (Continued)

4. Investing Activities

Include at Other (line 31) net cash outflow to acquire other companies. Provide a reconciliation of assets acquired with liabilities assumed on page 12 (Statement of Income for the Year). Do not include on this statement the dollar amount of leases capitalized per USofA General Instruction 20; instead provide a reconciliation of the dollar amount of leases capitalized with the plant cost.

5. Codes used:

- (a) Net proceeds or payments.
- (b) Bonds, debentures and other long-term
- (c) Include commercial paper.
- (d) Identify separately such items as investments, fixed assets, intangibles, etc.

6. Enter on page 12 clarifications and explanations

Line No.	DESCRIPTION (See Instruction No. 5 for Explanation of Codes) (a)	Amount (b)
46	Loans Made or Purchased	
47	Collections on Loans	
48		
49	Net (Increase) Decrease in Receivables	
50	Net (Increase) Decrease in Inventory	
51	Net (Increase) Decrease in	
52	Allowances Held for Speculation	
53	Net Increase (Decrease) in Payables and Accrued Expenses	
54	Other:	
55		
56	Net Cash Provided by (Used in) Investing Activities	
57	(Total of lines 34 thru 55)	(54,624,974)
58		
59	Cash Flows from Financing Activities:	
60	Proceeds from Issuance of:	
61	Long-Term Debt (b)	69,161,091
62	Preferred Stock	
63	Common Stock	
64	Other:	2,500,000
65		
66	Net Increase in Short-Term Debt (c)	
67	Other: OCI	601,142
68		
69		
70	Cash Provided by Outside Sources (Total of lines 61 thru 69)	72,262,233
71		
72	Payments for Retirement of:	
73	Long-Term Debt (b)	
74	Preferred Stock	
75	Common Stock	
76	Other:	
77		
78	Net Decrease in Short-Term Debt (c)	0
79		
80	Dividends on Preferred Stock	
81	Dividends on Common Stock	
82	Net Cash Provided by (Used in) Financing Activities	
83	(Total of lines 70 thru 81)	72,262,233
84		
85	Net Increase (Decrease) in Cash and Cash Equivalents	
86	(Total of lines 22, 57 and 83)	157,764
87		
88	Cash and Cash Equivalents at Beginning of Year	130,801
89		
90	Cash and Cash Equivalents at End of Year	288,565

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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NOTES TO FINANCIAL STATEMENTS

NONE

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
SUMMARY OF PLANT AND ACCUMULATED PROVISIONS FOR DEPRECIATION, AMORTIZATION, AND DEPLETION				
Line No.	Item (a)	Total (b)		
1	UTILITY PLANT			
2	In Service			
3	Plant in Service (Classified_	485,723,431		
4	Property Under Capital Leases			
5	Plant Purchased or Sold			
6	Completed Construction not Classified	42,277,446		
7	Experimental Plant Unclassified			
8	Total Utility Plant (Total of lines 3 thru 7)	528,000,877		
9	Leased to Others			
10	Held for Future Use	433,920		
11	Construction Work in Progress	11,231,685		
12	Acquisition Adjustments			
13	Total Utility Plant (Totals of lines 8 thru 12)	539,666,482		
14	Accumulated Provisions for Depreciation, Amortization & Depletion	(130,926,210)		
15	Net Utility Plant (Totals of lines 13 less 14)	408,740,272		
16	DETAIL OF ACCUMULATED PROVISIONS FOR DEPRECIATION, AMORTIZATION AND DEPLETION			
17	In Service:			
18	Depreciation	(123,922,187)		
19	Amortization and Depletion of Producing Natural Gas Land and Land Rights			
20	Amortization of Underground Storage Land and Land Rights			
21	Amortization of Other Utility Plant	(7,004,024)		
22	Total In Service (Totals of lines 18 thru 21)	(130,926,210)		
23	Leased to Others			
24	Depreciation			
25	Amortization and Depletion			
26	Total Leased to Others (Totals off lines 24 and 25)	-		
27	Held for Future Use			
28	Depreciation			
29	Amortization			
30	Total Held for Future Use (Totals of lines 28 and 29)	-		
31	Abandonment of Leases (Natural Gas)			
32	Amortization of Plant Acquisition Adjustment			
33	Total Accum Provisions (Should agree with line 14 above) (Total of lines 22, 26, 30, 31, and 32)	(130,926,210)		

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report is: (1) Original (2) Revised	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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GAS PLANT IN SERVICE (Accounts 101, 102, 103, and 106)

- Report below the original cost of gas plant in service according to the prescribed accounts.
- In addition to Account 101, Gas Plant in Service(Classified), include Account 102, Gas Plant Purchased or Sold; Account 103, Experimental Gas Plant Unclassified; and Account 106, Completed Construction Not Classified-Gas.
- Include in column (c) or (d), as appropriate, corrections of additions and retirements for the current or preceding year.
- Enclose in parentheses credit adjustments of plant accounts to indicate the negative effect of such accounts.
- Classify Account 106 according to prescribed accounts, on an estimated basis if necessary, and include the entries in column (c). Also to be included in column (c) are entries for reversals of tentative distributions of prior year reported in column (b). Likewise if the respondent has a

significant amount of plant retirements which have not been classified to primary accounts at the end of the year, include in column (d) a tentative distribution of such retirements, on an estimated basis, with appropriate contra entry to the account for accumulated depreciation provision. Include also in column (d) reversals of tentative distributions or prior year of unclassified retirements. Attach supplemental statement showing the account distribution of these tentative classifications in columns (c) and (d), including the reversals of the prior years tentative account distributions of these amounts. Careful observance of the above instructions and the texts of Accounts 101 and 106 will avoid serious omissions of the reported amount of respondent's plant actually in service at end of year.

6. Show in column (f) reclassifications or transfers within utility plant accounts. Include

also in column (f) the additions or reductions of primary account classifications arising from distribution of amounts initially recorded in Account 102. In showing the clearance of Account 102, include in column (d) the amounts with respect to accumulated provision for depreciation, acquisition adjustments, etc., and show in column (f) only the offset to the debits or credits distributed in column (f) to primary account classifications.

7. For Account 399, state the nature and use of plant included in this account and if substantial in amount submit a supplementary statement showing the subaccount classification of such plant conforming to the requirements of these pages.

8. For each amount comprising the reported balance and changes in Account 102, state the property purchased or sold, name of vendor or purchaser, and date of transaction.

Line No.	Account (a)	Balance at Beginning of Year (b)	Additions (c)	Retirements (d)	Adjustments (e)	Transfers (f)	Balance at End of Year (g)
1	1. Intangible Plant						
2	301 Organization						0
3	302 Franchises and Consents						0
4	303 Miscellaneous Intangible Plant	14,741,392	388,779				15,130,171
5	TOTAL Intangible Plant (1)	14,741,392	388,779	0	0	0	15,130,171
6	2. Production Plant						
7	Natural Gas Production and Gathering Plant						
8	325.1 Producing Lands						0
9	325.2 Producing Leaseholds						0
10	325.3 Gas Rights						0
11	325.4 Rights-of-Way						0
12	325.5 Other Land and Land Rights						0
13	326 Gas Well Structures						0
14	327 Field Compressor Station Structures						0
15	328 Field Meas. and Reg. Sta. Structures						0
16	329 Other Structures						0
17	330 Producing Gas Wells-Well Construction						0
18	331 Producing Gas Wells-Well Equipment						0
19	332 Field Lines						0
20	333 Field Compressor Station Equipment						0
21	334 Field Meas. and Reg. Sta. Equipment						0
22	335 Drilling and Cleaning Equipment						0
23	336 Purification Equipment						0
24	337 Other Equipment						0
25	338 Unsuccessful Exploration and Devel. Costs						0
26	TOTAL Production and Gathering Plant	0	0	0	0	0	0
27	Products Extraction Plant						
28	340 Land and Land Rights						0
29	341 Structures and Improvements						0
30	342 Extraction and Refining Equipment						0
31	343 Pipe Lines						0
32	344 Compressor Equipment						0
33	345 Gas Meas. and Reg. Equipment						0
34	346 Compressor Equipment						0
35	347 Other Equipment						0
36	TOTAL Products Extraction Plant						0
37	TOTAL Nat. Gas Production Plant	0	0	0	0	0	0
38	Mfd. Gas Prod. Plant (Submit Suppl. Statement)						0
39	TOTAL Production Plant (2)	0	0	0	0	0	0
40	3. Natural Gas Storage and Processing Plant						
41	Under Ground Storage Plant						
42	350.1 Land						0
43	350.2 Rights-of-Way						0
44	351 Structures and Improvements						0
45	352 Wells						0
46	352.1 Storage Leaseholds and Rights						0
47	352.2 Reservoirs						0
48	352.3 Non-recoverable Natural Gas						0
49	353 Lines						0
50	354 Compressor Station Equipment						0
51	355 Measuring and Reg. Equipment						0
52	356 Purification Equipment						0
53	357 Other Equipment						0
54	TOTAL Underground Storage Plant	0	0	0	0	0	0

Name of Respondent		This Report is:		Date of Report		Year of Report	
Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		(1) Original (2) Revised X		(Mo, Da, Yr) July 11, 2018		December 31st, 2017	
GAS PLANT IN SERVICE (Accounts 101, 102, 103, and 106) (Continued)							
Line No.	Account (a)	Balance at Beginning of Year (b)	Additions (c)	Retirements (d)	Adjustments (e)	Transfers (f)	Balance at End of Year (g)
55	Other Storage Plant						
56	360 Land and Land Rights						0
57	361 Structures and Improvements	57,345	39,634				96,980
58	362 Gas Holders						0
59	363 Purification Equipment						0
60	363.1 Liquefaction Equipment						0
61	363.2 Vaporizing Equipment						0
62	363.3 Compressor Equipment						0
63	363.4 Meas. and Reg. Equipment						0
64	363.5 Other Equipment	7,646					7,646
65	TOTAL Other Storage Plant	64,991	39,634	0	0	0	104,625
66	Base Load Liquefied Natural Gas Terminating and Processing Plant						
67	364.1 Land and Land Rights						0
68	364.2 Structures and Improvements						0
69	364.3 LNG Processing Terminal Equipment						0
70	364.4 LNG Transportation Equipment						0
71	364.5 Measuring and Regulating Equipment						0
72	364.6 Compressor Station Equipment						0
73	364.7 Communications Equipment						0
74	364.8 Other Equipment						0
75	TOTAL Base Load Liquefied Natural Gas, Terminating and Processing Plant	0	0	0	0	0	0
77	TOTAL Nat. Gas Storage and Proc. Plant (3)						
78	4. Transmission Plant						
79	365.1 Land and Land Rights						0
80	365.2 Rights-of-Way						0
81	366 Structures and Improvements						0
82	367 Mains						0
83	368 Compressor Station Equipment						0
84	369 Measuring and Reg. Sta. Equipment						0
85	370 Communication Equipment						0
86	371 Other Equipment						0
87	TOTAL Transmission Plant (4)	0		0	0	0	0
88	5. Distribution Plant						
89	374 Land and Land Rights	592,018	25,387				617,405
90	375 Structures and Improvements	2,857,303	68,254	55,110			2,870,448
91	376 Mains	216,577,069	24,208,292	2,045,490			238,739,871
92	377 Compressor Station Equipment						0
93	378 Meas. and Reg. Sta. Equip.-General	4,909,208	22,053	18,921			4,912,339
94	379 Meas. and Reg. Sta. Equip.-City Gate						0
95	380 Services	143,518,867	6,272,660	1,456,943			148,334,584
96	381 Meters	20,464,512	2,526,432	3,141,135			19,849,809
97	382 Meter Installations	14,360,005	3,342,410				17,702,415
98	383 House Regulators						0
99	384 House Reg. Installations						0
100	385 Industrial Meas. and Reg. Sta. Equipment						0
101	386 Other Prop. on Customers' Premises						0
102	387 Other Equipment	12,017,725	516,792	0			12,534,518
103	TOTAL Distribution Plant (5)	415,296,707	36,982,280	6,717,599	0	0	445,561,389
104	6. General Plant						
105	389 Land and Land Rights	16,806					16,806
106	390 Structures and Improvements	16,827,051	486,517	1,867			17,311,701
107	391 Office Furniture and Equipment	2,806,393					2,806,393
108	392 Transportation Equipment	1,514,462	1,151,132	47,569			2,618,024
109	393 Stores Equipment	99,421	0				99,421
110	394 Tools, Shop, and Garage Equipment	825,963	59,114				885,077
111	395 Laboratory Equipment						0
112	396 Power Operated Equipment	491,943	0	94,386			397,557
113	397 Communication Equipment	395,811	48,153				443,965
114	398 Miscellaneous Equipment	348,302	0				348,302
115	Subtotal	23,326,152	1,744,916	143,822	0	0	24,927,246
116	399 Other Tangible Property						0
117	TOTAL General Plant (6)	23,326,152	1,744,916	143,822	0	0	24,927,246
118	TOTAL (Accounts 101 and 106)	453,429,242	39,155,610	6,861,421	0	0	485,723,431
1012	Plant in Service - ARO	139,286			(139,286)		0
119	Gas Plant Purchased (See Instr. 8)						0
120	(Less) Gas Plant Sold (See Instr. 8)						0
121	Experimental Gas Plant Unclassified						0
122	Completed Construction not Classified		42,277,446				42,277,446
\$123.00	TOTAL Gas Plant in Service	453,568,528	81,433,056	6,861,421	(139,286)	0	528,000,877

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017	
ACCUMULATED PROVISION FOR DEPRECIATION OF GAS UTILITY PLANT (Account 108)					
<p>1. Explain in a footnote any important adjustments during year.</p> <p>2. Explain in a footnote any difference between the amount for book cost of plant retired, line 11, column (c), and that reported for gas plant in service, pages 18-19, column (d), excluding retirements of non-depreciable property.</p> <p>3. The provisions of Account 108 in the Uniform System of Accounts require that retirements of depreciable plant be recorded when such plant is</p>			<p>removed from service. If the respondent has a significant amount of plant retired at year end which has not been recorded and/or classified to the various reserve functional classifications, make preliminary closing entries to tentatively functionalize the book cost of the plant retired. In addition, include all costs included in retirement work in progress at year end in the appropriate functional classifications.</p> <p>4. Show separately interest credits under a sinking fund or similar method of depreciation accounting.</p>		
Section A. Balances and Changes During Year					
Line No.	Item (a)	Total (c+d+e) (b)	Division (c)	Division (d)	Gas Plant Leased to Others (e)
1	Balance Beginning of Year	(125,436,149)			
2	Depreciation Provisions for Year, Charged to				
3	(403) Depreciation Expense 1080	(12,786,243)			
4	Exp. of Gas Plt. Leas. to Others	0			
5	Transportation Expenses- Clearing	0			
6	Other Clearing Accounts 1084	2,769,549			
7	Other Accounts (Specify):	0			
8					
9	TOTAL Deprec. Prov. for Year (Enter Total of lines 3 thru 8)	(10,016,693)	0	0	0
10	Net Charges for Plant Retired:				
11	Book Cost of Plant Retired	6,861,421			
12	Cost of Removal 1081	0			
13	Salvage (Credit) 1082	(17,347)			
14	TOTAL Net Chrgs. for Plant Ret. (Enter Total of lines 11 thru 13)	6,844,073	0	0	0
15	Other Debit or Cr. Items (Describe)				
	Asset Retire Obligation Accret 1080	(62,587)			
	Asset Retire Obligation Accret 1100	133,535			
	Adj-Acc Depr CWIP -Neg & CIAC 1080	(214,943)			
	Software Amortization 1110	(2,173,446)			
16	Adjust. to Reserve				
17	Balance End of Year (Enter Total of lines 1,9,14,15, and 16)	(130,926,210)	0	0	0
Section B. Balances at End of Year According to Functional Classifications					
18	Production-Manufactured Gas	0			
19	Prod. and Gathering-Natural Gas	0			
20	Products Extraction-Natural Gas	0			
21	Underground Gas Storage	0			
22	Other Storage Plant	0			
23	Base Load LNG Term. and Proc. Plt.	0			
24	Transmission	0			
25	Distribution	161,323,689			
26	General	4,924,471			
27	TOTAL (Enter Total of lines 18 thru 26)	166,248,160	0	0	0

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised X		Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017	
OTHER REGULATORY ASSETS (ACCOUNT 182.3)						
1. Report below the details called for concerning other regulatory assets which are created through the ratemaking actions of regulatory agencies (and not included in other accounts).			3. Minor items (5% of the Balance at End of Year for Account 182.3 or amounts less than \$250,000, whichever is less) may be grouped by classes.			
2. For regulatory assets being amortized, show period of amortization in column (a).			4. Report separately any "Deferred Regulatory Commission Expenses"			
Line No.	Description and Purpose of Other Regulatory Assets	Balance at Beginning of Year	Debits	Written off During Year		Balance at End of Year
				Account Charged	Amount	
	(a)	(b)	(c)	(d)	(e)	(f)
1	Current Regulatory Asset - Special Auc 1168-1821	210,208	-		-	210,208
2	OPEB Expense Deferred-Gas 1929-1828	688,642	172,161	Reg asset other Pension related	860,803	-
3	R/A Deferred Tilton Remediation 1930-1824	124,124	-	Accounts Payable	108	124,016
4	FAS 158 - Pension 1930-1826	21,625,753	-		-	21,625,753
5	Asset Ret Oblig Reg Asset 1930-1827	1,434,765	-	Asset Retirement Obligation	1,434,765	-
6	NEG & KeySpan CTA 1930-1828	988,103	88,913	Regulatory Debits	409,203	667,813
7	Other Regulatory Assets 1930-1823		3,982,840	Degradation fees	1,970,378	2,012,462
8	Phased in Revenue - ST 1168-1420	1,024,163	164,236	Rate Case Recovery	138,902	1,049,497
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40	TOTAL	26,095,758	4,408,149		4,814,159	25,689,749

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised		Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017	
MISCELLANEOUS DEFERRED DEBITS (ACCOUNT 186)						
<p>1. Report below the details called for concerning miscellaneous deferred debits.</p> <p>2. For any deferred debit being amortized, show period of amortization in column (a).</p> <p>3. Minor items amounts less than \$250,000 may be grouped by classes.</p>						
Line No.	Description of Miscellaneous Deferred Debits	Balance at Beginning of Year	Debits	Credits		Balance at End of Year
				Account Charged	Amount	
	(a)	(b)	(c)	(d)	(e)	(f)
1	Misc Deferred Debits 1920-1860	-	4,039,973	5610-9280	595,793	3,444,180
2	R/A-Environmental-Materials 1920-1863	23,488,008	6,570,869	2110'2930-2282	2,983,780	27,075,097
3	R/A-Environmental-Purch Gz 1920-1864	20,191,455	1,830,830	2110-2420	1,057,933	20,964,352
4	Regulatory Assets - FAS 10 1929-1863	425,019				425,019
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40	TOTAL	44,104,482	12,441,673		4,637,507	51,908,648

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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LONG-TERM DEBT (Accounts 221, 222, 223, and 224)

1. Report by balance sheet the particulars (details) concerning long-term debt included in Accounts 221, Bonds, 222, Reacquired Bonds, 223, Advances from Associated Companies, and 224, Other Long-Term Debt. If information to meet the stock exchange reporting requirement outlined in column (a) is available from the SEC 10-K Report Form filing, a specific reference to the report form (i.e. year and company title) may be reported in column (a) provided the fiscal years for both the 10-K report and this report are compatible.

2. For bonds assumed by the respondent, include in column (a) the name of the issuing company as well as a description of the bonds.

3. For advances from Associated Companies, report separately advances on notes and advances on open accounts. Designate demand notes as such. Include in column (a) names of associated companies from which advances were received.

4. For receivers' certificates, show in column (a) the name of the court and date of court order under which such certificates were issued.

5. In a supplemental statement, give explanatory particulars (details) for Accounts 223 and 224 of net changes during the year. With respect to long-term advances, show for each company: (a) principal advanced during year, (b) interest added to principal amount, and (c) principal repaid during year. Give Commission authorization numbers and dates.

6. If the respondent has pledged any of its long-term debt securities, give particulars (details) in a footnote, including name of the pledgee and purpose of the pledge.

Line No.	Class and Series of Obligation and Name of Stock Exchange	Nominal Date of Issue (b)	Date of Maturity (c)	Outstanding (Total amount outstanding without reduction for amounts held by respondent) (d)	INTEREST FOR YEAR		HELD BY RESPONDENT		Redemption Price Per \$100 at End of Year (i)
					Rate (in %) (e)	Amount (f)	Reacquired Bonds (Acct. 222) (g)	Sinking and Other Funds (h)	
1	NP-LU and EN \$18.1M 5YR@3.51%	12/21/12	12/20/17	0	3.51%	638,182			
2	NP- LU and EN \$41.8M 10YR@4.49%	12/21/12	12/20/22	41,818,182	4.49%	1,877,636			
3	NP-LU and EN \$21.8M 15YR@4.89%	12/21/12	12/20/27	21,818,182	4.89%	1,066,909			
4	NP-LU and EN \$8.2M 15YR@4.89%	12/21/12	12/20/27	8,181,818	4.89%	400,091			
5	NP - LU and EN \$87.8M 15YR@4.22%	12/31/17	12/31/32	87,781,818	4.22%	0			
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38				159,600,000		3,982,818	0	0	

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
RECONCILIATION OF REPORTED NET INCOME WITH TAXABLE INCOME FOR FEDERAL INCOME TAXES			
<p>1. Report the reconciliation of reported net income for the year with taxable income used in computing Federal income tax accruals and show computation of such tax accruals. Include in the reconciliation, as far as practicable, the same detail as furnished on Schedule M-1 of the tax return for the year. Submit a reconciliation even though there is no taxable income for the year. Indicate</p> <p>clearly the nature of each reconciling amount.</p> <p>2. If the utility is a member of a group which files consolidated Federal tax return, reconcile reported net income with taxable net income as if a separate return were to be filed, indicating, however, intercompany amounts to be eliminated in such a consolidated return. State names of group members, tax assigned to each group member, and basis of allocation, assignment, or sharing of the consolidated tax among the group members.</p>			
Line No.	Particulars (Details) (a)	Amount (b)	
1	New Hampshire Book Income Before Taxes	22,030,587.00	
2	Provision for Deferred Income Taxes and Other	(6,276,297)	
3	Net Income for the Year (Page 12)	15,754,290	
4	Reconciling Items for the Year	(32,057,888)	
5	Federal AMT	0	
6	Taxable Income Not Reported on Books		
7	CIAC Received	287,873	
8	Regulatory Assets & Liabilities	(9,357,975)	
9			
10			
11	Deductions Recorded on Books Not Deducted for Return		
12	Employee Share Purchase Plan	24,107	
13	Accounting Depreciation	14,959,689	
14	Allowance for Doubtful Accounts	(532,081)	
15	Pension Accrual	509,893	
16	50% Meals & Entertainment	7,533	
17	Lobbying	16,897	
18	Penalties	14,209	
19	Asset Retirement Obligation	(1,503,103)	
20	Pension OCI Amortization	99,724	
21			
22			
23			
24			
25	Income Recorded on Books Not Included in Return		
26	AFUDC Equity	(100,567)	
27			
29			
30			
31	Deductions on Return Not Charged Against Book Income		
32	Tax Depreciation	(23,774,876)	
33	Repair Deduction	(11,109,652)	
34	Accrued Liabilities & Other Liabilities	(263,231)	
35	Environmental Obligations	6,213,864	
36	Pension Contribution	(4,845,990)	
37	Cost of Removal Paid	(2,517,374)	
38	UNICAP	52,766	
39	Derivative Liabilities	0	
40	Tax Goodwill Amortization	(19,381)	
41			
42	New Hampshire Tax	(220,215)	
43	Federal Tax Net Income	(10,027,301)	
44			
45	Show Computation of Tax:		
46			
47	Federal Taxable Income	(10,027,301)	
48	Deduct: Net Operating Loss Carryover	10,027,301	
49	Federal Taxable Income After NOLs	0	
50	Tax Rate	0.34	
51	Federal AMT	0	

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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TAXES ACCRUED, PREPAID AND CHARGED DURING YEAR

1. Give particulars (details) of the combined prepaid and accrued tax accounts and show the total taxes charged to operations and other accounts during the year. Do not include gasoline and other sales taxes which have been charged to the accounts to which the taxed material was charged. If the actual or estimated amounts of such taxes are known, show the amounts in a footnote and designate whether estimated or actual amounts.
2. Include on this page taxes paid during the year and charged direct to final accounts, (not charged to prepaid or accrued taxes). Enter the amounts in both columns (d) and (e). The balancing of this page is not affected by the inclusion of these taxes.
3. Include in column (d) taxes charged during the year, taxes charged to operations and other

accounts through (a) accruals credited to taxes accrued, (b) amounts credited to proportions of prepaid taxes chargeable to current year, and (c) taxes paid and charged direct to operations or accounts other than accrued and prepaid tax accounts.
4. List the aggregate of each kind of tax in such manner that the total tax for each State and sub-division can readily be ascertained.
5. If any tax (Exclude Federal and state income taxes) covers more than one year, show the required information separately for each tax year, identifying the year in column (a).
6. Enter all adjustments of the accrued and prepaid tax accounts in column (f) and explain each adjustment in a footnote. Designate debit adjustments by parentheses.

7. Do not include on this page entries with respect to deferred income taxes or taxes collected through payroll deduction or otherwise pending transmittal of such taxes to the taxing authority.
8. Show in column (i) thru (p) how the taxed accounts were distributed. Show both the utility department and number of account charged. For taxes charged to utility plant, show the number of the appropriate balance sheet plant account or subaccount.
9. For any tax apportioned to more than one utility department or account, state in a footnote the basis (necessity) of apportioning such tax.
10. For NHPUC reporting purposes, taxes greater than \$25,000 should be reported separately -- others may be combined.

Line No.	Kind of Tax (See Instruction 5)	BALANCE BEGINNING OF YEAR				Adjustments	BALANCE END OF YEAR	
		Taxes Accrued (Account 236)	Prepaid Taxes (Incl. in Account 165)	Taxes Charged During Year	Taxes Paid During Year		Taxes Accrued (Account 236)	Prepaid Taxes (Incl. in Account 165)
		(b)	(c)	(d)	(e)		(f)	(g)
1	Income Tax Receivable 10-1163-1430			286,511	286,511		-	-
2	Prepaid Taxes-Mun-Property-Oper 10-1240-1653		3,625,472	9,542,179	9,386,412		-	3,781,238
3	Accum Def Inc Taxes-Other Reg Asset 10-1930-2830			84,122	93,655		-	
4	Accum Def Inc Taxes Liability-(Long-term) 20-2965-2830			62,635,396	69,626,362		-	
5	Social Security Taxes 69-5040-4080			252,668	252,668		-	
6	Federal Unemployment taxes 69-5041-4080			9,987	9,987		-	
7	Tx Oth Inc Tx-St Unempl Tax 69-5041-4082			31,424	31,424		-	
8	Property taxes 69-5680-4080			9,379,571	9,379,571		-	
9	State Income Tax 80-8720-4090			220,214	220,214		-	
10	Social Security Taxes 69-5040-4080			978,454	978,454		-	
11	Federal Unemployment Taxes 69-5041-4080			1,177	1,177		-	
12	State Umemployment Taxes 69-5041-4082			5,593	5,593		-	
13	Medicare 69-5041-4082			61,679	61,679		-	
14	Medicare 69-5041-4082			243,019	243,019		-	
15	OCI-Pension-Taxes 30-3800-0052			(38,524)				
16	AOCI - Pension - Taxes 30-3800-0153			(5,233,123)				
17	AOCI - OPEB - Taxes 30-3800-0154			3,673,300				
18	TOTAL	0	3,625,472	82,133,646	90,576,726	0	0	3,781,238

DISTRIBUTION OF TAXES CHARGED (Show utility department where applicable and account charged.)

Line No.		Gas (408.1 409.1)	Other Utility Departments (408.1, 409.1)	Other Income and Deductions (408.2, 409.2)	Extraordinary Items (409.3)	Other Utility Dpn. Incom (408.1, 409.1)	Adjustment to Ret. Earnings (439)	Other							
									(i)	(j)	(k)	(l)	(m)	(n)	(o)
									1	Social Security Taxes 69-5040-4080	252,668				
2	Federal Unemployment taxes 69-5041-4080	9,987													
3	Tx Oth Inc Tx-St Unempl Tax 69-5041-4082	31,424													
4	Property taxes 69-5680-4080	9,379,571													
5	State Income Tax 80-8720-4090	220,214													
6	Social Security Taxes 69-5040-4080	978,454													
7	Federal Unemployment Taxes 69-5041-4080	1,177													
8	State Umemployment Taxes 69-5041-4082	5,593													
9	Medicare 69-5041-4082	61,679													
10	Medicare 69-5041-4082	243,019													
11															
12															
13															
14															
15															
16															
17															
18	TOTAL	11,183,786	0	0	0	0	0	0							

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Co d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised X		Date of Report (Mo, Da, Yr) July 11, 2018		Year of Report December 31st, 2017	
OTHER REGULATORY LIABILITIES (Account 254)							
1. Report below the particulars (details) called for concerning other regulatory liabilities which are created through the ratemaking actions of regulatory agencies and not includable in other amounts).				3. Minor items (5% of the Balance at End of Year for Account 254 or amounts less than \$50,000, whichever is less) may be grouped by classes.			
2. For regulatory liabilities being amortized, show period of amortization in column (a).							
Line No.	Description and Purpose of Other Regulatory Liabilities (a)	Balance at Beg of Year (b)	DEBITS		Credits (e)	Balance at End of Year (f)	
			Account Credited (c)	Amount (d)			
1	None	-				-	
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42	TOTAL	0		0	0	0	

Line No.	Title of Account	Total		OPERATING REVENUES			GAS			DEKATHERM OF NATURAL GAS		AVG. NO. OF GAS CUSTOMERS PER MO.	
		Current Year	Prior Year	Current Year	Prior Year	Current Year	Prior Year	Current Year	Prior Year	Current Year	Prior Year	Current Year	Prior Year
		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	
1	GAS SERVICE REVENUES												
2	480 Residential Sales	\$ 75,557,486	\$ 67,946,193	\$ 41,671,966	\$ 37,593,071	\$ 33,885,520	\$ 30,353,122	\$ 5,794,076	\$ 3,958,260	79,810	79,129		
3	481 Commercial & Industrial Sales	\$ 38,561,842	\$ 32,245,554	\$ 17,956,841	\$ 17,886,201	\$ 20,605,001	\$ 14,359,353	\$ 3,526,669	\$ 2,456,636	9,173	9,201		
4	Small (or Comm.) (See Instr. 6)												
5	Large (or Ind.) (See Instr. 6)												
6	482 Other Sales to Public Authorities	\$ 8,800	\$ 3,200										
7	484 Unbilled Revenue												
8	TOTAL Sales to Ultimate Consumers	\$ 114,128,128	\$ 100,194,947	\$ 59,628,807	\$ 55,479,272	\$ 54,490,521	\$ 44,712,475	\$ 9,320,745	\$ 6,414,896	88,983	88,330		
9	483 Sales for Resale	\$ 2,179,448	\$ 2,729,123										
10	TOTAL Natural Gas Service Revenues	\$ 116,307,576	\$ 102,924,070	\$ 59,628,807	\$ 55,479,272	\$ 54,490,521	\$ 44,712,475	\$ 9,320,745	\$ 6,414,896	88,983	88,330		
11	Revenues from Manufactured Gas												
12	TOTAL Gas Service Revenues	\$ 116,307,576	\$ 102,924,070	\$ 59,628,807	\$ 55,479,272	\$ 54,490,521	\$ 44,712,475	\$ 9,320,745	\$ 6,414,896	88,983	88,330		
13													
14	485 Intracompany Transfers												
15	487 Forfeited Discounts												
16	488 Misc. Service Revenues	\$ 901,290	\$ 847,735										
17	489.1 Rev. from Trans. of Gas of Others through Gathering Facilities												
18	489.2 Rev. from Trans. of Gas of Others through Transmission Facilities												
19	489.3 Rev. from Trans. of Gas of Others through Distribution Facilities												
20	489.4 Rev. from Storing Gas of Others												
21	490 Sales of Prod. Ext. from Nat. Gas												
22	491 Rev. from Nat. Gas Proc. by Others												
23	492 Incidental Gasoline and Oil Sales	\$ 16,173,667	\$ 13,494,254	\$ 16,119,017	\$ 13,193,715	\$ 54,650	\$ 300,539	\$ 6,859,311	\$ 4,785,029	2,632	2,620		
24	493 Rent from Gas Property												
25	494 Interdepartmental Rents												
26	495 Other Gas Revenues	\$ 3,301,434	\$ 2,787,590										
27	TOTAL Other Operating Revenues	\$ 20,376,391	\$ 17,129,590	\$ 16,119,017	\$ 13,193,715	\$ 54,650	\$ 300,539	\$ 6,859,311	\$ 4,785,029	2,632	2,620		
28	TOTAL Gas Operating Revenues	\$ 136,683,967	\$ 120,053,649	\$ 75,747,824	\$ 68,672,987	\$ 54,545,170	\$ 45,013,014	\$ 16,180,056	\$ 11,199,925	91,615	90,950		
29	(Less) 496 Provision for Rate Refunds												
30	TOTAL Gas Operating Revenues Net of Provision for Refunds	\$ 136,683,967	\$ 120,053,649	\$ 75,747,824	\$ 68,672,987	\$ 54,545,170	\$ 45,013,014	\$ 16,180,056	\$ 11,199,925	91,615	90,950		
31	Dist. Type Sales by States (Inc. Main Line Sales to Resid and Comm Cust)	\$ 114,119,328	\$ 100,191,747	\$ 59,628,807	\$ 55,479,272	\$ 54,490,521	\$ 44,712,475	\$ 9,320,745	\$ 6,414,896	88,983	88,330		
32	Main Line Industrial Sales (Inc. Main Line Sales to Pub. Authorities)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	-		
33	Sales for Resale	\$ 2,179,448	\$ 2,729,123	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	-		
34	Other Sales to Pub. Auth. (Local Dist. Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	-		
35	Unbilled Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	-		
36	TOTAL (Same as Line 10. Columns (b) and (d))	\$ 116,298,776	\$ 102,920,870	\$ 59,628,807	\$ 55,479,272	\$ 54,490,521	\$ 44,712,475	\$ 9,320,745	\$ 6,414,896	88,983	88,330		

added. The average number of customers means the average of twelve figures at the close of each month.

4. Report quantities of natural gas sold on a per term basis.

5. If increases or decreases from previous year columns (c), (e) and (g), are not derived from previously reported figures explain any inconsistencies in a footnote.

6. Commercial and Industrial Sales. Account 481 may be classified according to the basis of classification (Small or Commercial, and Large or Industrial) regularly used by the respondent if such basis of classification is not generally greater than 200,000 Dth per year or approximately 800 Dth per day of normal requirements. (See Account 481 of the Uniform System of Accounts. Explain basis of classification in a footnote.)

7. See page 7, Important Changes During Year, for important new territory added and important rate increases or decreases.

* Accounting Change - acct 4800-4803, 4810-4815, 4893, 4897-4899 - these account now contain Unbilled Revenues

** Please see page 50 as a supplement to page28 for gas revenue accounts not included here.

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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REVENUES FROM TRANSPORTATION OF GAS OF OTHERS THROUGH DISTRIBUTION FACILITIES (ACCOUNT 489.3)

1. Report revenues and Dth of gas delivered by zone of Delivery by Rate Schedule. Total by Zone of Delivery and for all zones. If respondent does not have separate zones, provide totals by rate schedule.
2. Revenues for penalties including penalties for unauthorized overruns must be reported separately.
3. Other revenues include reservation charges received plus usage charges for transportation and hub services.
4. Delivered Dth of gas must not be adjusted for discounting.
5. Each incremental rate schedule and each individually certified rate schedule must be separately reported.

Line No.	Zone of Delivery, Rate Schedule (a)	OTHER REVENUES		TOTAL OPERATING REVENUES		DEKATHERM OF NATURAL GAS	
		Amount for Current Year (b)	Amount for Previous Year (c)	Amount for Current Year (d)	Amount for Previous Year (e)	Amount for Current Year (f)	Amount for Previous Year (g)
1	Transportation			16,173,667	13,494,254	3,526,668	4,785,029
2							
3							
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NAME OF RESPONDENT: Liberty Utilities (Energy/North Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report July 11, 2018	Year of Report December 31st, 2017
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GAS OPERATING REVENUES by Tariff Sheets

- Complete the following information for the calendar year ending December 31 according to the column headings.
- The average number of customers should be the number of bills rendered during the year divided by the number of billing periods during the year (12 if all billings are made monthly).

Line No.	Rate Designation	GAS SERVICE TARIFFS	Revenue * (b)	Therms (c)	Number of Customers (d)	Therm Use per Customer (e)	Revenue per Therm Units Sold (f)	Number of Customers in Previous Year (g)
1								
2		Residential Sales						
3	GR-3	Residential Heating						
4		Base Revenues	\$37,823,180	53,036,382	71,046			70,646
5		COG Revenues	\$31,099,863					
6		Other Revenues (LDAC)	\$3,514,527					
7		Total	\$72,437,570	53,036,382	71,046	747	1.365809045	70,646
8	GR-1	Residential Non-Heating						
9		Base Revenues	\$740,702	682,982	3,119			3,036
10		COG Revenues	\$380,060					
11		Other Revenues (LDAC)	\$44,804					
12		Total	\$1,165,567	682,982	3,119	219	1.706584208	3,036
13	GR-4	Residential Heating Low Income						
14		Base Revenues	\$1,200,850	4,221,404	5,644			5,446
15		COG Revenues	\$2,495,799					
16		Other Revenues (LDAC)	\$277,229					
17		Total	\$3,973,878	4,221,404	5,644	748	0.941364008	5,446
18	NA	Residential Non-Heating Low Income						
19		Base Revenues						
20		COG Revenues						
21		Other Revenues (LDAC)						
22		Total	\$0	0	0	0	0	0
23								
24		Total Residential Heating - Combined						
25		Base Revenues	\$39,024,031	57,257,786	76,690			76,092
26		COG Revenues	\$33,595,661					
27		Other Revenue (LDAC)	\$3,791,756					
28		Total	\$76,411,448	57,257,786	76,690	747	1.33451629	76,092
29		Total Residential Non-Heating - Combined						
30		Base Revenues	\$740,702	682,982	3,119			3,036
31		COG Revenues	\$380,060					
32		Other Revenue (LDAC)	\$44,804					
33		Total	\$1,165,567	682,982	3,119	219	1.706584208	3,036
34		Total Residential (Heating & Non-Heating)						
35		Base Revenues	\$39,764,733	57,940,768	79,809			79,128
36		COG Revenues	\$33,975,722					
37		Other Revenue (LDAC)	\$3,836,560					
38		Total	\$77,577,015	57,940,768	79,809	726	1.338902076	79,128
39								
40		Commercial and Industrial Sales Service						
41	GC-41	C&I Low Annual Use, High Peak Period Use						
42		Base Revenues	\$9,304,779	15,687,985	7,412			7,156
43		COG Revenues	\$9,115,249					
44		Other Revenues (LDAC)	\$743,902					
45		Total	\$19,163,929	15,687,985	7,412	2,117	1.221567255	7,156
46	GC-42	C&I Medium Annual Use, High Peak Period Use						
47		Base Revenues	\$4,657,767	11,476,919	687			903
48		COG Revenues	\$6,650,729					
49		Other Revenues (LDAC)	\$541,385					
50		Total	\$11,849,881	11,476,919	687	16,716	1.032496731	903
51	GC-43	C&I High Annual Use, High Peak Period Use						
52		Base Revenues	\$508,426	1,814,779	18			18
53		COG Revenues	\$1,031,290					
54		Other Revenues (LDAC)	\$88,304					
55		Total	\$1,628,019	1,814,779	18	100,821	0.897089456	18
56	GC-51	C&I Low Annual Use, Low Peak Period Use						
57		Base Revenues	\$1,013,362	2,534,352	896			973
58		COG Revenues	\$1,417,207					
59		Other Revenues (LDAC)	\$120,187					
60		Total	\$2,550,756	2,534,352	896	2,827	1.006472768	973
61	GC-52	C&I Medium Annual Use, Low Peak Period Use						
62		Base Revenues	\$677,477	2,524,586	147			141
63		COG Revenues	\$1,393,569					
64		Other Revenues (LDAC)	\$118,791					
65		Total	\$2,189,837	2,524,586	147	17,167	0.867404371	141
66	GC-53 & GC-54	C&I High Annual Use, Load Factor <=>90						
67	IINAT	Base Revenues	\$215,504	1,228,048	12			11
68		COG Revenues	\$669,003					
69		Other Revenues (LDAC)	\$61,850					
70		Total	\$946,357	1,228,048	12	98,559	0.770618417	11
71		Total Commercial and Industrial Sales Service						
72								
73		Total C&I Sales Service - Combined						
74		Base Revenues	\$16,377,313	35,266,669	9,172			9,202
75		COG Revenues	\$20,277,047					
76		Other Revenue (LDAC)	\$1,674,419					
77		Total	\$38,328,779	35,266,669	9,172	3,845	1.086827306	9,202

* Revenue does not include Unbilled Revenues

NAME OF RESPONDENT: Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report July 11, 2018	Year of Report December 31st, 2017
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GAS OPERATING REVENUES by Tariff Sheets

- Complete the following information for the calendar year ending December 31 according to the column headings.
- The average number of customers should be the number of bills rendered during the year divided by the number of billing periods during the year (12 if all billings are made monthly).

Line No.	Rate Designation	GAS SERVICE TARIFFS	Revenue *	Therms	Number of Customers	Therm Use per Customer	Revenue per Therm Units Sold	Number of Customers in Previous Year
			(b)	(c)	(d)	(e)	(f)	(g)
78	GC-41	Commercial and Industrial Transportation Service						
79		C&I Low Annual Use, High Peak Period Use						
80		Base Revenues	\$2,435,719	5,605,958	1,299			1,233
81		Other Revenues (LDAC)	\$265,281					
82		Total	\$2,700,999	5,605,958	1,299	4,314	0.481808742	1,233
83	GC-42	C&I Medium Annual Use, High Peak Period Use						
84		Base Revenues	\$6,867,010	19,332,616	755			775
85		Other Revenues (LDAC)	\$918,685					
86		Total	\$7,785,695	19,332,616	755	25,591	0.402723276	775
87	GC-43	C&I High Annual Use, High Peak Period Use						
88		Base Revenues	\$1,978,433	8,746,260	31			31
89		Other Revenues (LDAC)	\$401,790					
90		Total	\$2,380,223	8,746,260	31	281,592	0.272141818	31
91	GC-51	C&I Low Annual Use, Low Peak Period Use						
92		Base Revenues	\$378,715	1,152,554	279			279
93		Other Revenues (LDAC)	\$53,435					
94		Total	\$432,150	1,152,554	279	4,131	0.374949904	279
95	GC-52	C&I Medium Annual Use, Low Peak Period Use						
96		Base Revenues	\$1,305,942	6,218,339	215			167
97		Other Revenues (LDAC)	\$293,753					
98		Total	\$1,599,695	6,218,339	215	28,976	0.257254345	167
99	GC-53 & GC	C&I High Annual Use, Low Peak Period Use						
100		Base Revenues	\$2,288,574	27,537,385	53			51
101		Other Revenues (LDAC)	\$1,279,804					
102		Total	\$3,568,378	27,537,385	53	521,245	0.129583021	51
103		Total C&I Transportation Service - Combined						
104		Base Revenues	\$15,254,392	68,593,112	2,632			2,536
105		Other Revenue (LDAC)	\$3,212,748					
106		Total	\$18,467,139	68,593,112	2,632	26,057	0.269227315	2,536
107								
108		C&I Special Contract Sales Service						
109		Base Revenues						
110		COG Revenues						
111		Other Revenues (LDAC)						
112		Total C&I Special Contract Sales Service	\$0	0	0	0	0	0
113								
114		C&I Special Contract Firm Transportation Service						
115		Base Revenues						
116		Other Revenues (LDAC)						
117		Total C&I Special Contract FT Service	\$0	0	0	0	0	0
118								
119		C&I Special Contract Interruptible Transportation Service						
120		Base Revenues						
121		Other Revenues (LDAC)						
122		Total C&I Special Contract IT Service	\$0	0	0	0	0	0
123								
124		C&I Special Contract Transportation (Firm & IT)						
125		Base Revenues	\$0					
126		Other Revenue (LDAC)	\$0					
127		Total	\$0	0	0	0	0	0
128								
129		C&I Special Contract (Sales & Transportation)						
130		Base Revenues	\$0					
131		COG Revenues	\$0					
132		Other Revenue (LDAC)	\$0					
133		Total	\$0	0	0	0	0	0
134								
135		Total C&I (Sales, Transportation & Special Contract)						
136		Base Revenues	\$15,254,392	68,593,112	2,632			11,738
137		COG Revenues	\$0					
138		Other Revenue (LDAC)	\$3,212,748					
139		Total	\$18,467,139	68,593,112	2,632	26,057	0.269227315	11,738
140								
141		Total Residential & Commercial and Industrial						
142		Base Revenues	\$71,396,438	\$161,800,550	\$91,614			\$100,068
143		COG Revenues	\$54,252,769					
144		Other Revenue (LDAC)	\$8,723,727					
145		Total	\$134,372,933	161,800,550	91,614	1,766	0.830485025	100,068
146								

* Revenue does not include Unbilled Revenues

NAME OF RESPONDENT: Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised		Date of Report July 11, 2018	Year of Report December 31st, 2017			
CAPACITY EXEMPT TRANSPORTATION								
1 Complete the following information for the calendar year ending December 31 according to the column headings.								
2 The average number of customers should be the number of bills rendered during the year divided by the number of billing periods during the year (12 if all billings are made monthly).								
Line No.	Rate Designation	GAS SERVICE TARIFFS - CAPACITY EXEMPT TRANSPORTATION CUSTOMER CLASSES	Revenue (b)	Therms (c)	Peak Month Therms (d)	Peak Month Therms in Previous Year (e)	Number of Customers (f)	Number of Customers in Previous Year (g)
1		Commercial and Industrial Transportation Service						
2	G-41	C&I Low Annual Use, High Peak Period Use						
3		Base Revenues	\$13,759					
4		Other Revenues (LDAC)	\$1,498					
5		Total	\$15,257	34,130	5,321	4,925	4	4
6		C&I Medium Annual Use, High Peak Period Use						
7	G-42	Base Revenues	\$445,125					
8		Other Revenues (LDAC)	\$59,550					
9		Total	\$504,675	1,221,444	187,789	207,512	22	16
10		C&I High Annual Use, High Peak Period Use						
11	G-43	Base Revenues	\$991,755					
12		Other Revenues (LDAC)	\$201,411					
13		Total	\$1,193,166	4,912,996	717,790	733,080	10	11
14		C&I Low Annual Use, Low Peak Period Use						
15	G-51	Base Revenues	\$6,092					
16		Other Revenues (LDAC)	\$860					
17		Total	\$6,952	23,085	6,761	3,466	0	2
18		C&I Medium Annual Use, Low Peak Period Use						
19	G-52	Base Revenues						
20		Other Revenues (LDAC)						
21		Total	\$0	0	0	31,084	0	0
22		C&I High Annual Use, Low Peak Period Use						
23	G-53	Base Revenues	\$586,833					
24		Other Revenues (LDAC)	\$196,772					
25		Total	\$783,606	3,759,835	423,142	412,546	9	16
26		C&I High Annual Use, Low Peak Period Use						
27	G-54	Base Revenues	\$890,451					
28		Other Revenues (LDAC)	\$790,178					
29		Total	\$1,680,629	16,708,536	1,767,219	1,592,126	19	19
30		Total C&I Transportation Service - Combined						
31		Base Revenues	\$2,934,015					
32		Other Revenue (LDAC)	\$1,250,269					
33		Total	\$4,184,284	26,660,026	3,108,022	2,984,739	64	68
34		C&I Special Contract Firm Transportation Service						
35		Base Revenues						
36		Other Revenues (LDAC)						
37		Total C&I Special Contract FT Service	\$0					
38		C&I Special Contract Interruptible Transportation Service						
39		Base Revenues						
40		Other Revenues (LDAC)						
41		Total C&I Special Contract IT Service	\$0					
42		Total Capacity Exempt Transportation	\$4,184,284	26,660,026	3,108,022	2,984,739	64	68
43		Total Transportation - p. 31 - lines 107 + 128	\$18,467,139	68,593,112			2,632	2,536
44		Percentage of Capacity Exempt Transportation	22.66%	38.87%			2.43%	2.68%

NAME OF RESPONDENT:		This Report is:	Date of Report	Year of Report				
Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		(1) Original (2) Revised X	July 11, 2018	December 31st, 2017				
CAPACITY ASSIGNED TRANSPORTATION								
1 Complete the following information for the calendar year ending December 31 according to the column headings.								
2 The average number of customers should be the number of bills rendered during the year divided by the number of billing periods during the year (12 if all billings are made monthly).								
Line No.	Rate Designation	GAS SERVICE TARIFFS - CAPACITY ASSIGNED TRANSPORTATION CUSTOMER CLASSES	Revenue	Total Therms	Slice of System Assigned Therms	Company Managed Assigned Therms	Number of Customers	Number of Customers in Previous Year
			(b)	(c)	(d)	(e)	(f)	(g)
1	G-41	Commercial and Industrial Transportation Service						
2		C&I Low Annual Use, High Peak Period Use						
3		Base Revenues	\$2,421,960					
4		Other Revenues (LDAC)	\$263,782					
5		Total	\$2,685,742	6,007,974	64,414	21,385	1,297	1,235
6	G-42	C&I Medium Annual Use, High Peak Period Use						
7		Base Revenues	\$6,421,885					
8		Other Revenues (LDAC)	\$859,135					
9		Total	\$7,281,020	17,621,965	176,807	58,700	767	752
10	G-43	C&I High Annual Use, High Peak Period Use						
11		Base Revenues	\$986,677					
12		Other Revenues (LDAC)	\$200,380					
13		Total	\$1,187,057	4,887,841	49,207	16,337	22	22
14	G-51	C&I Low Annual Use, Low Peak Period Use						
15		Base Revenues	\$372,623					
16		Other Revenues (LDAC)	\$52,575					
17		Total	\$425,198	1,411,993	7,527	1,302	279	283
18	G-52	C&I Medium Annual Use, Low Peak Period Use						
19		Base Revenues	\$1,305,942					
20		Other Revenues (LDAC)	\$293,753					
21		Total	\$1,599,695	5,288,276	24,954	4,317	172	169
22	G-53	C&I High Annual Use, Low Peak Period Use						
23		Base Revenues	\$727,364					
24		Other Revenues (LDAC)	\$243,893					
25		Total	\$971,256	4,660,211	26,361	4,561	16	16
26	G-54	C&I High Annual Use, Low Peak Period Use						
27		Base Revenues	\$70,407					
28		Other Revenues (LDAC)	\$62,479					
29		Total	\$132,886	1,321,131	3,379	585	5	5
30		Total C&I Transportation Service - Combined						
31		Base Revenues	\$12,306,859					
32		Other Revenue (LDAC)	\$1,975,996					
33		Total	\$14,282,855	41,199,391	352,649	107,187	2,558	2,482
34		C&I Special Contract Firm Transportation Service						
35		Base Revenues						
36		Other Revenues (LDAC)						
37		Total C&I Special Contract FT Service	\$0					
38		C&I Special Contract Interruptible Transportation Service						
39		Base Revenues						
40		Other Revenues (LDAC)						
41		Total C&I Special Contract IT Service	\$0					
42								
43								
44								
45		Total Capacity Assigned Transportation	\$14,282,855	41,199,391	352,649	107,187	2,558	2,482
46								
47								
48		Total Transportation - p. 31 - lines 107 + 128	\$18,467,139	68,593,112			2,632	2,536
49								
50		Percentage of Capacity Assigned Transportation	77.34%	60.06%			97.17%	97.87%

Line No.	Account (a)	Amount for Current Year (b)	Amount for Previous Year (c)	Increase or (decrease) (d)
Name of Respondent: Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities This Report Is: (1) Original (2) Revised X Date of Report: July 11, 2018 Year of Report: December 31st, 2017				
GAS OPERATION AND MAINTENANCE EXPENSES				
If the amount for previous year is not derived from previously reported figures, explain in footnotes.				
1	1. PRODUCTION EXPENSES			
2	A. Manufactured Gas Production			
3	Manufactured Gas Production (Submit Supplemental Statement) PG 51	1,345,784	1,068,988	276,796
4	B. Natural Gas Production			
5	B1. Natural Gas Production and Gathering			
6	Operation	None		
7	750 Operation Supervision and Engineering			0
8	751 Production Maps and Records			0
9	752 Gas Wells Expenses			0
10	753 Field Lines Expenses			0
11	754 Field Compressor Station Expenses			0
12	755 Field Compressor Station Fuel and Power			0
13	756 Field Measuring and Regulating Station Expenses			0
14	757 Purification Expenses			0
15	758 Gas Well Royalties			0
16	759 Other Expenses			0
17	760 Rents			0
18	TOTAL Operation (Enter Total of lines 7 thru 17)	0	0	0
19	Maintenance	None		
20	761 Maintenance Supervision and Engineering			0
21	762 Maintenance of Structures and Improvements			0
22	763 Maintenance of Producing Gas Wells			0
23	764 Maintenance of Field Lines			0
24	765 Maintenance of Field Compressor Station Equipment			0
25	766 Maintenance of Field Meas. and Reg. Sta. Equipment			0
26	767 Maintenance of Purification Equipment			0
27	768 Maintenance of Drilling and Cleaning Equipment			0
28	769 Maintenance of Other Equipment			0
29	TOTAL Maintenance (Enter Total of lines 20 thru 28)	0	0	0
30	TOTAL Natural Gas Production and Gathering (Total of lines 18 and 29)	0	0	0
31	B2. Products Extraction			
32	Operation	None		
33	770 Operation Supervision and Engineering			0
34	771 Operation Labor			0
35	772 Gas Shrinkage			0
36	773 Fuel			0
37	774 Power			0
38	775 Materials			0
39	776 Operation Supplies and Expenses			0
40	777 Gas Processed by Others			0
41	778 Royalties on Products Extracted			0
42	779 Marketing Expenses			0
43	780 Products Purchased for Resale			0
44	781 Variation in Products Inventory			0
45	(Less) 782 Extracted Products Used by the Utility-Credit			0
46	783 Rents			0
47	TOTAL Operation (Enter Total of lines 33 thru 46)	0	0	0

Name of Respondent		This Report Is:	Date of Report	Year of Report
Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		(1) Original (2) Revised X	July 11, 2018	December 31st, 2017
GAS OPERATION AND MAINTENANCE EXPENSES (Continued)				
Line No.	Item (a)	Amount for Current Year (b)	Amount for Previous Year (c)	Increase or (decrease) (d)
B2. Products Extraction (Continued)				
48	Maintenance			
49	784 Maintenance Supervision and Engineering			0
50	785 Maintenance of Structures and Improvements			0
51	786 Maintenance of Extraction and Refining Equipment			0
52	787 Maintenance of Pipe Lines			0
53	788 Maintenance of Extracted Products Storage Equipment			0
54	789 Maintenance of Compressor Equipment			0
55	790 Maintenance of Gas Measuring and Reg. Equipment			0
56	791 Maintenance of Other Equipment			0
57	TOTAL Maintenance (Enter Total of lines 49 thru 56)	0	0	0
58	TOTAL Products Extraction (Enter Total of lines 47 and 57)	0	0	0
C. Exploration and Development				
60	Operation			
61	795 Delay Rentals			0
62	796 Nonproductive Well Drilling			0
63	797 Abandoned Leases			0
64	798 Other Exploration			0
65	TOTAL Exploration and Development (Enter Total of lines 61 thru 64)	0	0	0
D. Other Gas Supply Expenses				
66	Operation			
67	800 Natural Gas Well Head Purchases			0
68	800.1 Natural Gas Well Head Purchases, Intracompany Transfers			0
69	801 Natural Gas Field Line Purchases			0
70	802 Natural Gasoline Plant Outlet Purchases			0
71	803 Natural Gas Transmission Line Purchases			0
72	804 Natural Gas City Gate Purchases	(17,429,472)	(34,130,483)	16,701,011
73	804.1 Liquefied Natural Gas Purchases	18,168,580	17,830,636	337,944
74	805 Other Gas Purchases	54,403,805	60,771,419	(6,367,614)
75	(Less) 805.1 Purchased Gas Cost Adjustments			0
76				
77	TOTAL Purchased Gas (Enter Total of lines 67 to 75)	55,142,914	44,471,572	10,671,341
78	806 Exchange Gas			0
79	Purchased Gas Expenses			
80	807.1 Well Expenses-Purchased Gas			0
81	807.2 Operation of Purchased Gas Measuring Stations			0
82	807.3 Maintenance of Purchased Gas Measuring Stations			0
83	807.4 Purchased Gas Calculations Expenses			0
84	807.5 Other Purchased Gas Expenses			0
85	TOTAL Purchased Gas Expenses (Enter Total of lines 80 thru 84)	0	0	0
86	808.1 Gas Withdrawn from Storage-Debit	(360,976)	1,255,384	(1,616,360)
87	Unbilled Revenue Costs			0
88	809.1 Withdrawals of Liquefied Natural Gas for Processing-Debit			0
89	(Less) 809.2 Deliveries of Natural Gas for Processing-Credit			0
90	Gas Used in Utility Operations-Credit			
91	810 Gas Used for Compressor Station Fuel-Credit			0
92	811 Gas Used for Products Extraction-Credit			0
93	812 Gas Used for Other Utility Operations-Credit			0
94	TOTAL Gas Used in Utility Operations-Credit (Total of lines 91 thru 93)	0	0	0
95	813 Other Gas Supply Expenses			
96	TOTAL Other Gas Supply Exp. (Total of lines 77,78,85,86 thru 89,94,95)	54,781,937	45,726,956	9,054,982
97	TOTAL Production Expenses (Enter Total of lines 3,30,58,65, and 96)	\$56,127,721	\$46,795,944	\$9,331,778

Name of Resodent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised X		Date of Report July 11, 2018	Year of Report December 31st, 2017
GAS OPERATION AND MAINTENANCE EXPENSES (Continued)					
Line No.	Account (a)	Amount for Current Year (b)	Amount for Previous Year (c)	Increase or (decrease) (d)	
98	2. NATURAL GAS STORAGE, TERMINALING AND PROCESSING EXPENSES				
99	A. Underground Storage Expenses				
100	Operation				
101	814 Operation Supervision and Engineering				0
102	815 Maps and Records				0
103	816 Wells Expenses				0
104	817 Lines Expense				0
105	818 Compressor Station Expenses				0
106	819 Compressor Station Fuel and Power				0
107	820 Measuring and Regulating Station Expenses				0
108	821 Purification Expenses				0
109	822 Exploration and Development				0
110	823 Gas Losses				0
111	824 Other Expenses				0
112	825 Storage Well Royalties				0
113	826 Rents				0
114	TOTAL Operation (Enter Total of lines 101 thru 113)	0	0		0
115	Maintenance				
116	830 Maintenance Supervision and Engineering				0
117	831 Maintenance of Structures and Improvements				0
118	832 Maintenance of Reservoirs and Wells				0
119	833 Maintenance of Lines				0
120	834 Maintenance of Compressor Station Equipment				0
121	835 Maintenance of Measuring and Regulating Station Equipment				0
122	836 Maintenance of Purification Equipment				0
123	837 Maintenance of Other Equipment				0
124	TOTAL Maintenance (Enter Total of lines 116 thru 123)	0	0		0
125	TOTAL Underground Storage Expenses (Total of lines 114 and 124)	0	0		0
126	B. Other Storage Expenses				
127	Operation				
128	840 Operation Supervision and Engineering				0
129	841 Operation Labor and Expenses	1,034	2,427		(1,393)
130	842 Rents				0
131	842.1 Fuel				0
132	842.2 Power				0
133	842.3 Gas Losses				0
134	TOTAL Operation (Enter Total of lines 128 thru 133)	1,034	2,427		(1,393)
135	Maintenance				
136	843.1 Maintenance Supervision and Engineering				0
137	843.2 Maintenance of Structures and Improvements				0
138	843.3 Maintenance of Gas Holders				0
139	843.4 Maintenance of Purification Equipment				0
140	843.5 Maintenance of Liquefaction Equipment				0
141	843.6 Maintenance of Vaporizing Equipment				0
142	843.7 Maintenance of Compressor Equipment				0
143	843.8 Maintenance of Measuring and Regulating Equipment				0
144	843.9 Maintenance of Other Equipment				0
145	TOTAL Maintenance (Enter Total of lines 136 thru 144)	0	0		0
146	TOTAL Other Storage Expenses (Enter Total of lines 134 and 145)	1,034	2,427		(1,393)

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised X	Date of Report July 11, 2018	Year of Report December 31st, 2017
GAS OPERATION AND MAINTENANCE EXPENSES (Continued)				
Line No.	Account (a)	Amount for Current Year (b)	Amount for Previous Year (c)	Increase or (decrease) (d)
147	C. Liquefied Natural Gas Terminating and Processing Expenses			
148	Operation			
149	844.1 Operation Supervision and Engineering			0
150	844.2 LNG Processing Terminal Labor and Expenses			0
151	844.3 Liquefaction Processing Labor and Expenses			0
152	844.4 Liquefaction Transportation Labor and Expenses			0
153	844.5 Measuring and Regulating Labor and Expenses			0
154	844.6 Compressor Station Labor and Expenses			0
155	844.7 Communication System Expenses			0
156	844.8 System Control and Load Dispatching			0
157	845.1 Fuel			0
158	845.2 Power			0
159	845.3 Rents			0
160	845.4 Demurrage Charges			0
161	(Less) 845.5 Wharfage Receipts-Credit			0
162	845.6 Processing Liquefied or Vaporized Gas by Others			0
163	846.1 Gas Losses			0
164	846.2 Other Expenses	(1,988,122)	(1,988,285)	164
165	TOTAL Operation (Enter Total of lines 149 thru 164)	(1,988,122)	(1,988,285)	164
166	Maintenance			
167	847.1 Maintenance Supervision and Engineering			0
168	847.2 Maintenance of Structures and Improvements			0
169	847.3 Maintenance of LNG Processing Terminal Equipment			0
170	847.4 Maintenance of LNG Transportation Equipment			0
171	847.5 Maintenance of Measuring and Regulating Equipment			0
172	847.6 Maintenance of Compressor Station Equipment			0
173	847.7 Maintenance of Communication Equipment			0
174	847.8 Maintenance of Other Equipment	0	0	0
175	TOTAL Maintenance (Enter Total of lines 167 thru 174)	0	0	0
176	TOTAL Liquefied Nat Gas Terminating and Processing Exp (Lines 165 & 175)	(1,988,122)	(1,988,285)	164
177	TOTAL Natural Gas Storage (Enter Total of lines 125, 146, and 176)	(1,987,088)	(1,985,859)	(1,229)
178	3. TRANSMISSION EXPENSES			
179	Operation			
180	850 Operation Supervision and Engineering			0
181	851 System Control and Load Dispatching			0
182	852 Communication System Expenses			0
183	853 Compressor Station Labor and Expenses			0
184	854 Gas for Compressor Station Fuel			0
185	855 Other Fuel and Power for Compressor Stations			0
186	856 Mains Expenses			0
187	857 Measuring and Regulating Station Expenses	1,088	30,299	(29,211)
188	858 Transmission and Compression of Gas by Others			0
189	859 Other Expenses			0
190	860 Rents			0
191	TOTAL Operation (Enter Total of lines 180 thru 190)	1,088	30,299	(29,211)

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised X	Date of Report July 11, 2018	Year of Report December 31, 2016
GAS OPERATION AND MAINTENANCE EXPENSE (Continued)				
Line No.	Account (a)	Amount for Current Year (b)	Amount for Previous Year (c)	Increase or (decrease) (d)
3. TRANSMISSION EXPENSES (Continued)				
192	Maintenance			
193	861 Maintenance Supervision and Engineering			-
194	862 Maintenance of Structures and Improvements			-
195	863 Maintenance of Mains	-	5,483	(5,483)
196	864 Maintenance of Compressor Station Equipment			-
197	865 Maintenance of Measuring and Reg. Station Equipment			-
198	866 Maintenance of Communication Equipment			-
199	867 Maintenance of Other Equipment			-
200	TOTAL Maintenance (Enter Total of lines 193 thru 199)	0	5,483	(5,483)
201	TOTAL Transmission Expenses (Enter Total of lines 191 and 200)	1,088	35,782	(34,694)
202	4. DISTRIBUTION EXPENSES			
203	Operation			
204	870 Operation Supervision and Engineering	948,919	1,686,434	(737,514)
205	871 Distribution Load Dispatching	826,481	242,795	583,685
206	872 Compressor Station Labor and Expenses		-	-
207	873 Compressor Station Fuel and Power		-	-
208	874 Mains and Services Expenses	4,418,798	4,691,554	(272,756)
209	875 Measuring and Regulating Station Expenses-General	47,758	123,901	(76,143)
210	876 Measuring and Regulating Station Expenses-Industrial	1,146	14,098	(12,952)
211	877 Measuring and Regulating Station Expenses-City Gate Check Station		-	-
212	878 Meter and House Regulator Expenses	1,439,228	1,730,441	(291,213)
213	879 Customer Installations Expenses	612,877	2,331	610,546
214	880 Other Expenses	1,629,941	903,449	726,492
215	881 Rents	16,436	12,098	4,339
216	TOTAL Operation (Enter Total of lines 204 thru 215)	9,941,584	9,407,100	534,484
217	Maintenance			
218	885 Maintenance Supervision and Engineering	-	-	-
219	886 Maintenance of Structures and Improvements	220,488	96,985	123,503
220	887 Maintenance of Mains	1,647,842	1,644,243	3,599
221	888 Maintenance of Compressor Station Equipment	-	-	-
222	889 Maintenance of Meas. and Reg. Sta. Equip.-General	3,956	54,565	(50,610)
223	890 Maintenance of Meas. and Reg. Sta. Equip.-Industrial		-	-
224	891 Maintenance of Meas. and Reg. Sta. Equip.-City Gate Check Station		-	-
225	892 Maintenance of Services	438,607	640,956	(202,349)
226	893 Maintenance of Meters and House Regulators	231,673	235,276	(3,603)
227	894 Maintenance of Other Equipment	243,764	6,216	237,547
228	TOTAL Maintenance (Enter Total of lines 218 thru 227)	2,786,329	2,678,242	108,088
229	TOTAL Distribution Expenses (Enter Total of lines 216 and 228)	\$12,727,913	\$12,085,341	\$642,572
230	5. CUSTOMER ACCOUNTS EXPENSES			
231	Operation			
232	901 Supervision	438,366	190,994	247,373
233	902 Meter Reading Expenses	401,869	364,666	37,204
234	903 Customer Records and Collection Expenses	2,947,258	3,771,514	(824,256)
235	904 Uncollectible Accounts	5,159	167,437	(162,278)
236	905 Miscellaneous Customer Accounts Expenses	4,200	(19,398)	23,598
237	TOTAL Customer Accounts Expenses (Enter Total of lines 232 thru 236)	\$3,796,852	\$4,475,212	(\$678,360)

Name of Resondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised X	Date of Report July 11, 2018	Year of Report December 31st, 2017
GAS OPERATION AND MAINTENANCE EXPENSES (Continued)				
Line No.		Amount for Current Year (b)	Amount for Previous Year (c)	Increase or (decrease) (d)
238	6. CUSTOMER SERVICE AND INFORMATIONAL EXPENSES			
239	Operation			
240	907 Supervision			
241	908 Customer Assistance Expenses	1		
242	909 Informational and Instructional Expenses	106,014	63,715	42,299
243	910 Miscellaneous Customer Service and Informational Expenses	397	2,338	(1,941)
244	TOTAL Customer Service and Information Expenses (Lines 240 thru 243)	\$106,412	\$66,053	\$40,358
245	7. SALES EXPENSES			
246	Operation			
247	911 Supervision		-	-
248	912 Demonstration and Selling Expenses	619,543	155,476	464,067
249	913 Advertising Expenses	2,643	117,168	(114,524)
250	916 Miscellaneous Sales Expenses	68,169	91,523	(23,354)
251	TOTAL Sales Expenses (Enter Total of lines 247 thru 250)	\$690,355	\$364,167	\$326,189
252	8. ADMINISTRATIVE AND GENERAL EXPENSES			
253	Operation			
254	920 Administrative and General Salaries	5,325,665	5,023,002	302,663
255	921 Office Supplies and Expenses	1,344,517	1,190,181	154,336
256	(Less) (922) Administrative Expenses Transferred-Cr.	(8,770,498)	(7,484,377)	(1,286,121)
257	923 Outside Services Employed	4,936,482	4,361,373	575,109
258	924 Property Insurance	23,100	38,113	(15,013)
259	925 Injuries and Damages	709,061	877,844	(168,783)
260	926 Employee Pensions and Benefits	5,595,561	6,338,058	(742,496)
261	927 Franchise Requirements	-	-	-
262	928 Regulatory Commission Expenses	623,767	634,272	(10,505)
263	(Less) (929) Duplicate Charges-Cr.	-	-	-
264	930.1 General Advertising Expenses	-	-	-
265	930.2 Miscellaneous General Expenses	(187,564)	(129,230)	(58,334)
266	931 Rents	61,424	44,158	17,267
267	TOTAL Operation (Enter Total of lines 254 thru 266)	9,661,517	10,893,394	(1,231,877)
268	Maintenance			
269	935 Maintenance of General Plant	-	133,881	(133,881)
270	TOTAL Administrative and General Exp (Total of lines 267 and 269)	\$9,661,517	\$11,027,275	(\$1,365,758)
271	TOTAL Gas O. and M. Exp (Lines 97, 177, 201, 229, 237, 244, 251, and 270)	\$81,124,771	\$72,863,915	\$8,260,855
NUMBER OF GAS DEPARTMENT EMPLOYEES				
1. The data on number of employees should be reported for the payroll period ending nearest to December 31.		3. The number of employees assignable to the gas department from joint functions of combination utilities may be determined by estimate, on the basis of employee equivalents. Show the estimated number of equivalent employees attributed to the gas department from joint functions.		
2. If the respondent's payroll for the reporting period include any special construction personnel, include such employees on line 3, and and show the number of such special construction in a footnote.				
Line No.		Number for Current Year (b)	Number for Previous Year (c)	Increase or (decrease) (d)
1	Total Regular Full-time Employees	275	274	1
2	Total Part-Time and Temporary Employees			
3	Total Employees	275	274	1

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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REGULATORY COMMISSION EXPENSES

- Report particulars (details) of regulatory commission expenses incurred during the current year (or incurred in previous years, if being amortized) relating to cases before a regulatory body or cases in which such a body was a party.
- In columns (b) and (c), indicate whether the expenses were assessed by a regulatory body or were otherwise incurred by the utility.
- Show in column (k) any expenses incurred in prior years which are being amortized. List in column (a) the period of amortization.
- The totals of columns (e), (l), (k), and (l) must agree with the totals shown at the bottom of page 22 for Account 186 - Misc. Deferred Debits.
- List in column (f), (g), and (h) expenses incurred during year which were charged currently to income, plant or other accounts.
- Minor items (less than \$25,000) may be grouped.

Line No.	(Furnish name of regulatory commission and the docket or case number, and a description of the case.) (a)	Assessed by Regulatory Commission (b)	Expenses of Utility (c)	Total Expenses to Date (d)	In Account 186 at Beginning of Year (e)	Expenses Incurred During Year				Amortized During Year		
						Charged Currently To			Deferred to Account 186 (i)	Contra Account (j)	Amount (k)	Deferred In Account 186 at End of Year (l)
						Department (f)	Account No. (g)	Amount (h)				
1	N.H. Public Utility Commission (NHPUC) public utility and gas pipeline safety assessments. NHPUC Docket 11-040 Order No. 25,370.		0	346,670	-	Regulatory Expense	69-5610-9280	623,767	-	1240-1650	0	0
2	2016-2017 (2017 Portion)	346,670		346,670								
3	2017-2018 (2017 Portion)	276,647		276,647								
4												
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40	Total	623,317	0	623,317	0		0	623,767	0	0	0	0

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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CHARGES FOR OUTSIDE PROFESSIONAL AND OTHER CONSULTATIVE SERVICES

1. Report the information specified below for all charges made during the year included in any account (including plant accounts) for outside consultative and other professional services. These services include rate, management, construction, engineering, research, financial, legal, valuation, accounting, purchasing, advertising, labor relations and public relations, rendered for the respondent under written or oral arrangement, for which aggregate payments were made during the year to any corporation, partnership, organization of any kind, or individual (other than for

services as an employee or for payments made for medical and related services) amounting to more than \$50,000, including payments for legislative services, except those which should be reported in Account 426.4, Expenditures for Certain Civic, Political and Related Activities.

- (a) Name of person or organization rendering service.
- (b) Total charges for the year.

2. Designate associated companies with an asterisk in column (b).

Line No.	Description (a)	Associated Company * (b)	Amount Paid (c)	Amount Distributed to		
				Fixed Plant (d)	Operations (e)	Other Accounts (f)
1	LIBERTY UTILITIES CANADA CORP	*	1,211,129.54			1,211,129.54
2	ALGONQUIN POWER & UTILITIES CORP	*	959,735.61			959,735.61
3	SCOTTMADDEN, INC.		448,222.44			448,222.44
4	LIBERTY UTILITIES SERVICE CORP.	*	142,202.42			142,202.42
5	BALANCE PROFESSIONAL		80,897.52			80,897.52
6	STERI CLEAN LLC		68,569.99			68,569.99
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40			2,910,758			2,910,758

Name of Respondent	This Report Is:	Date of Report (Mo, Da, Yr)	Year of Report
Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	(1) Original (2) Revised X	July 11, 2018	December 31st, 2017
GAS ACCOUNTS - NATURAL GAS			
<p>1. The purpose of this schedule is to account for the quantity of natural gas received and delivered by the respondent.</p> <p>2. Natural gas means either natural gas unmixed or any mixture of natural and manufactured gas.</p> <p>3. Enter in column (c) the Dth as reported in the schedules indicated for the items of receipts and deliveries.</p> <p>4. Indicate in a footnote the quantities of bundled sales and transportation gas and specify the line on which such quantities are listed.</p> <p>5. If the respondent operates two or more systems which are not interconnected, submit separate pages for this purpose. Use copies of this page as necessary.</p> <p>6. Also indicate by footnote the quantities of gas not subject to Commission regulation which did not incur FERC regulatory costs by showing (1) the local distribution volumes another jurisdictional pipeline delivered to the local distribution company portion of the reporting pipeline (2) the quantities that the reporting pipeline transported or sold through its local distribution facilities or intrastate facilities and which the reporting pipeline received received through gathering facilities or intrastate facilities, but not through any of the inter-</p>		<p>state of the reporting pipeline, and (3) the gathering line quantities that were not destined for interstate market or that were not transported through any interstate portion of the reporting pipeline.</p> <p>7. Also indicate in a footnote (1) the system supply quantities of gas that are stored by the reporting pipeline, during the reporting year and also reported as sales, transportation and compression volumes by the reporting pipeline during the same reporting year which the reporting pipeline intends to sell or transport in a future reporting year, and (3) contract storage quantities.</p> <p>8. Also indicate the volumes of pipeline production field sales included in both the company's total sales figures and total transportation figure.</p>	
1	Name of System		
Line No.	Item (a)	Ref Page No. (b)	Amount of Dth (c)
2	GAS RECEIVED		
3	Gas Purchases (Accounts 800-805)	49	11,306,166
4	Gas of Others Received for Gathering (Account 489.1)		
5	Gas of Others Received for Transmission (Account 489.2)	49	7,024,865
6	Gas of Others Received for Distribution (Account 489.3)		
7	Gas of Others Received for Contract Storage (Account 489.4)	49	272,120
8	Exchanged Gas Received from Others (Account 806)		
9	Gas Received as Imbalances (Account 806)		
10	Receipts of Respondent's Gas Transported by Others (Account 858)		
11	Other Gas Withdrawn from Storage (Explain)		
12	Gas Received from Shippers as Compressor Station Fuel		
13	Gas Received from Shippers as Lost and Unaccounted for		
14	Other Receipts (Specify)		
15	Total Receipts (Total of lines 3 thru 14)		18,603,151
16	GAS DELIVERED		
17	Gas Sales (Accounts 480-484)	49	9,320,743
18	Deliveries of Gas Gathered for Others (Account 489.1)		
19	Deliveries of Gas Transported for Others (Account 489.2)	49	6,859,311
20	Deliveries of Gas Distributed for Others (Account 489.3)		
21	Deliveries of Contract Storage Gas (Account 489.4)	49	272,120
22	Exchange Gas Delivered to Others (Account 806)		
23	Exchange Gas Delivered as Imbalances (Account 806)		
24	Deliveries of Gas to Others for Transportation (Account 858)		
25	Other Gas Delivered to Storage (Explain)		
26	Gas Used for Compressor Station Fuel		
27	Other Deliveries (Specify)		
28	Total Deliveries (Total of lines 17 thru 27)		16,452,174
29	GAS UNACCOUNTED FOR		
30	Production System Losses		
31	Gathering System Losses		
32	Transmission System Losses		
33	Distribution System Losses	49	356,281
34	Storage System Losses		
35	Other Losses (Specify)		
36	Total Unaccounted For (Total of Lines 30 thru 35)		356,281
37	Total Deliveries & Unaccounted For (Total of lines 28 and 36)		16,808,455

Name of Respondent	This Report Is:	Date of Report (Mo, Da, Yr)	Year of Report
Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	(1) Original (2) Revised X	July 11, 2018	December 31st, 2017
Information Required Pursuant to Puc 510.06. Political Activities, Institutional Advertising, Promotional Advertising and Promotional Allowances			
AMERICAN LEGION POST 27	500.00		
AMERICAN RED CROSS NEW HAMPSHIRE	1,750.00		
BELKNAP HOUSE BALL	500.00		
BENCHMARK GRAPHICS	4,798.23		
BETTY LASKY FOR STATE SENATOR	100.00		
BOBBY STEPHEN'S FUND FOR EDUCATION	490.00		
BOYS & GIRLS CLUB OF GREATER DERRY, INC.	400.00		
BUSINESS & INDUSTRY ASSOCIATION	4,792.20		
CHAD CHILDREN'S HOSPITAL AT DARTMOUTH-HITCHCOCK	5,000.00		
COMMITTEE TO ELECT LOU D'ALLESANDRO	100.00		
COMMUNITY HEALTH INSTITUTE/JSI	210.00		
DAN FELTES FOR STATE SENATE	500.00		
DARTMOUTH-HITCHCOCK HEALTH	3,500.00		
DAVID BOUTIN FOR STATE SENATE	250.00		
DAVID WATTERS FOR STATE SENATE	100.00		
DERRY VILLAGE ROTARY CLUB	200.00		
FRIENDS OF ANDY SANBORN	125.00		
FRIENDS OF BOB GUIDA	100.00		
FRIENDS OF CHRIS SUNUNU	1,050.00		
FRIENDS OF DAN INNIS	100.00		
FRIENDS OF GARY DANIELS	100.00		
FRIENDS OF JEB BRADLEY FOR STATE SENATE	175.00		
FRIENDS OF KEVIN CAVANAUGH	250.00		
FRIENDS OF REGINA BIRSELL	337.50		
FRIENDS OF SHARON CARSON	100.00		
GIFT OF ADOPTION FUND, INC	175.00		
GLOBAL EQUIPMENT	3,979.00		
GRANITE UNITED WAY	7,000.00		
GREATER CONCORD CHAMBER OF COMMERCE	852.00		
GREATER DERRY LONDONDERRY CHAMBER OF COMMERC	850.00		
GREATER HAMPSTEAD CIVIC CLUB, INC.	700.00		
GREATER MANCHESTER CHAMBER OF COMMERCE	2,655.00		
GREATER MANCHESTER HABITAT FOR HUMANITY	1,500.00		
GREATER NASHUA CHAMBER OF COMMERCE	550.00		
HANNAFORD & DUMAS CORP	192.33		
INTOWN CONCORD	1,000.00		
JAY KAHN FOR STATE SENATE	100.00		
KEENE PUBLISHING CORP	944.03		
LACONIA SALVATION ARMY	400.00		
MORSE FOR STATE SENATE	875.00		
NASHUA CHILDREN'S HOME	400.00		
NEW HAMPSHIRE BUSINESS REVIEW	2,245.00		
NEW HAMPSHIRE BUSINESSES FOR SOCIAL RESPONSIBILIT	1,400.00		
NEW HAMPSHIRE LEGISLATIVE GOLF COMMITTEE	350.00		
NORTHEAST GAS ASSOCIATION	9,543.00		
NORTHERN LIGHTS PARENTS ASSOCIATION	100.00		
PELHAM GOOD NEIGHBOR FUND	210.00		
PROFESSIONAL FIREFIGHTERS OF KEENE	200.00		
PURCHASE POWER (PITNEY BOWES)	6,000.00		
SCOTT MCGILVRAY STATE SENATE	100.00		
SOFTCHOICE CORPORATION	3,030.84		
SOPHWELL INC	1,930.33		
SOUCY FOR SENATE	100.00		
SOUTHWESTERN COMMUNITY SERVICES	1,050.00		
STATE OF NEW HAMPSHIRE DEPARTMENT OF STATE	35.00		
THE BRAD DELP FOUNDATION	300.00		
THE COMPASSIONATE FRIENDS	350.00		
THE FRIENDS OF BENSON PARK INC	250.00		
THE FRIENDS PROGRAM	1,050.00		
THE NEW ENGLAND COUNCIL	7,000.00		
THE PARADIGM ALLIANCE	14,301.18		
THE SUNUNU INAUGURAL CELEBRATION, INC.	3,500.00		
UNION LEADER CORPORATION	2,245.09		
UNITED PARCEL SERVICE	189.75		
UNITED STEELWORKERS LOCAL 12012	3,000.00		
UNITED WAY OF GREATER NASHUA	1,500.00		
WOODBURN FOR SENATE	245.00		
EMPLOYEE REIMBURSEMENT	13,941.23		
	121,866.71		

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
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Summary of Affiliated Transactions
Report of Affiliate Transactions - Past Year

Provide affiliate name and description of the service(s) provided.

Due to LU	Interest on Notes Payable	4,076,508
	Intercompany Payable	53,312,601
Due to Liberty Energy New Hampshire	AP transactions through Service Compan	(8,577,700)
Due to Cogsdale	AR Transactions between Energy North and Granite State Electric and Keene	1,471,660
Due to Liberty Utilities America Co.	Tax entry related	78,316
I/C Interest Payable - LU CO.	Interest payable	1,753,197

52,114,581

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017
LIQUEFIED PETROLEUM GAS OPERATIONS				
<p>1. Report the information called for below concerning plants which produce gas from liquefied gas (LPG). which is only an adjunct of a manufactured gas plant, may include or exclude (as appropriate) the plant cost and expenses of any plant used jointly with the manufactured plant facilities on the basis of predominant use. Indicate in a footnote how the plant cost and expense for the liquefied petroleum plant described above are reported.</p> <p>2. For columns (b) and (c), the plant cost and operation and maintenance expenses of any liquefied petroleum gas installation</p>				
Line No.	Identification of Plant and Year Installed (a)	Cost of Plant (Land, struc, equip.) (b)	Operations & Maintenance, Rents Expense (c)	LPG Facility Number of Days of Peakshaving Operations (d)
1	Nashua Propane Station Year Installed: 1947			
2	38 Bridge Street	\$ 3,292,067	\$ 49,229	11
3	Nashua, NH 03060			
4				
5	Manchester Propane Station Year Installed: 1948			
6	130 Elm Street	\$ 1,987,619	\$ 46,328	9
7	Manchester, NH 03101			
8				
9	Tilton Propane Station Year Installed: 1972			
10	30 Tilton Road	\$ 226,888	\$ 15,128	0
11	Tilton, NH 03276			
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40	Total	5,506,574	110,685	20

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017	
LIQUEFIED PETROLEUM GAS OPERATIONS (continued)				
<p>3. (continued) Designate any plant held under a title other than full ownership and in a footnote state name of owner or co-owner, nature of respondent's title and percent ownership if jointly owned.</p> <p>4. For column (g) report the Mcf that is mixed with natural gas or which is substituted for deliveries normally made from natural gas. Natural gas means either natural gas unmixed or any mixture of natural and manufactured gas or mixture of natural gas and gasified LPG.</p>		<p>5. If any plant was not operated during the past year, give details in a footnote, and state whether the book cost of plant or any portion thereof, has been retired in the books of account or what disposition of the plant and its book cost is contemplated.</p> <p>6. Report pressure base of gas at 14.73 psia at 60 F. Indicate the Btu content in a footnote.</p>		
Gallons of LPG Used (e)	Sendout Volumes		LPG Storage Capacity Gallons (h)	Maximum Daily Delivery Capacity of Facility, MMBtu at 14.73 psia at 60 (i)
	Peak Day Propane MMBTU (f)	Annual Propane MMBtu MMBTU (g)		
Nashua 154,038	5,302	13,585	304,200	12,000
Manchester 150,005	4,111	16,306	600,000	21,600
Tilton -	0	-	60,000	2,400
304,043	9,413	29,891	964,200	36,000

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised X	Date of Report (Mo, Da, Yr) July 11, 2018	Year of Report December 31st, 2017		
Liquefied Natural Gas (LNG) PEAKING FACILITIES						
<p>1. Report below auxiliary facilities of the respondent for meeting seasonal peak demands on the respondent's system, such as underground storage projects, liquefied petroleum gas installations, gas liquefaction plant, oil gas sets, etc.</p> <p>2. For column (c), for underground storage projects, report the delivery capacity on February 1 of the heating season overlapping the year-end for which this report is submitted. For other facilities, report the maximum</p>				<p>daily delivery capacities.</p> <p>3. For column (d), include or exclude (as appropriate) the cost of any plant used jointly with another facility on the basis of predominant use, unless the auxiliary peaking facility is a separate plant as contemplated by general instruction 12 of the Uniform System of Accounts.</p>		
Line No.	Location of Facility (a)	LNG Facility Number of Days of Peakshaving Operation (b)	Maximum Daily Delivery Capacity of Facility, MMBtu at 14.73 psia at 60 (c)	Cost of Facility (in dollars) (d)	Sendout Volumes MMBtu Units	
					Peak Day (e)	Annual (f)
1 2 3 4	Concord LNG Station 20 Broken Bridge Road Concord, NH 03301	7	6,000	\$ 3,640,694	1,938	10,754
5 6 7 8	Manchester LNG Station 130 Elm Street Manchester, NH 03101	23	6,000	\$ 7,906,154	3,496	21,815
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39	Tilton LNG Station 30 Tilton Road Tilton, NH 03276	54	6,000	\$ 3,439,513	4,703	120,980
40	Total	84	18,000	14,986,360	10,137	153,549

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	This Report Is: (1) Original (2) Revised X	Date of Report July 11, 2018	Year of Report December 31st, 2017
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GAS PURCHASES (Accounts 800, 800.1, 801, 802, 803, 804, 804.1, 805, 805.1)

- | | |
|---|---|
| <p>1. Provide totals for the following accounts:
 800 Natural Gas Well Head Purchases
 800.1 Natural Gas Well Head Purchases,
 Intracompany Transfers
 801 Natural Gas Field Line Purchases
 802 Natural Gas Gasoline Plant Outlet Purchases
 803 Natural Gas Transmission Line Purchases
 804 Natural Gas City Gate Purchases
 804.1 Liquefied Natural Gas Purchases
 805 Other Gas Purchases
 805.1 Purchase Gas Cost Adjustments</p> | <p>The totals shown in columns (b) and (c) should agree with the books of account. Reconcile any differences in a footnote.
 2. State in column (b) the volume of purchased gas as finally measured for the purpose of determining the amount payable for the gas. Include current year receipts of makeup gas that was paid for in previous years.
 3. State in column (c) the dollar amount (omit cents) paid and previously paid for the volume of gas shown in column (b).
 4. State in column (d) the average cost per Dth to the nearest hundredth of a cent. (Average means column (c) divided by column (b) multiplied by 100.)</p> |
|---|---|

Line No.	Account Title (a)	Gas Purchased - Dth (14.73 psia at 60F) (b)	Cost of Gas (in dollars) (c)	Average Cost per Dth (To nearest .01 of a cent) (d)
1	800 - Natural Gas Well Head Purchases			
2	800.1 - Natural Gas Well Head Purchases, Intracompany Transfers			
3	801 - Natural Gas Field Line Purchases			
4	802 - Natural Gas Gasoline Plant Outlet Purchases			
5	803 - Natural Gas Transmission Line Purchases			
6	804 - Natural Gas City Gate Purchases *	16,853,936	\$ 111,162,424	\$ 6.60
7	804.1 - Liquefied Natural Gas Purchases			
8	805 - Other Gas Purchases			
9	805.1 - Purchase Gas Cost Adjustments			
10	Total (Lines 1 through 9)	16,853,936	\$ 111,162,424	\$ 6.60

Notes to Gas Purchases

* - This amount does not include injections or withdrawals to storage account 808.1 and 808.2

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised X			Date of Report July 11, 2018		Year of Report December 31st, 2017		
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	+ Dth
1	January	-	1,795,118	(33,179)	316,417	845,217			2,956,752
2	February	-	1,452,109	(71,667)	318,150	792,942			2,563,201
3	March	-	1,505,297	464	574,202	850,360			2,929,859
4	April	-	795,520	(225,418)	87,960	552,452			1,435,932
5	May	-	568,090	(200,708)	200,708	492,219			1,261,017
6	June	-	340,096	(234,157)	2,427	364,017			706,540
7	July	-	289,084	(233,887)	-	328,662			617,746
8	August	-	297,512	(217,931)	-	368,030			665,542
9	September	-	320,063	(210,747)	708	368,030			688,801
10	October	-	496,071	(219,476)	5,057	401,792			902,920
11	November	-	1,343,667	(42,433)	93,858	712,898			2,150,423
12	December	-	2,103,539	(8,711)	370,483	948,246			3,422,268
13									
14									
15	Total Natural Gas	-	11,306,166.4	(1,697,850.0)	1,969,970.0	7,024,865.0	-	-	20,301,001
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	January	13,876	13,674	11,128	644	2,126	97,540		14,520
2	February	8,519	9,162	11,771	664	56	96,932		9,183
3	March	28,919	28,825	11,677	10,912	6	86,026		39,831
4	April	1,031	(8)	10,638	113.0	(552)	85,361		1,144
5	May	1,958	16	8,696	-	328	85,689		1,958.0
6	June	1,527	3,677	10,846	-	(78)	85,611		1,527
7	July	1,676	42	9,212	-	567	86,178		1,676
8	August	2,276	4,474	11,410	-	114	86,292		2,276
9	September	1,044	65	10,430	-	3,417	89,709		1,044
10	October	3,453	5,310	12,287	-	5,820	95,530		3,453
11	November	7,092	5,421	10,616	-	587	96,117		7,092
12	December	55,987	53,942	8,571	15,427	9,019	89,709		71,414
13									
14									
15	Total On-Site Peakshaving	127,358	124,600	127,282	27,760	21,410	1,080,694	-	155,118
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	January	2,971,272	1,599,259	819,151	3,573	1,515,218	58,719	2,480,701	490,572
2	February	2,572,384	1,481,810	847,329	4,177	1,307,473	49,588	2,382,903	189,481
3	March	2,969,690	1,454,076	769,084	5,523	1,526,769	57,988	2,286,672	683,019
4	April	1,437,076	1,299,741	785,076	3,161	496,101	28,141	2,116,119	(679,043)
5	May	1,262,975	572,207	518,509	1,476	428,542	(21,579)	1,070,613	192,362
6	June	708,067	374,980	465,073	887	239,003	14,125	855,066	(146,999)
7	July	619,422	203,818	343,932	579	224,813	12,577	560,907	58,516
8	August	667,818	206,604	335,124	423	232,229	13,682	555,833	111,985
9	September	689,845	202,713	374,690	502	260,552	13,889	591,795	98,050
10	October	906,373	226,087	370,103	786	423,367	18,947	615,922	290,451
11	November	2,157,515	469,929	483,682	2,179	1,234,401	42,332	998,122	1,159,393
12	December	3,493,682	1,229,519	747,559	4,412	1,786,121	67,871	2,049,360	1,444,322
13									
14									
15	Total Annual Volume	20,456,119	9,320,743	6,859,311	27,676	9,674,589	356,281	16,564,011	3,892,109
16									
17	Percent of Sendout	123.5%	56.3%	41.4%	0.2%	58.4%	2.2%	100.0%	23.5%
18									
19									
20									
21									

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised X		Date of Report July 11, 2018		Year of Report December 31st, 2017	
GAS OPERATING REVENUES (Account 400) Supplement to Page 28							
Line No.	Account (a)			Amounts from Revenue for Current Year (b)	Amounts from Revenue for Previous Year (c)	Increase or (decrease) (d)	
	FERC						
1.00	4295-4801	Residential Sales - Fixed Portion	PG 28	22,335,331	19,834,582	2,500,749	
2	4295-4802	Residential Sales - Variable Portion	PG 28	19,336,635	17,758,489	1,578,146	
3	4295-4803	Residential Sales - Energy Cost	PG 28	33,885,520	30,353,122	3,532,398	
4	4295-4813	Commercial Sales - Fixed Portion	PG 28	7,159,734	7,212,664	(52,930)	
5	4295-4814	Commercial Sales - Variable Portion	PG 28	10,788,946	10,673,537	115,409	
6	4295-4815	Commercial Sales - Energy Cost	PG 28	20,603,250	14,539,353	6,063,897	
7	4295-4816	Industrial Sales - Fixed Portion	PG 28	7,951	0	7,951	
8	4295-4817	Industrial Sales - Variable Portion	PG 28	211	0	211	
9	4295-4818	Industrial Sales - Energy Cost	PG 28	1,751	0	1,751	
10	4460-4897	Metered Sales to Transportation - Fixed	PG 28	3,708,388	3,101,845	606,543	
11	4460-4898	Metered Sales to Transportation - Variable	PG 28	12,410,629	10,408,950	2,001,679	
12	4460-4899	Metered Sales to Transportation - Pass Through Gas	PG 28	54,650	(16,540)	71,190	
13	1163-1422	Deferred Working Capital - Winter	PG 9	48,597	47,640	958	
14	1163-1424	Deferred Working Capital - Summer	PG 9	15,811	18,991	(3,180)	
15	1920-1743	Deferred Bad Debt - Winter	PG 9	1,850,885	2,389,820	(538,935)	
16	1163-1754	Deferred Bad Debt - Summer	PG 9	259,772	209,912	49,860	
17	1163-1755	Deferred Reserves EE	PG 9	5,351,524	5,427,457	(75,933)	
18	1920-1863	R/A Environmental Materials	PG 9	2,525,473	2,203,730	321,743	
19	1930-1745	Rate Case Recovery	PG 9	(21,815)	15,397,321	(15,419,137)	
20	1169-1756	Deferred RLIAP	PG 9	1,148,640	2,036,307	(887,667)	
21	1163-1756	Lost Revenue Adjustment Mechanism	PG 21	182,965	1,038,581	(855,616)	
22	1168-1420	Phased in Revenue Short term	PG 21	21,431	1,038,581	(1,017,150)	
23	1930-1420	Phased in Revenue Long Term	PG 21	0	444,632	(444,632)	
24							
25							
26	Page number show where full amounts are reflected on this report.						
27							
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35							
36							
TOTAL Operation (Total of lines 5 thru 14)				141,676,277	144,118,972	(2,442,695)	
						NHPUC Page 50	

Name of Respondent Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities		This Report Is: (1) Original (2) Revised X.		Date of Report July 11, 2018	Year of Report December 31st, 2017	
GAS OPERATION AND MAINTENANCE EXPENSES SUPPLEMENTAL SCHEDULE to Page 34						
Line No.	Account (a)			Amount for Current Year (b)	Amount for Previous Year (c)	Increase or (decrease) (d)
1						
2	A. Manufactured Gas Production					
3	Manufactured Gas Production (Supplemental Statement)					
4	FERC	Department	Great Plains			
5	710	Operation Supervision & Engineering - Labour	(5010-7100)	11,849	285,347	(273,498)
6	710	Operation Supervision & Engineering	(5540-7100)	58,583	34,210	24,373
7	717	Liquefied Petroleum Gas	(5540-7170)	1,203	18,743	(17,540)
8	728	Liquefied Petroleum Gas - Labor	(5010-7280)	2,171	12,953	(10,782)
9	728	Liquefied Petroleum Gas	(5540-7280)	11,495	32,604	(21,109)
10	735	Misc Production Exp - Labour	(5010-7350)	15,021	185,919	(170,898)
11	735	Misc Production Exp	(5444-7350)	280,278	193,426	86,853
12	742	Maint of Production Eq	(5210-7420)	134,508	72,133	62,376
13	717	Liquefied Petroleum Gas	(5010-7170)	37,976	233,653	(195,678)
14	710	Operation Supervision & Engineering - Lat	9853 (5010-7100)	782,705	0	782,705
15	717	Liquefied Petroleum Gas	9853 (5010-7170)	0	0	0
16	728	Liquefied Petroleum Gas - Labor	9853 (5010-7280)	0	0	0
17	735	Misc Production Exp - Labour	9853 (5010-7350)	4,793	0	4,793
18	932	Maintenance of general plant-Gas	(7100-9320)	5,201.05	0.00	5,201.05
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47	TOTAL Operation (Total of lines 5 thru 14)			1,345,784	1,068,988	276,796
						NHPUC Page 51



Stephen R. Hall
Director, Rates & Regulatory Affairs
O: 603-216-3523
E: Stephen.Hall@libertyutilities.com

January 19, 2018

Via ERF and US Mail

Debra A. Howland
Executive Director
New Hampshire Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, NH 03301-2429

**Re: Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities
Annual Residential Customer Satisfaction Survey - 2017**

Dear Ms. Howland:

On behalf of Liberty Utilities, this annual report is provided in accordance with Liberty's commitment to continue to provide the results of EnergyNorth's customer satisfaction surveys to the Commission. Please note this report has been filed via the Commission's Electronic Report Filing system.

As shown in the report, EnergyNorth's customer satisfaction, excluding price, was 82% in 2017.

Thank you for your attention to this matter. Please do not hesitate to contact me should you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Stephen R. Hall".

Stephen R. Hall

Enclosure

cc: Amanda Noonan

5022



CUSTOMER SATISFACTION TRACKING NEW HAMPSHIRE GAS

DECEMBER 2017





CONTENTS

- 1** Objectives & Methodology
- 2** Key Findings
- 3** Detailed Findings
- 4** Appendix



OBJECTIVES & METHODOLOGY

Objectives:

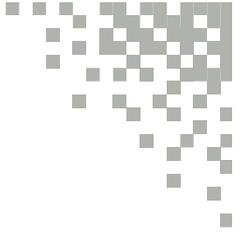
- Analyze current customer satisfaction levels with Liberty Utilities among New Hampshire (NH) Gas Customers.
- Compare current customer satisfaction levels with previous years to determine whether satisfaction significantly increased or not over time.
- Identify areas for improvement in order to increase satisfaction in the future.

Methodology:

Number of Completed Interviews:	n=1605
Phone vs. Online Completion Ratio:	33%/67%
Fieldwork Dates:	10/3/2017 – 10/26/2017
Statistical Significance Level:	95%

Sampling:

- Customers were randomly selected from a sample provided by Liberty Utilities for participation in the survey. The survey sample was representative of Liberty Utilities' New Hampshire Gas customers.
- As is the case in all survey samples, there is an element of sampling error that is known and measurable when making projections to the population of all Liberty Utilities' NH Gas Customers. Sampling error varies inversely with the size of the sample. With a sample size of n=1605 and a 95% confidence interval, the range of error for proportions observed in this survey is +/- 2.4 percentage points.

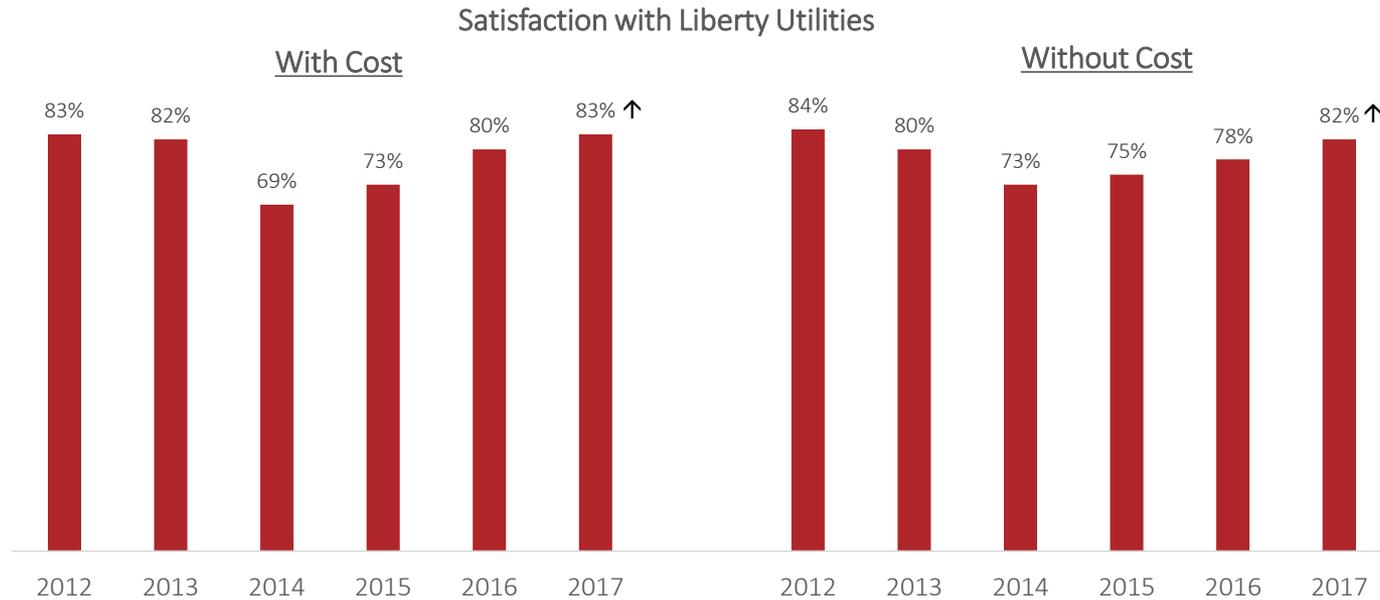


KEY FINDINGS



OVERALL SATISFACTION

Overall satisfaction increased for the third straight year, rising to 83% this year. Satisfaction without price also increased, from 78% to 82%.

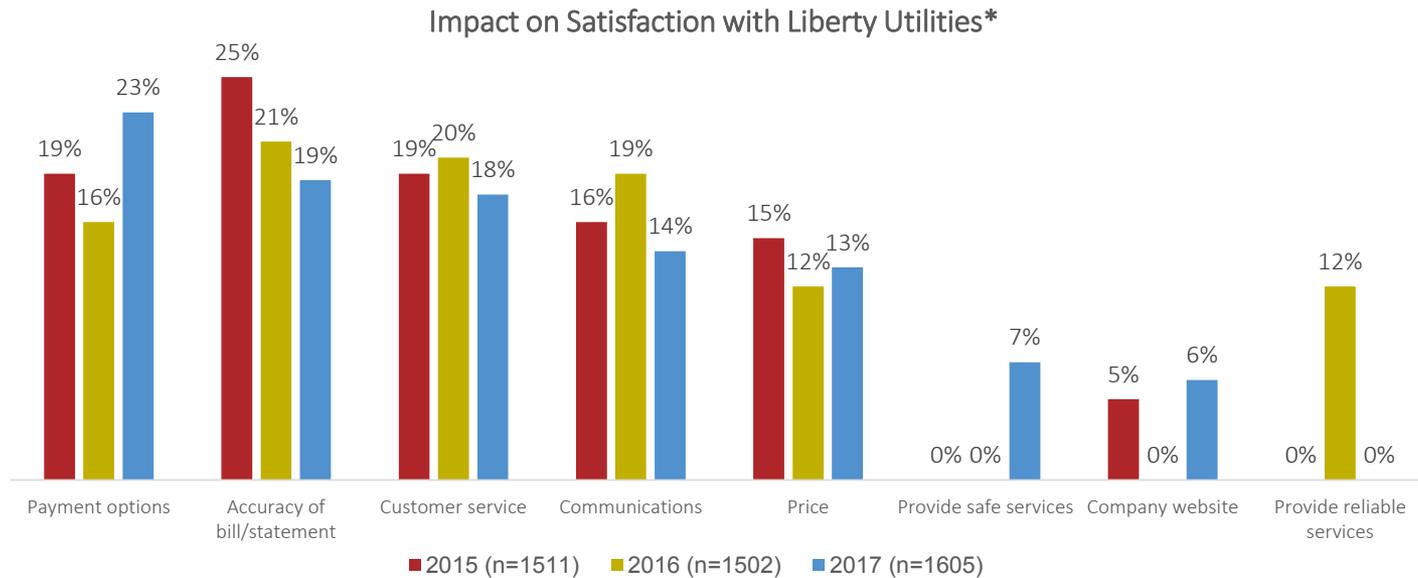


- Most of the gains this year were among less-affluent customers, those with household incomes below \$50,000. Satisfaction levels were stable among other groups.

DRIVERS OF SATISFACTION



- A regression analysis was conducted to help quantify the impact of the Key Indicators on overall satisfaction with Liberty Utilities. The results for the attributes which had a significant impact on satisfaction are shown below.
- *The results showed that payment options were most important in driving satisfaction, followed by bill accuracy and customer service.* These attributes, along with communications, were the top satisfaction drivers in 2016.



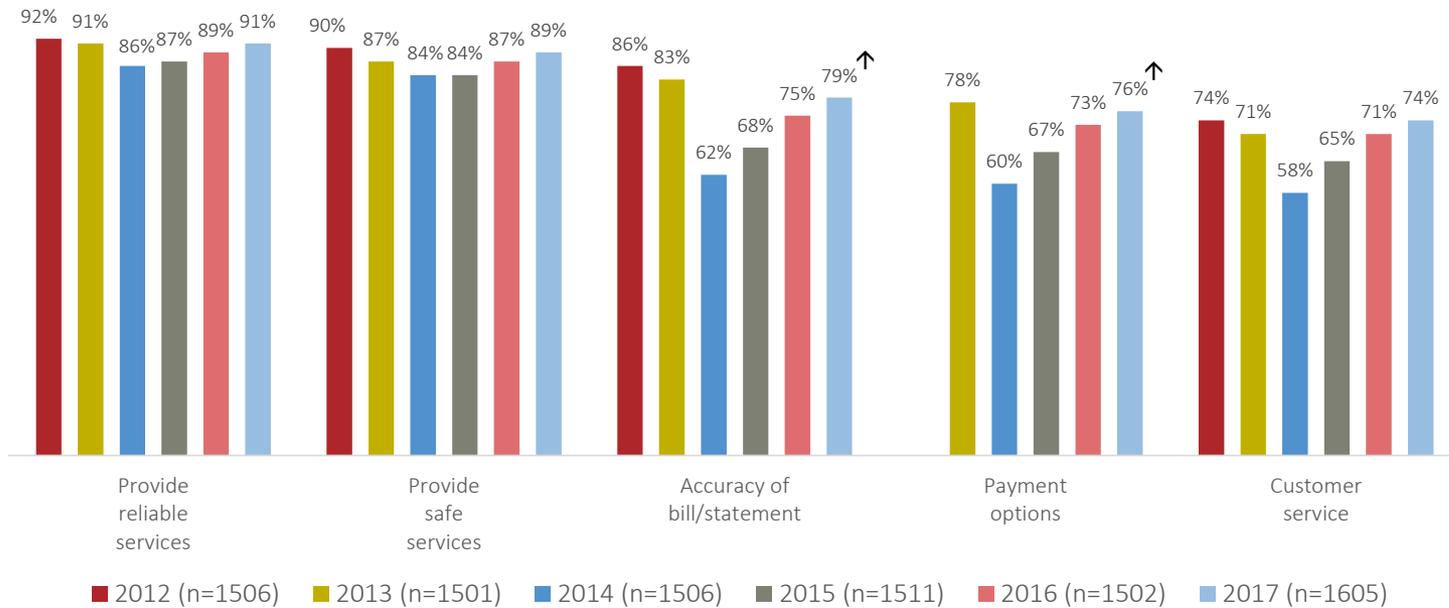
*Based on standardized regression coefficients

KEY INDICATORS – SLIDE 1



- Compared with 2016, *satisfaction was stable for most attributes, although there were increases for bill and statement accuracy and payment options*. Aside from the core utility functions (safe and reliable services), there have been remarkable increases in satisfaction since 2014.
- Across the board, satisfaction levels were higher among customers with household incomes under \$50,000, while satisfaction was stable among more-affluent customers.

Satisfaction (Very/Somewhat Satisfied)



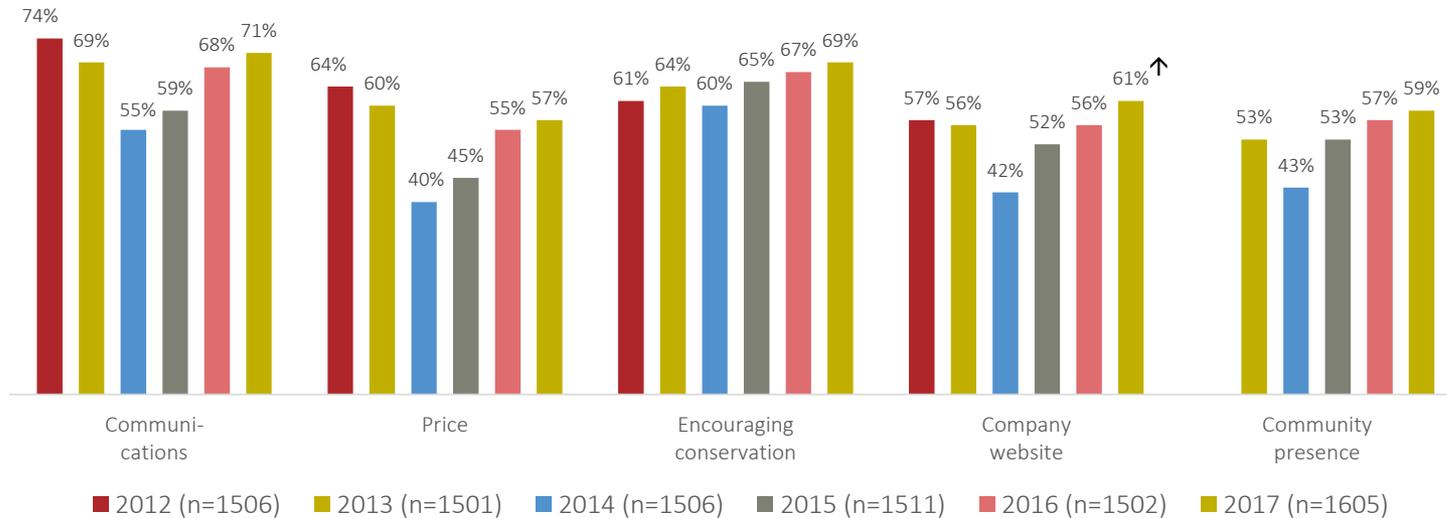
↑/↓ Indicates score is statistically significantly higher/lower than 2016



KEY INDICATORS – SLIDE 2

- While satisfaction levels were stable for most attributes, there was an increase in satisfaction for the company website.
- Aside from encouraging conservation, there have been consistent increases in satisfaction since 2014 for all the attributes on this slide.

Satisfaction (Very/Somewhat Satisfied)

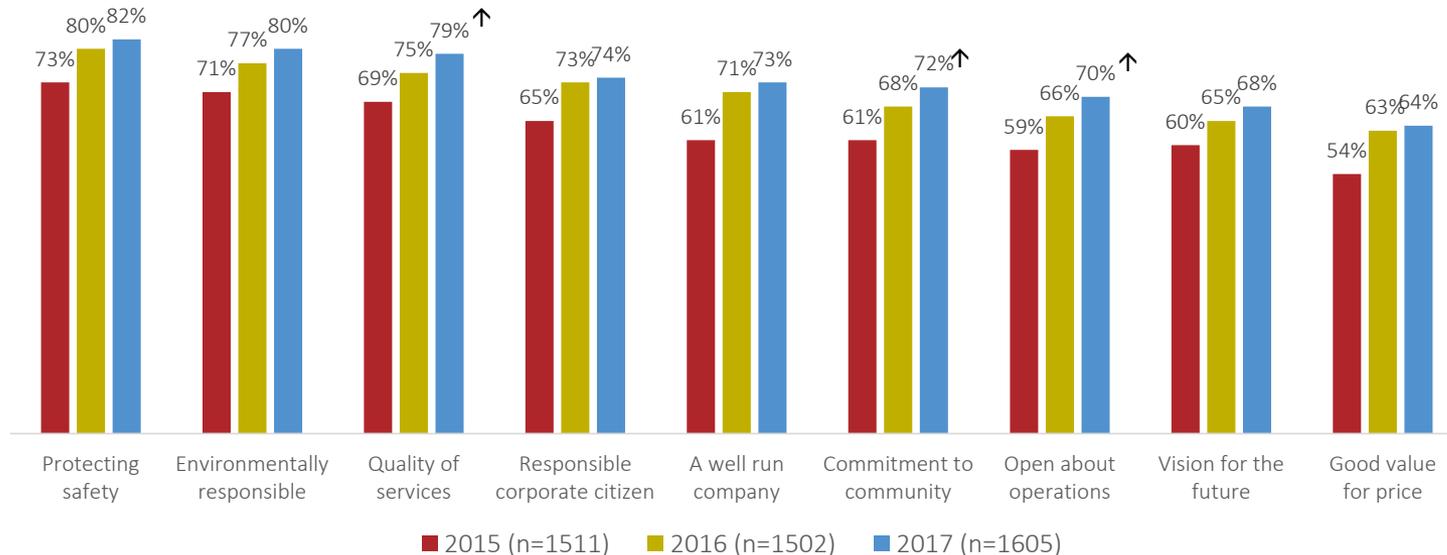




COMPANY EVALUATIONS

- After large increases last year, *satisfaction with Liberty was slightly higher this year*, with *significant increases for service quality, community commitment and openness about operations*.
- Satisfaction levels tended up be higher this year among 45-64 year old customers and those living in households with annual incomes below \$50,000.

Company Evaluation (Excellent/Good)



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DETAILED FINDINGS



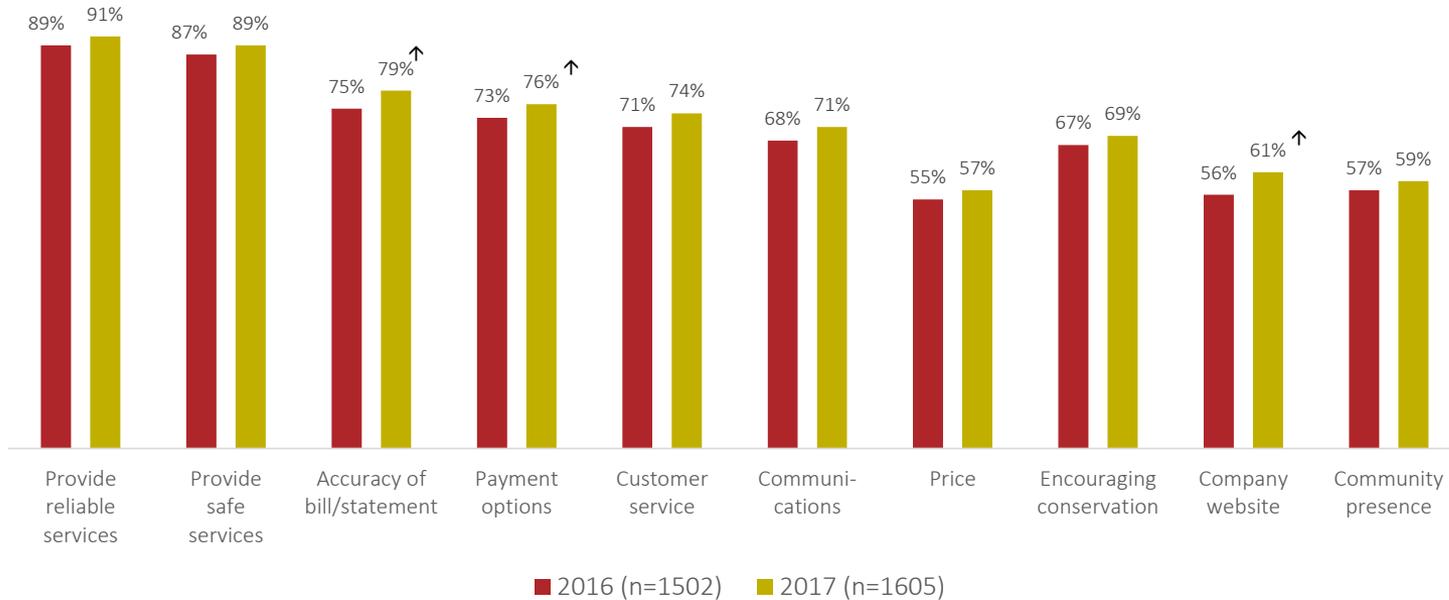
OVERALL SATISFACTION & EVALUATIONS



KEY INDICATORS

- *Compared with 2016, satisfaction increased for three of the ten metrics* – bill/statement accuracy, payment options and the website.
- Compared with last year, satisfaction levels were higher among customers with households incomes below \$50,000. For most attributes, satisfaction increased with age.

Satisfaction (Very/Somewhat Satisfied)



↑/↓
Q2

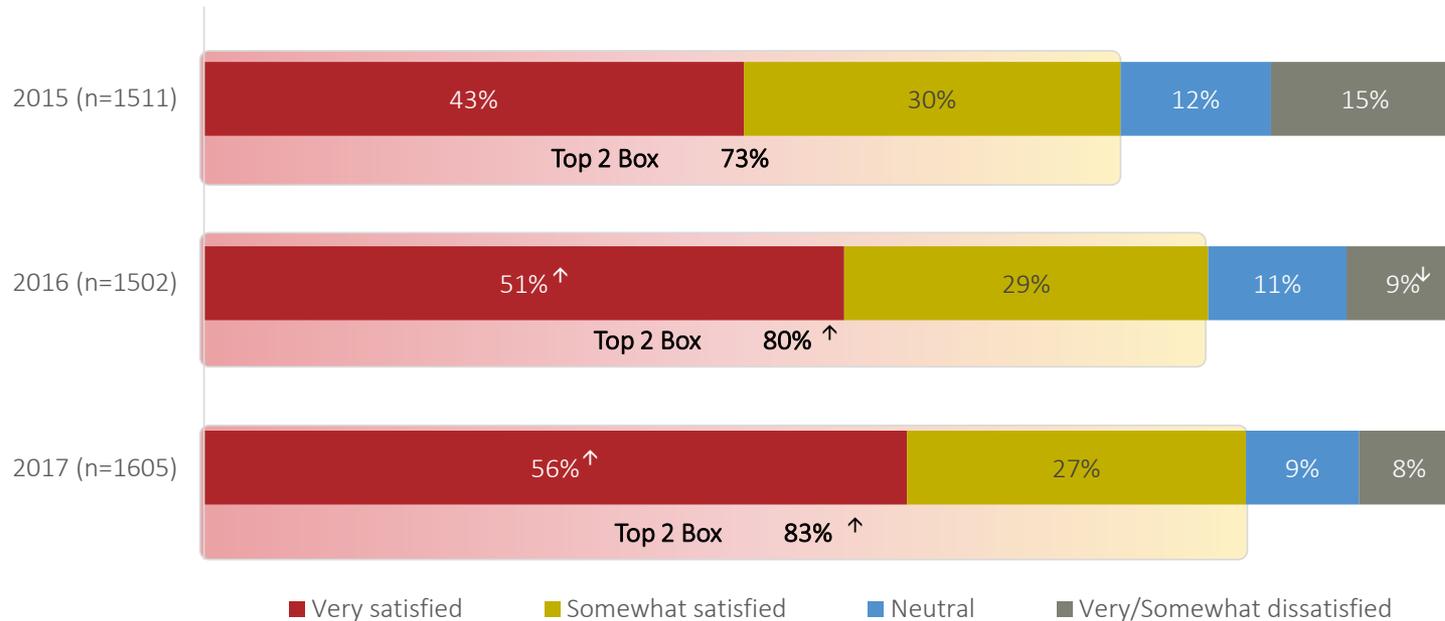
Indicates score is significantly higher/lower than 2016
Please rate Liberty Utilities in the following areas by using a 5-point scale with 5 being "Very Satisfied" and 1 being "Very Dissatisfied".



OVERALL SATISFACTION

- Overall satisfaction increased by 10 percentage points in the past two years, to 83%. The percentage who were very satisfied jumped by 13 points, while the percentage dissatisfied was cut in half.
- Satisfaction this year rises from 75% among under-45s to 90% among customers 65 and older.

Overall Satisfaction with Liberty Utilities

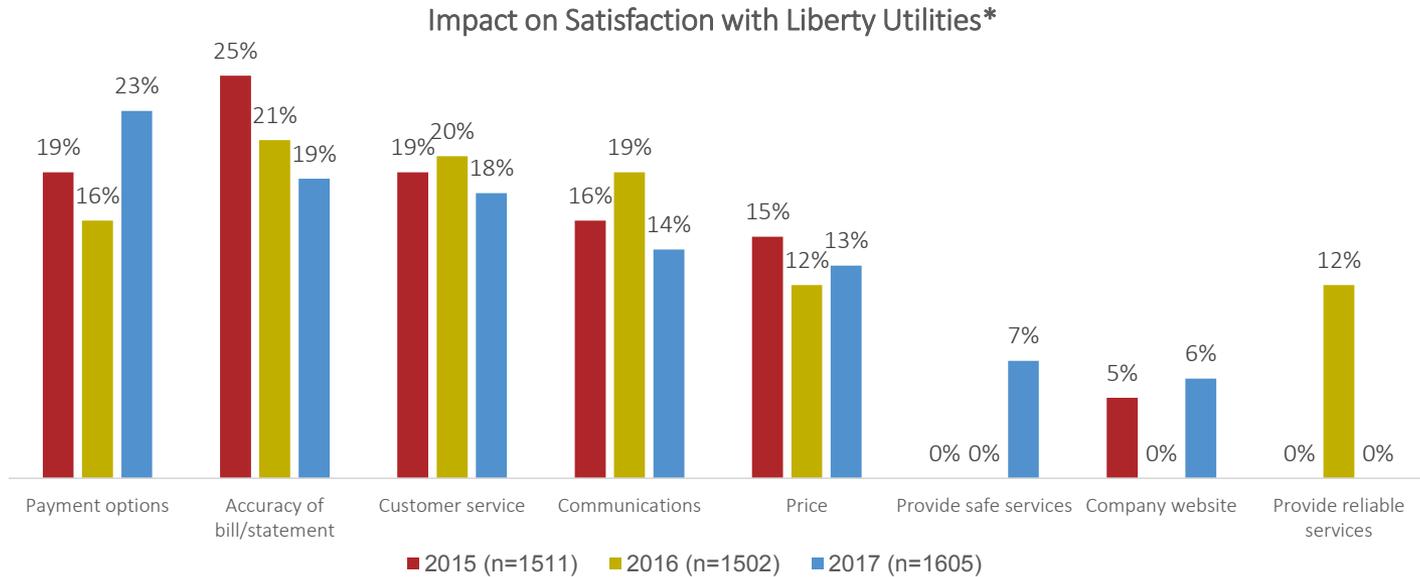


^{↑/↓} *Indicates score is significantly higher/lower than previous year*
 Q3 *Overall, how satisfied are you with Liberty Utilities?*

DRIVERS OF SATISFACTION



- A regression analysis was conducted to help quantify the impact of the Key Indicators on overall satisfaction with Liberty Utilities. The results for the attributes which had a significant impact on satisfaction are shown below.
- The results show that payment options are most important in driving satisfaction, followed by bill accuracy and customer service.



↑/↓

Indicates score is significantly higher/lower than previous year

*

Based on standardized regression coefficients

Q2

Please rate Liberty Utilities in the following areas by using a 5-point scale with 5 being "Very Satisfied" and 1 being "Very Dissatisfied".

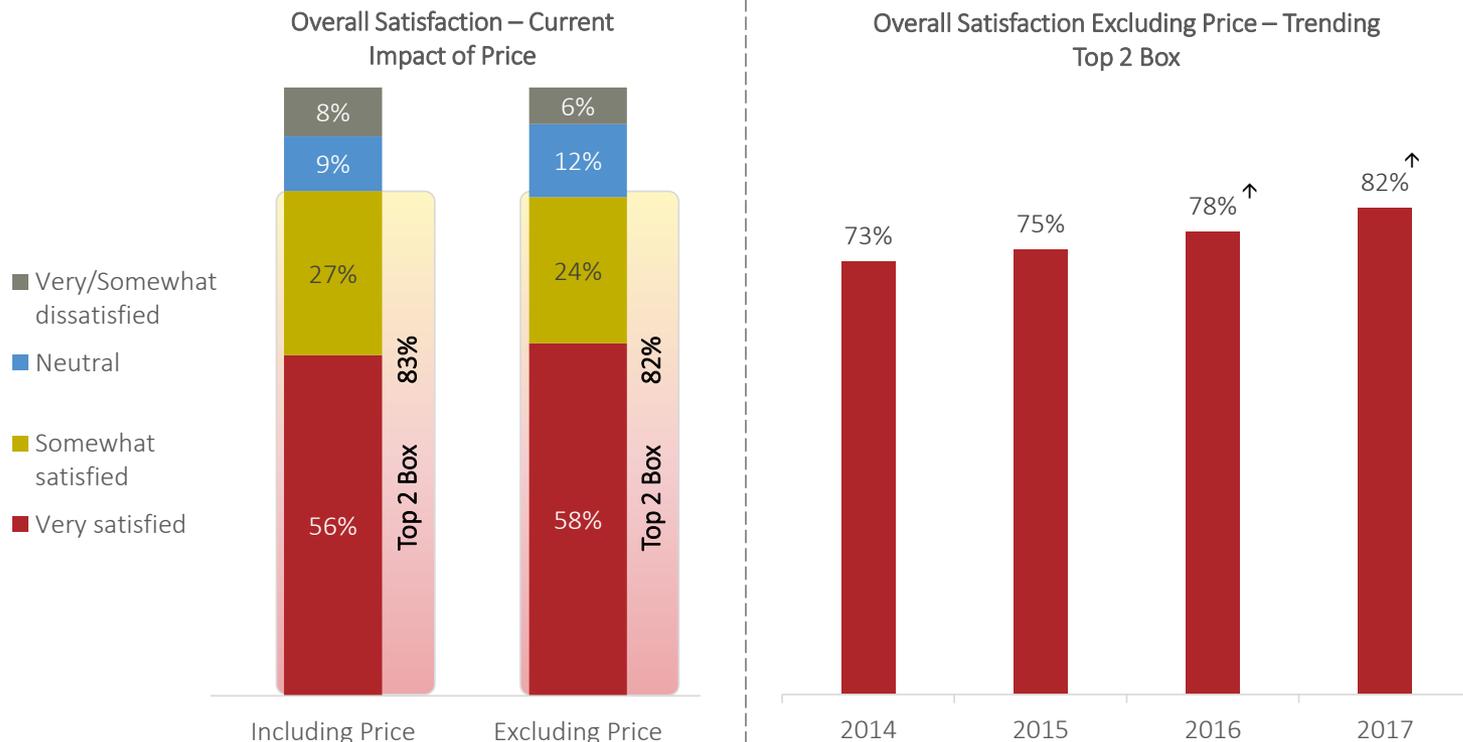
Q3

Overall, how satisfied are you with Liberty Utilities?



OVERALL SATISFACTION EXCLUDING PRICE

- Overall satisfaction with Liberty Utilities also increased when price was excluded from the evaluation**, rising from 78% to 82%. Satisfaction for the metric which includes price, was higher than last year among customers living in households with annual incomes below \$50,000. In addition to this group, satisfaction was also higher among 45-64 year old customers on the metric which excludes price.



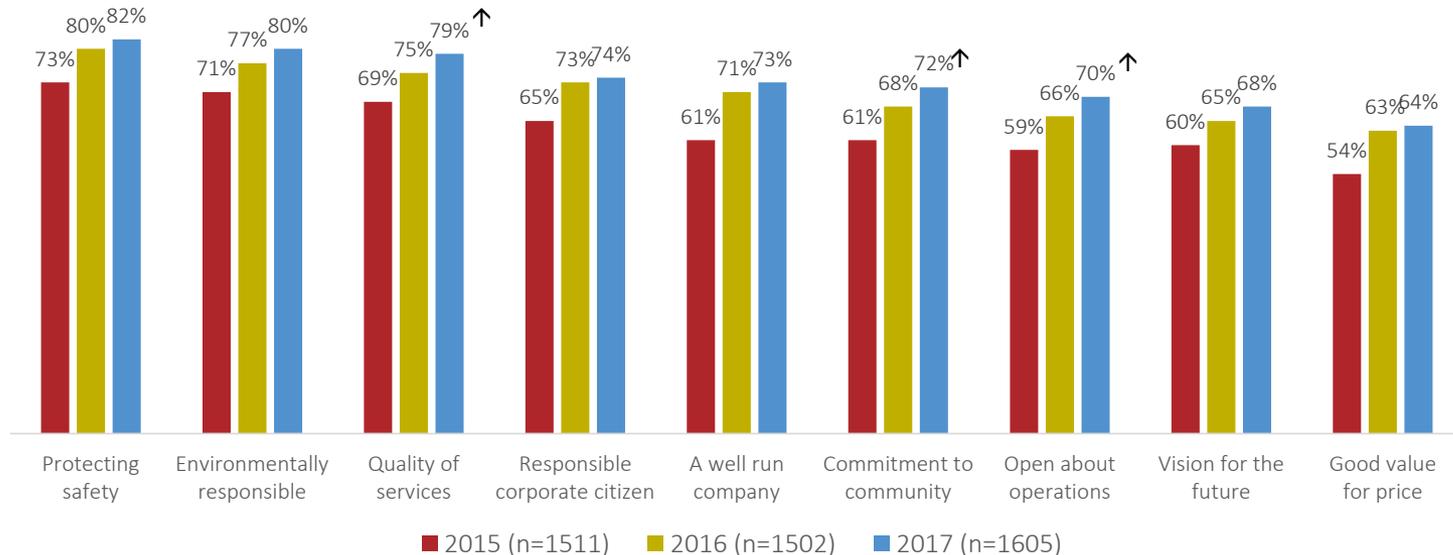
↑/↓ Indicates score is significantly higher/lower than previous year
 Q3 Overall, how satisfied are you with Liberty Utilities?
 QEAST01 Using a scale where 5 is "very satisfied" and 1 is "very dissatisfied", how satisfied are you with the services, excluding price, that you are receiving from Liberty Utilities?



COMPANY EVALUATIONS

- **Satisfaction increased this year for three of the nine company evaluations** – quality of services, community commitment and being open about operations.
- As in previous years, satisfaction levels increase with age. There was little difference in satisfaction levels by household income

Company Evaluation (Excellent/Good)



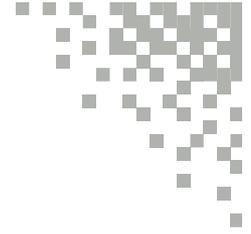
↑/↓

Note Q5

Indicates score is significantly higher/lower than 2016

Where applicable, all scores shown with N/A excluded from the base

Based on a scale from 1 to 5 where 1 is "Poor" and 5 is "Excellent", please rate how good a job Liberty Utilities does on each of the following items: (excluding Not Applicable/No Experience)



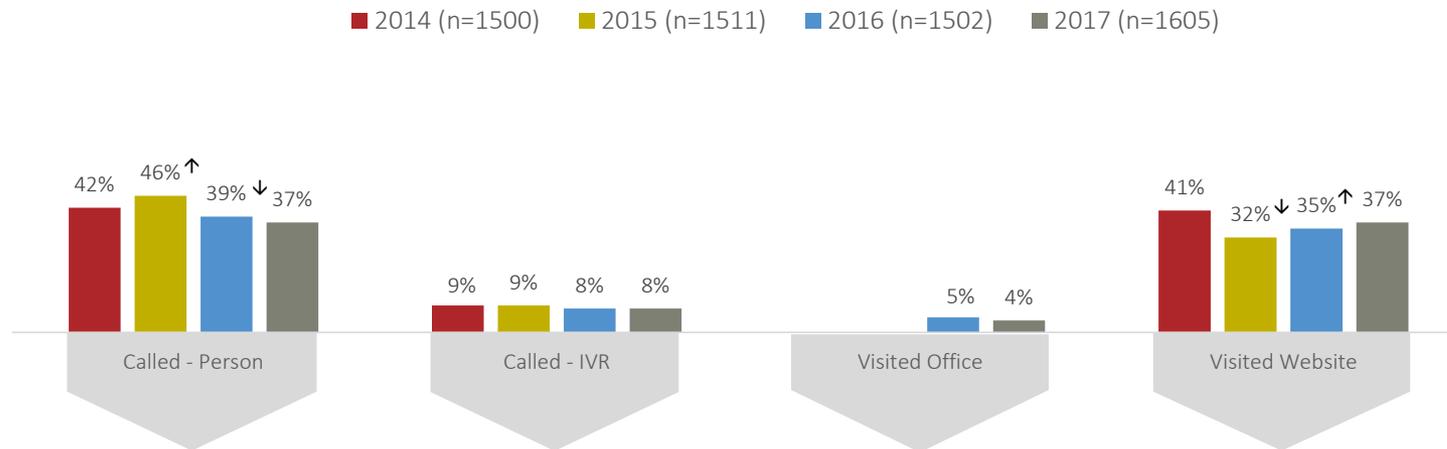
CUSTOMER SERVICE



CUSTOMER SERVICE

- As in 2015 and 2016, nearly two-thirds of customers (63%) contacted Liberty in the past year.
- Satisfaction was stable for all methods of contact, with calling and speaking with a person and visiting the website equally likely to be used for customer service.
- More than three-quarters (78%) of customers younger than 45 contacted customer service, while only 48% of customers 65 and older did.

Contacted Customer Service By...



↑/↓

Indicates score is significantly higher/lower than previous year

Q6z

Which of the following have you done in the past year? Please select all that apply.

Q6x

When you called Liberty Utilities in the past year, did you...?

Q6a

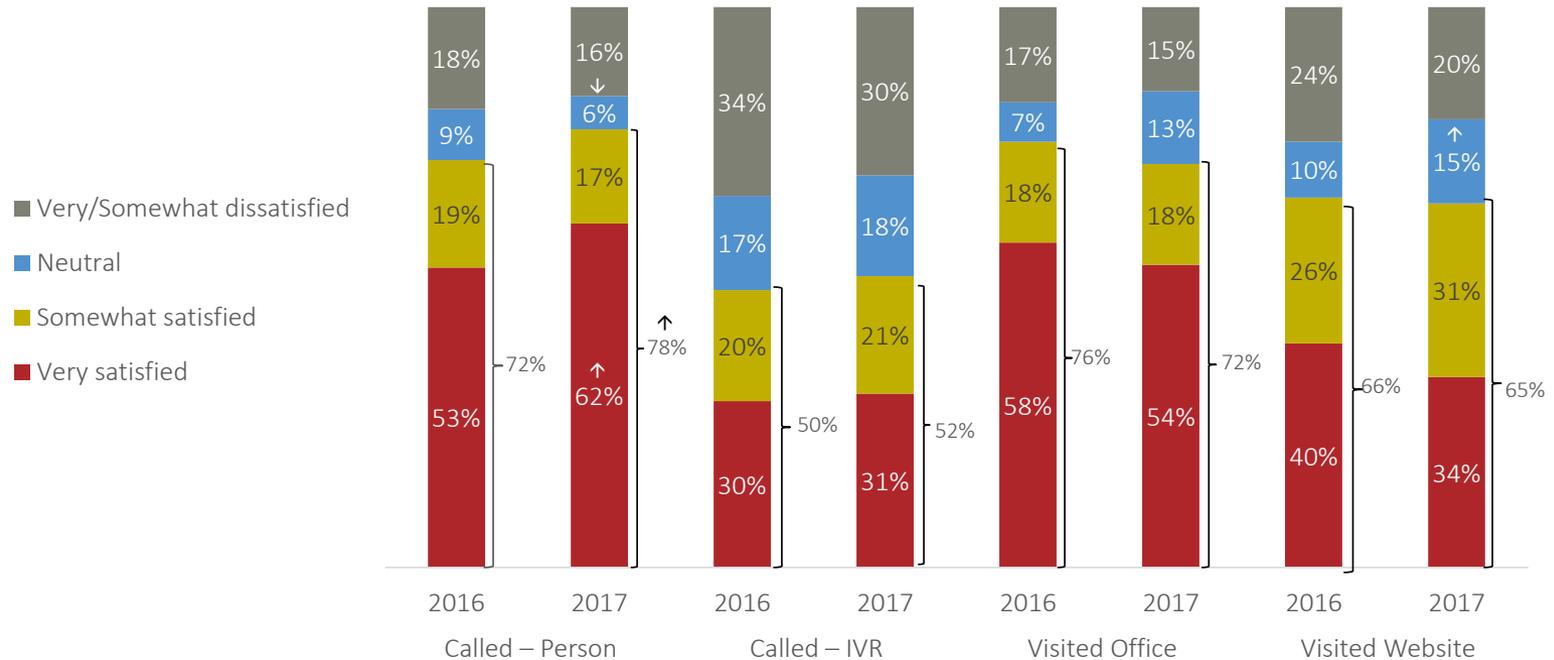
To the best of your recollection, how many times have you done each of the following within the last year?



SATISFACTION WITH CONTACT METHOD

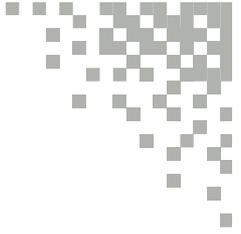
- Customers were most satisfied when they called and spoke with a live person or visited an office. Satisfaction increased this year among customers who called and spoke with a live person

Satisfaction with Each Contact Method



↑/↓
Q6y

Indicates score is significantly higher/lower than previous year
Overall, how satisfied are you with your experience with each of the following?



APPENDIX

KEY DRIVER ANALYSIS OF SATISFACTION WITH LIBERTY UTILITIES



Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.849 ^a	.721	.717	.582

	Unstandardized Coefficients		d Coefficients	t	Significance Level	% of Sig Beta Weights
	B	Std. Error	Beta			
(Constant)	.169	.142		1.186	.236	
Q2r1: Accuracy of bill/statement	.184	.030	.192	6.056	.000	18.6%
Q2r2: Company website	.058	.028	.064	2.051	.041	6.2%
Q2r3: Providing safe services	.102	.044	.076	2.295	.022	7.3%
Q2r4: Providing reliable services	.028	.044	.020	.637	.524	
Q2r5: Encouraging conservation	.011	.032	.010	.340	.734	
Q2r6: Price	.130	.028	.136	4.616	.000	13.2%
Q2r7: Communications	.135	.037	.146	3.697	.000	14.2%
Q2r8: Customer service	.173	.034	.183	5.076	.000	17.7%
Q2r9: Payment options	.199	.026	.235	7.761	.000	22.8%
Q2r10: Community presence	-.022	.034	-.021	-.651	.515	

NOTE: Variables which positively effect satisfaction and are significant at the 95% level are highlighted



RESPONDENT PROFILE

	2015	2016	2017
	n=1511	n=1502	n=1605
Gender			
Male	48%	47%	49%
Female	52%	53%	51%
Age			
18-24 years	2%	3%	2%
25-34 years	14%	13%	11% ↓
35-44 years	13%	14%	12%
45-54 years	17%	18%	15% ↓
55-64 years	21%	21%	22%
65+ years	34%	31%	38% ↑
Household Income			
Under \$25,000	13%	12%	9% ↓
\$25,000-\$49,999	19%	19%	19%
\$50,000-\$74,999	14%	16%	16%
\$75,000-\$99,999	11%	13%	13%
\$100,000-\$149,999	9%	10%	13% ↑
\$150,000+	5%	4%	7% ↑
Prefer not to say	29%	25% ↓	23%

↑/↓

Indicates score is significantly higher/lower than previous year



RESPONDENT PROFILE

	2015	2016	2017
	n=1511	n=1502	n=1605
Ethnicity			
White/Caucasian	81%	83%	84%
Asian/Pacific Islander	2%	2%	1%
Hispanic/Latino	3%	4%	3%
Black/African American	1%	1%	1%
Other	2%	3%	3%
Prefer not to say	10%	7%↓	8%
Education Level			
Less than high school	2%	2%	3%
High school/GED	19%	17%	16%
Professional school/training	4%	4%	5%
Some college	14%	18% ↑	14% ↓
Associate's degree	10%	10%	10%
Bachelor's degree	21%	22%	22%
Some graduate school	6%	6%	5%
Graduate school degree	16%	16%	20% ↑
Prefer not to say	9%	5% ↓	5%

↑/↓

Indicates score is significantly higher/lower than previous year



RESPONDENT PROFILE

	2015	2016	2017
	n=1511	n=1502	n=1605
Children in Household			
Under 18 years of age	24%	27%	23%↓
Home Status			
Rent	35%	36%	31%↓
Own	64%	63%	68%↑
Home Type			
Single family	59%	59%	61%
Multi-family/Apartment	36%	35%	32%
Other/Don't know	5%	6%	7%

FOR FOLLOW-UP QUESTIONS, PLEASE CONTACT:



1365 Fourth Avenue
San Diego, CA 92101
619.234.5884

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

Cast Iron/Bare Steel Replacement Program
Results
Fiscal Year 2018

April 16, 2018

Submitted by:



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INTRODUCTION

Pursuant to the settlement agreement approved by the New Hampshire Public Utilities Commission (the “Commission”) as part of the National Grid/KeySpan merger in Docket No. DG 06-107 and the settlement agreement in Docket No. DG 11-040 (the “Settlement Agreement”) approved by Order No. 25,370, Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities (“Liberty” or the “Company”) submits the results of the Cast Iron Bare Steel (“CIBS”) Replacement Program for fiscal year 2018 (April 1, 2017, to March 31, 2018). As required by the Settlement Agreement, the Company submits the following information in connection with this report, the pre-filed Joint Testimony of Shawn D. Furey and Brian R. Frost, and the Testimony of David Simek and Catherine A. McNamara: (1) A report detailing the actual amount of capital investments made in accordance with implementing the CIBS program during fiscal year 2018 (Attachment SDF/BRF-2 to Joint Furey-Frost Testimony); (2) A calculation of the incremental revenue requirement associated with placing the capital investments into rate base above a base spending level of \$527,275 (Attachment DBS-1 to Simek/McNamara Testimony); (3) A description of variances between actual results and the original plan; and (4) a request for a permanent increase in base distribution delivery rates in the amount of \$777,172 effective for usage on and after July 1, 2018.

SECTION 1: ACTUAL CAPITAL EXPENDITURES

Actual capital expenditures incurred during implementation of the CIBS program for fiscal year 2018 are detailed in Attachment SDF/BRF-2 to the Furey/Frost Testimony. Through a series of technical sessions that began in 2008, the Commission Staff and the Company have agreed that the capital investment amounts to be included for recovery under CIBS may include

all prudently incurred direct and indirect¹ costs associated with: (i) replacement or abandonment² of cast iron and bare steel mains, including replacement of existing pipe with replacement pipe of the same size,³ with recovery for the costs of “upsizing” the pipe allowed only when specifically justified;⁴ (ii) replacement or abandonment of cast iron or bare steel service lines directly connected to bare steel or cast iron main replacement projects; and (iii) tie over of connected service lines not replaced or abandoned as part of a cast iron bare steel main replacement project.

Categories of costs that may not be included for recovery under CIBS include: (i) replacement or abandonment of plastic main; (ii) replacement or abandonment of coated steel main, regardless of vintage, unless approved by the Safety Division of the Commission; (iii) replacement, abandonment, or reconnecting of plastic or coated steel services that were connected to existing cast iron or bare steel main replacement projects; (iv) the differential in cost to replace existing cast iron or bare steel mains with pipe of a diameter that is greater than the existing main and the cost to replace that main with a pipe that is larger than the existing main, unless specifically justified; (v) relocation of customer meters from inside to outside; (vi) random cast iron or bare steel service replacements not connected to a cast iron or bare steel main replacement project; (vii) carryover costs in aggregate exceeding 5% of the approved estimated total expenditures under the CIBS program for the construction year, unless approved

¹ Indirect costs mean overheads such as pension, OPEBs and other fringe benefits, payroll taxes, material handling costs and other general & administrative expenses that are loaded on all labor and material transactions. Categories of costs that may not be included for recovery under the plan include costs related to CIBS planning (other than normal engineering and project planning), reporting and filing.

² For purposes of ii and iii, abandonments such as mains that are not servicing a customer via a service will not be allowed. Other abandonments will be considered by Staff on a case by case basis.

³ 3-inch pipes, which are no longer standard size, will be routinely replaced with 4-inch pipes.

⁴ See Settlement Agreement in DG 11-040, Attachment J, section (20) n.

by the Safety Division; and (viii) replacements made under the Cast Iron Encroachment Policy are not eligible for accelerated rate recovery in the Cast Iron/Bare Steel Program unless a special circumstance is approved by the Safety Division.

On January 13, 2017, the Company made its proposed FY 2018 CIBS program filing with the Commission. On April 18, 2017, the filing was reviewed with Staff for project selection and scope.

The FY 2017 carryover costs that were captured within the FY 2018 program that are recoverable under CIBS rates totaled \$2,718,259. Under the Settlement Agreement in Docket No. DG 11-040, the Company cannot recover through the CIBS program “carryover costs in aggregate exceeding 5% of the approved estimated total expenditures under the CIBS program for the construction year, unless approved by the Safety Division.” The estimated total cost associated with completed FY 2018 projects is \$14,716,035, resulting in a 5% cap of \$735,802 of allowable carryover cost. The Company is seeking the revenue requirement associated with \$1,402,570 of FY 2017 carryover costs above the allowable carryover cost as part of the step increase in Docket No. DG 17-048. Therefore, the Company is only seeking the allowable 5% FY 2017 carryover cap of \$735,802 in this filing. The amount of CIBS FY 2017 carryover costs that are above the 5% cap and above the \$1,402,570 included in Docket No. DG 17-048 of \$579,887 will be recovered during the Company’s next distribution rate case.

Line 86 column BE of Attachment SDF/BRF-2 shows the actual recoverable expenditures of the FY 2018 projects, totaling \$10,247,781 (including carryover costs at the 5% cap). After removing from the actual expenditures the CIBS base amount of \$527,275 in

accordance with the terms of the Settlement Agreement, the total incremental expenditures to be included in rate base is \$9,720,506. Appendix A to this report is the Condition Bare Steel Main Replacement Program – Sample Analysis Report for FY 2018. This report contains photographs and descriptions of various pipe segments removed and catalogued as part of the FY 2018 CIBS program.

SECTION 2: CALCULATIONS OF INCREMENTAL REVENUE REQUIREMENT

In this filing, Liberty is seeking recovery in rates of the incremental revenue requirement associated with an additional \$9,720,506 of CIBS recoverable capital investments. As set forth in Attachment DBS/CAM-1, page 1 to the Simek/McNamara Testimony, the revenue requirement associated with the CIBS cumulative capital expenditures is \$3,535,855 (line 35(j)) with a corresponding revenue deficiency of \$777,172 (line 39 (j)). Consistent with prior delivery rate increases for the CIBS program, the Company proposes to apply the increase pro rata across all customer classes. Attachment DBS/CAM-1, page 4 to the Simek/McNamara Testimony also provides the annual bill impacts for an average residential customer and commercial customers in rate classes G-41, G-42, and G-52. Attachment DBS/CAM-2 is a computation of the cumulative revenue requirement associated with the CIBS program since its inception in FY 2009.

SECTION 3: DIFFERENCES BETWEEN INITIAL ESTIMATED EXPENDITURES AND FISCAL YEAR-END ESTIMATED EXPENDITURES

The Company's FY 2018 CIBS Plan provided for the replacement or abandonment of 13.23 miles of cast iron and bare steel pipe at an estimated cost of \$17,613,444. As shown on Attachment SDF/BRF-2 (line 57 column AJ), the Company eliminated 11.58 miles of cast iron

and bare steel at a cost of \$15,313,206 (line 56, column BL). A reconciliation of the total costs to the total recoverable costs is shown in the table below:

		<u>Attachment SDF/BRF-2</u> <u>Reference</u>
Actual Loaded Costs	\$15,313,206	line 57, column BL
FY 2017 allowable carry-over costs	\$735,802	line 84, column BE
FY 2017 remaining carry-over costs	\$1,982,457	line 85, column BE
Less: Expected FY 2018 carry-over costs	-\$3,698,261	line 56, column BG
Non-recoverable main costs	-\$650,141	line 56, column BA
Non-recoverable service costs	-\$1,452,825	line 56, column BB
Total Recoverable Costs	<u>\$10,247,781</u>	line 86, column BE

Details of the variances between estimated and actual costs by project are shown in Attachment SDF/BRF-2 columns BK through BN.

SECTION 4: STATUS OF THE LITIGATION BETWEEN LIBERTY AND THE CITIES OF CONCORD AND MANCHESTER

In 2010, National Grid filed actions in Hillsborough and Merrimack County Superior Courts against the Cities of Manchester and Concord seeking injunctions against enforcement of regulations concerning street opening permit fees (“degradation fees”), as well as requests for declaratory judgments invalidating such fees. The matters were docketed as No. 216-2010-EQ 001722 in Hillsborough County and No. 217-2010-CV-00402 in Merrimack County. The Company filed motions for summary judgment in both cases in April and May, 2011. The cases were consolidated in Merrimack County Superior Court.

On August 25, 2011, the Merrimack County Superior Court granted summary judgment to National Grid on the basis that the degradation fees at issue were pre-empted by state law. The City of Concord appealed to the New Hampshire Supreme Court, which held that the City

ordinance was not preempted by State law. The Supreme Court also concluded that there was a factual dispute between EnergyNorth and the City regarding whether patching an excavated paved road with new pavement diminishes or restores the road's original life expectancy, and remanded the case to Superior Court for trial, which was completed in May 2015. The trial court issued an order in July 2015 which struck down the penalty provisions in each ordinance for excavating new pavement, but otherwise upheld the ordinances. Both parties appealed. The Supreme Court issued an order on June 16, 2017, that upheld both the ordinances and their penalty provisions, effectively making the Company responsible for all the degradation fees charged over the ensuing years.

For FY 2018, the Company has included degradation fees in its proposed CIBS rates. Accrued Manchester degradation fees from prior year CIBS filings are included in the pending distribution rate case, Docket No. DG 17-048. The Company paid the Concord degradation fees while the case was pending, so no adjustment was necessary.

SECTION 5: TAX DEDUCTION FOR REPAIR EXPENSES

In 2009, the Internal Revenue Service issued guidance, under Internal Revenue Code Section 162, regarding the eligibility of certain repair and maintenance expenses for an immediate deduction for income tax purposes, but capitalized by the Company for book purposes. This tax deduction has the effect of increasing deferred taxes and lowering the revenue requirement that customers will pay under the CIBS program. Repairs resulting in the replacement of less than 20 percent of an original unit of property qualify for a repairs tax deduction. A gas company's gas subsystem is considered a "unit of property" for the purposes of the repairs tax deduction. As explained in the Simek/McNamara Testimony, projects

included in the CIBS program are expected to qualify as repairs; thus, when computing the revenue requirement, the Company reflects a tax deductibility of 100 percent for all CIBS jobs.

SECTION 6: CAST IRON/BARE STEEL REPLACED UNDER MUNICIPAL PROJECTS AND THE CAST IRON ENCROACHMENT POLICY

In FY 2018, the Company replaced approximately 30 feet of cast iron through the Cast Iron Encroachment Policy and approximately 15,570 feet of cast iron and bare steel through municipal projects, totaling to approximately 2.95 miles of replacement. This amounts to a total of approximately 14.53 miles of cast iron and bare steel replacement in FY 2018. A yearly summary of cast iron and bare steel replacement through municipal projects and encroachments can be seen below:

Fiscal Year	Footage of Cast Iron/Bare Steel Replaced	
	Municipal Projects	Encroachments
2008-2009	10,980	171
2009-2010	19,920	28
2010-2011	11,649	62
2011-2012	17,791	40
2012-2013	12,524	53
2013-2014	19,118	55
2014-2015	10,587	169
2015-2016	12,206	248
2016-2017	15,663	30
2017-2018	15,570	30
Total Footage	146,008	886
Total Mileage	27.65	0.17

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APPENDIX A: FY 2018 CONDITION BARE STEEL MAIN REPLACEMENT PROGRAM – SAMPLE ANALYSIS

Over the course of the FY 2018 construction season, bare steel pipe and soil samples were collected from the CIBS main replacement program. Each sample was sand blasted to expose the pipe down to the bare metal and will be provided for visual representation. Soil samples were taken as close to the pipe samples as possible in an effort to retrieve native soil. Chemical testing was conducted to determine the existing pH, chloride, sulfide, and sulfate levels. Microbiological testing for Acid Producing Bacteria (APB) and Sulfate Reducing Bacteria (SRB) were performed as well. Both chemical and microbiological tests were conducted as soon as possible. The table below shows the threshold of bacteria levels based on the results of bacterial colonies per milliliter.

Number of Positive Bottles	Bacteria Colonies/ml	Reporting Value Colonies/ml	Bacteria Level
0	< 1 - 10	< 10	Low
1	10	10	Low
2	10 - 100	100	Medium
3	100 - 1000	1,000	Medium
4	1,000 - 10,000	10,000	High
5	> 10,000 - 100,000	100,000	High

Positive APB and SRB vials with corresponding reporting values.

Details and testing results for the six pipe and soil samples collected are summarized on the following pages:

Sample 1

Work Order & Project:	401711-37632 5-67 WILLIAMS ST, NAS, NEWBURY ST
Sample Location:	In Front of 15 Newbury St
Pipe Sample Details:	2" Bare Steel, Standard Wall (0.154"), Low Pressure, Installed in 1940
Soil Sample Details:	Dark Brown Sandy Soil
Test Date:	10/13/2017

Soil Testing Results		
	Quantitative Value	Qualitative Value
pH:	7.5	-
Chloride (mg/l):	0	None
Sulfide (mg/l):	< 5	Not Appreciably Present
Sulfate (mg/l):	<200	Low
APB Level (Colonies/ml):	10,000	High
SRB Level (Colonies/ml):	100	Medium

Sample Condition: Generalized corrosion pitting over entire pipe, approximately 30% wall loss in pits.



Sample 2

Work Order & Project:	401711-37635 14-38 BROOK ST, NAS, ASH ST & LOVELL ST	
Sample Location:	In Front of 150 Chestnut St on Brook St	
Pipe Sample Details:	2" Bare Steel, Standard Wall (0.154"), Low Pressure, Installed in 1924	
Soil Sample Details:	Medium Brown Sandy Soil	
Test Date:	12/18/2017	
<u>Soil Testing Results</u>		
	Quantitative Value	Qualitative Value
pH:	7	-
Chloride (mg/l):	0	None
Sulfide (mg/l):	< 5	Not Appreciably Present
Sulfate (mg/l):	<200	Low
APB Level (Colonies/ml):	10,000	High
SRB Level (Colonies/ml):	100	Medium
Sample Condition: Generalized corrosion pitting over entire pipe, approximately 25-50% wall loss in pits.		



Sample 3

Work Order & Project:	401711-37638 4-26 NUTT ST, NAS, BUCHANAN ST & FAXON ST
Sample Location:	Buchanan St Near Intersection with Main St
Pipe Sample Details:	2" Bare Steel, Standard Wall (0.154"), Low Pressure, Installed in 1924
Soil Sample Details:	Dark Reddish Sandy Soil
Test Date:	3/2/2018

Soil Testing Results

	Quantitative Value	Qualitative Value
pH:	6	-
Chloride (mg/l):	0	None
Sulfide (mg/l):	< 5	Not Appreciably Present
Sulfate (mg/l):	<200	Low
APB Level (Colonies/ml):	100	Medium
SRB Level (Colonies/ml):	<10	Low

Sample Condition: Heavy corrosion pitting over entire pipe, 100% wall loss in pits.



Sample 4

Work Order & Project:	401711-37641 3-75 BLOSSOM ST, NAS, HANOVER & WILDER
Sample Location:	In Front of 36 Blossom St
Pipe Sample Details:	2" Bare Steel, Standard Wall (0.154"), Low Pressure, Installed in 1915
Soil Sample Details:	Light Brown Sandy Soil
Test Date:	3/2/2018

Soil Testing Results

	Quantitative Value	Qualitative Value
pH:	7	-
Chloride (mg/l):	0	None
Sulfide (mg/l):	< 5	Not Appreciably Present
Sulfate (mg/l):	400	Low
APB Level (Colonies/ml):	<10	Low
SRB Level (Colonies/ml):	1,000	Medium

Sample Condition: Moderate corrosion pitting over entire pipe, 100% wall loss in service connection.



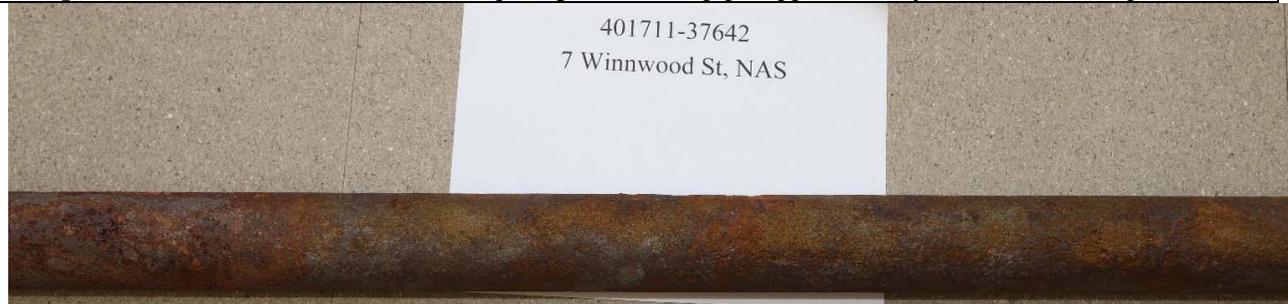
Sample 5

Work Order & Project:	401711-37642 28-36 FIFIELD ST, NAS & WINNWOOD ST
Sample Location:	In Front of 7 Winnwood St
Pipe Sample Details:	2" Bare Steel, Standard Wall (0.154"), Low Pressure, Installed in 1959
Soil Sample Details:	Medium Brown Sandy Soil
Test Date:	9/8/2017

Soil Testing Results

	Quantitative Value	Qualitative Value
pH:	7	-
Chloride (mg/l):	0	None
Sulfide (mg/l):	< 5	Not Appreciably Present
Sulfate (mg/l):	<200	Low
APB Level (Colonies/ml):	100,000	High
SRB Level (Colonies/ml):	1,000	Medium

Sample Condition: Generalized corrosion pitting over entire pipe, approximately 30% wall loss in pits.



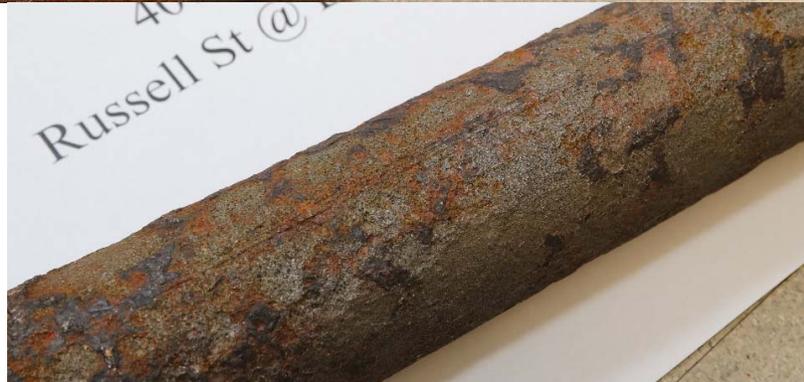
Sample 6

Work Order & Project:	401711-37639 75-235 LAKE ST, NAS
Sample Location:	Russell St at Intersection With Lake St
Pipe Sample Details:	2" Bare Steel, Standard Wall (0.154"), Low Pressure, Installed in 1900
Soil Sample Details:	Light Brown Sandy Soil
Test Date:	3/2/2017

Soil Testing Results

	Quantitative Value	Qualitative Value
pH:	7	-
Chloride (mg/l):	0	None
Sulfide (mg/l):	< 5	Not Appreciably Present
Sulfate (mg/l):	<200	Low
APB Level (Colonies/ml):	1,000	Medium
SRB Level (Colonies/ml):	100	Medium

Sample Condition: Generalized pitting and scaling over entire pipe, approximately 30% wall loss in pits.



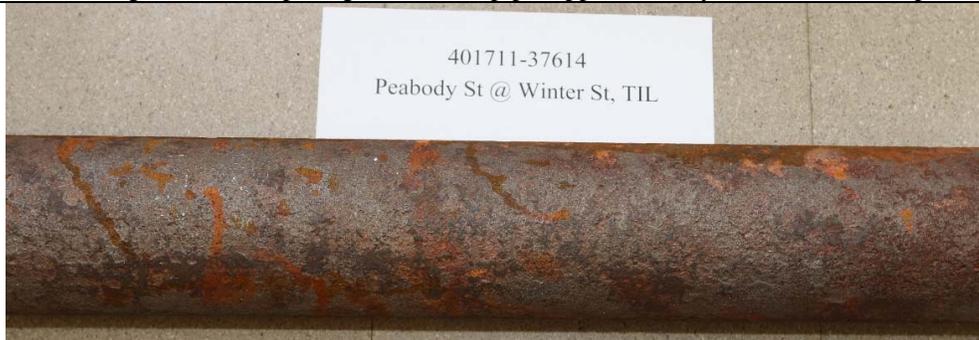
Sample 7

Work Order & Project:	401711-37614 4-22 PEABODY ST, TIL, CEDAR ST & HIGH ST
Sample Location:	Peabody St at Intersection With Winter St
Pipe Sample Details:	4" Bare Steel, Standard Wall (0.237"), Low Pressure, Installed in 1931
Soil Sample Details:	Dark Brown Sandy Soil
Test Date:	10/16/2017

Soil Testing Results

	Quantitative Value	Qualitative Value
pH:	7	-
Chloride (mg/l):	0	None
Sulfide (mg/l):	< 5	Not Appreciably Present
Sulfate (mg/l):	<200	Low
APB Level (Colonies/ml):	10,000	High
SRB Level (Colonies/ml):	10,000	High

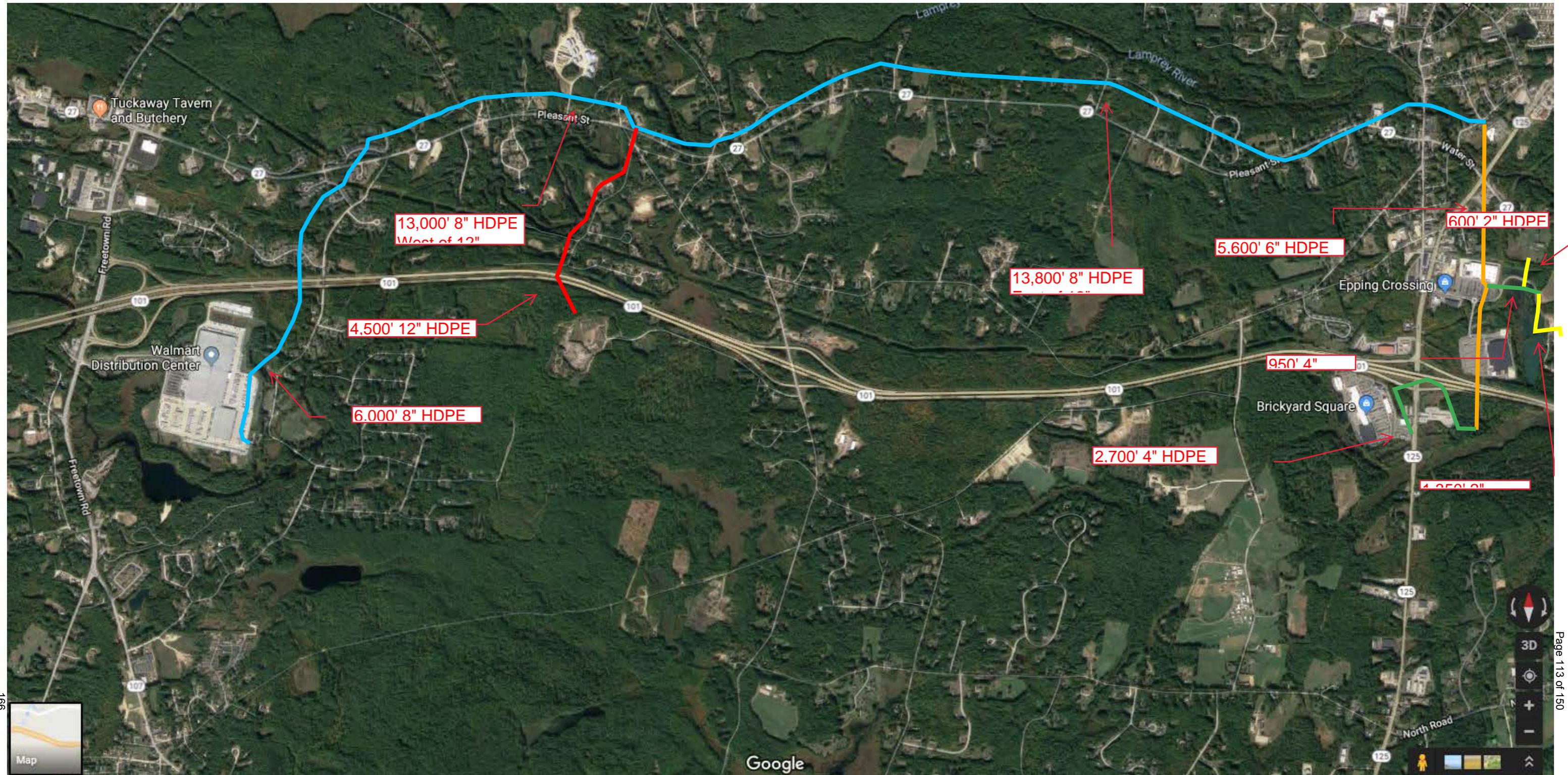
Sample Condition: Light corrosion pitting over entire pipe, approximately 20% wall loss in pits.

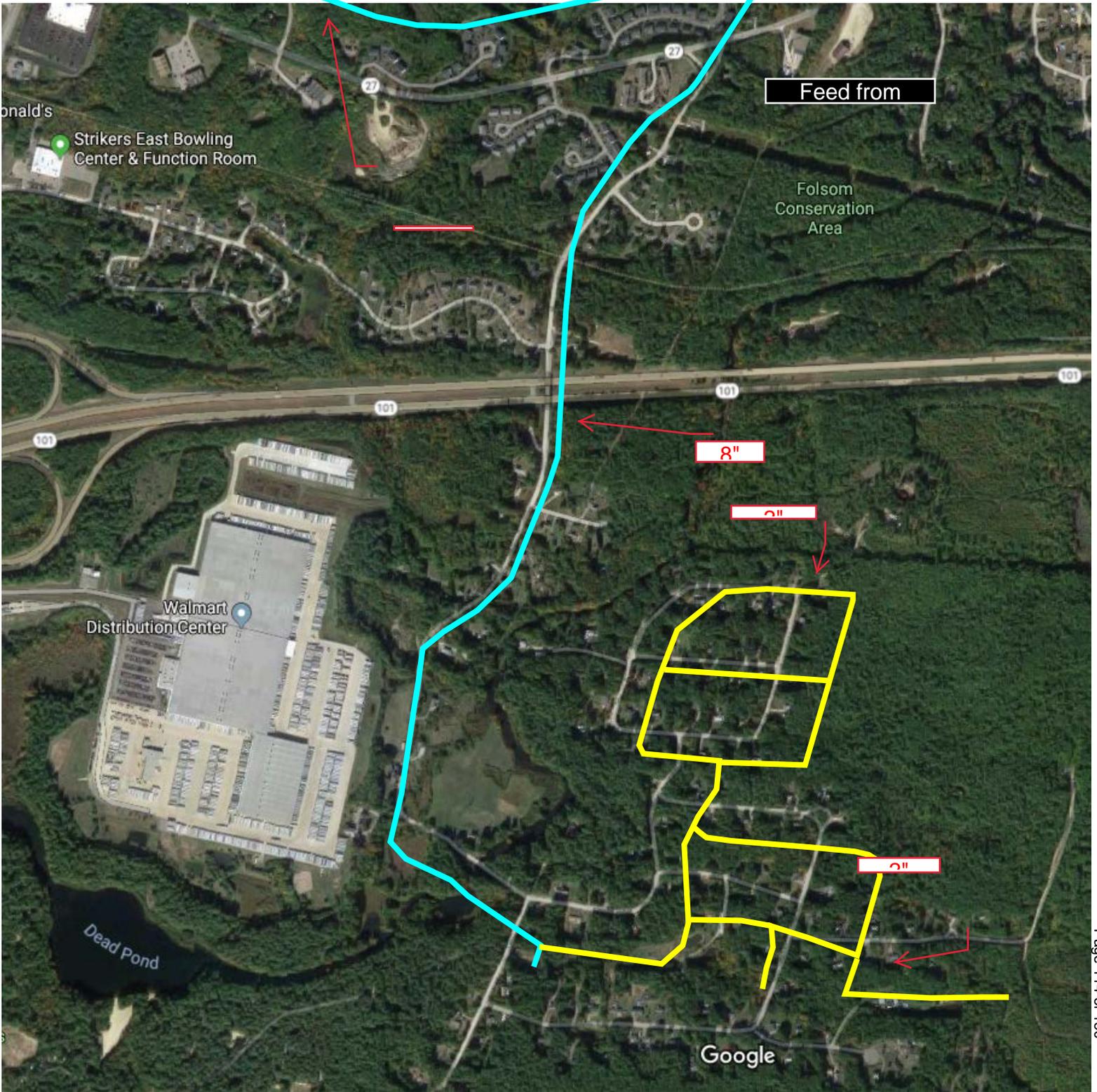


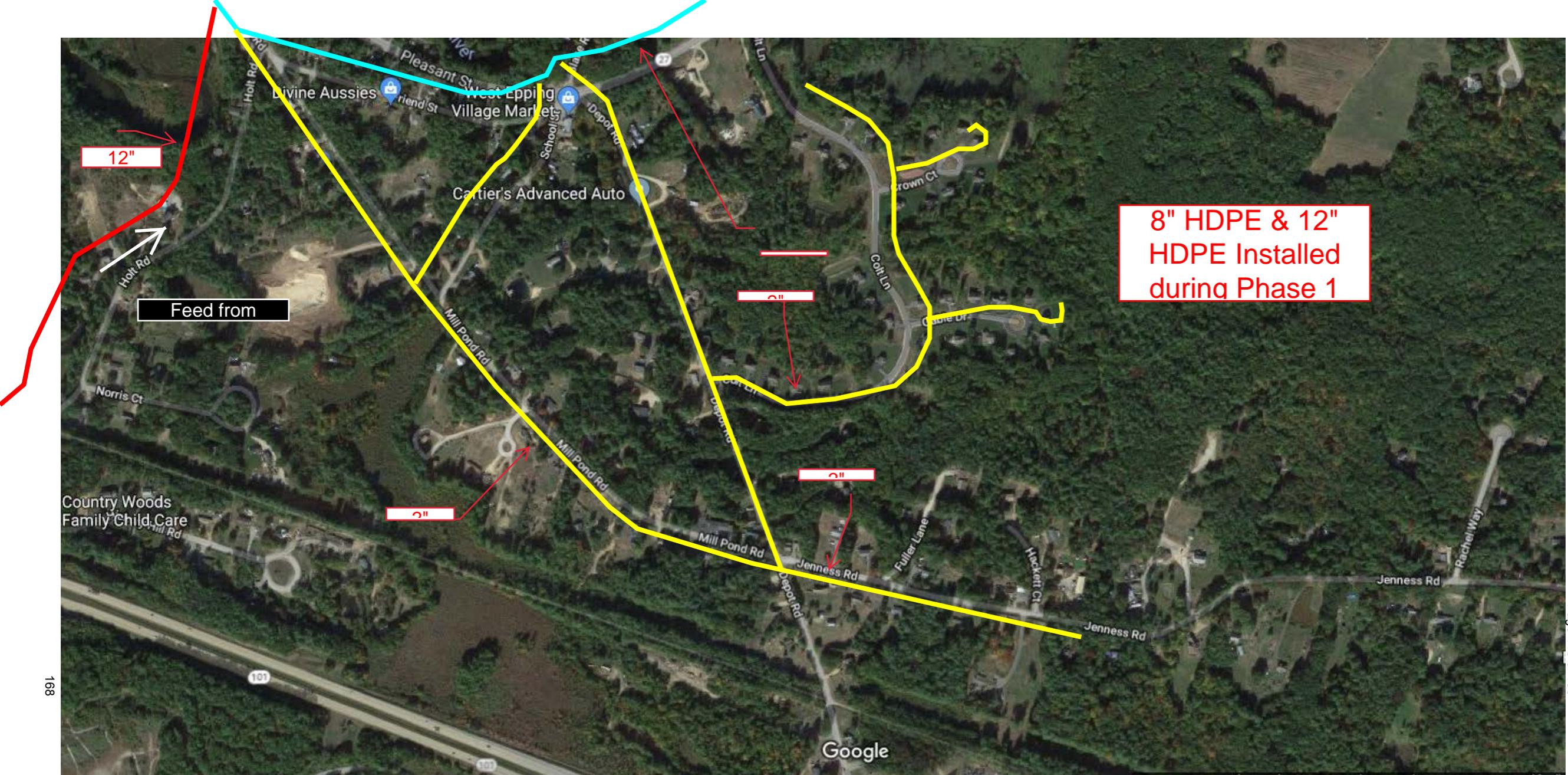
Conclusions/Recommendations:

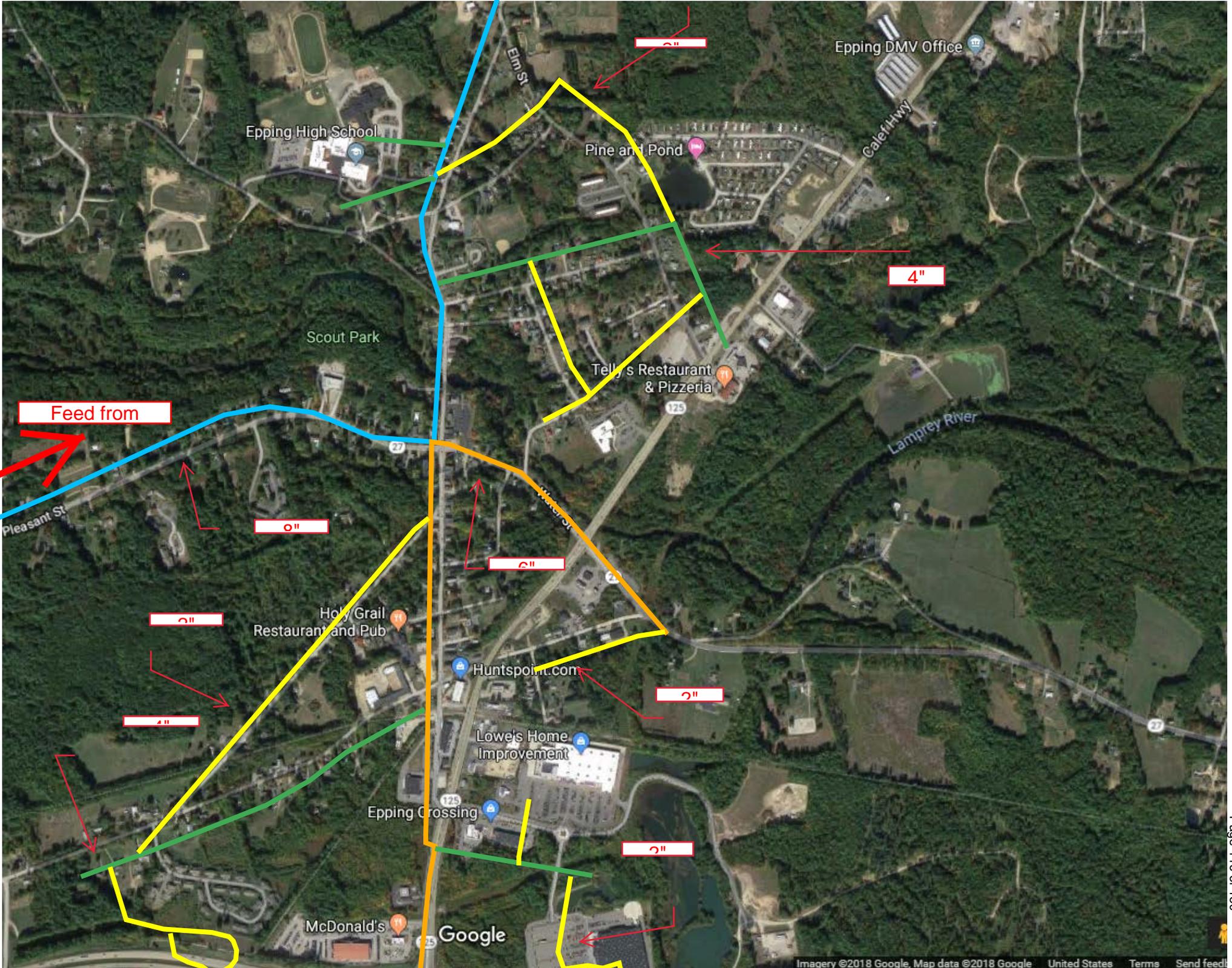
- (1) Bare steel cutouts locations should continue to be identified on designs and reference dimensions to leak repair locations. This is to ensure a piece of poor condition bare steel pipe is collected.
- (2) A representative should be on site to verify that the pipe sample is acceptable and that the soil taken is valid for analysis. The soil sample should be tested as soon as possible. Testing the soil when it is “fresh” will provide more accurate results as it relates to the existing chemical and microbiological conditions at each location.
- (3) The criteria used for the segment selection process should continue to include references to deep pitting and/or poor condition. This data has proven to be useful and indicative of pipe that is in need of replacement.
- (4) Special attention should be paid to locations where bare steel segments are to remain in service and the pH is highly acidic or highly alkaline.
- (5) Special attention should be paid to locations where bare steel segments are to remain in service and high levels of bacteria are recorded.
- (6) MSES Consultants, Inc. – Corrosion Products Division recommended incorporating results from sulfide and sulfate levels as it relates to the aggressiveness of potential corrosion. Special attention should be paid to locations where bare steel segments are to remain in service and high levels sulfide and/or sulfate are recorded.

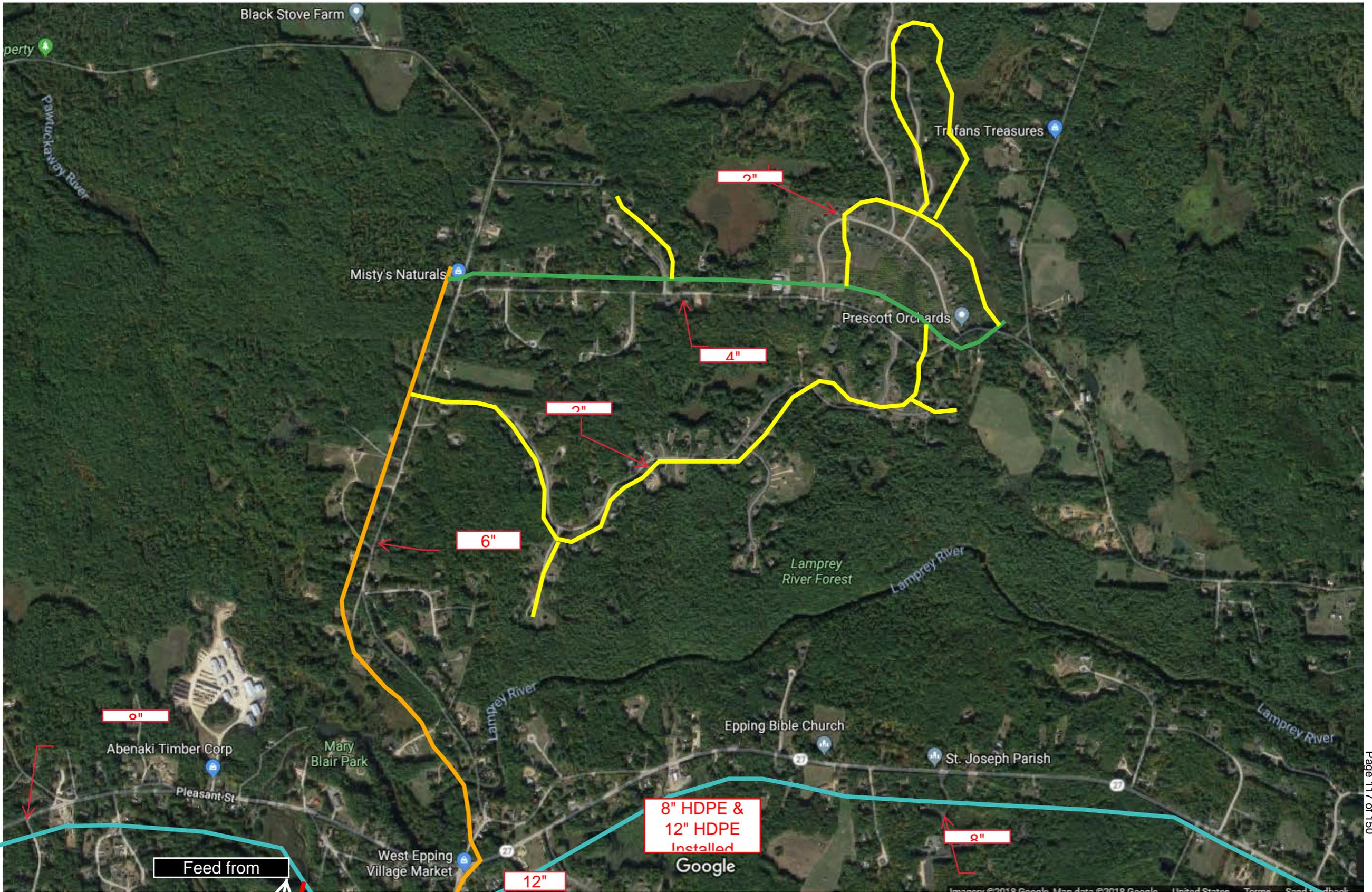
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Amendment One

This document ("Amendment One") amends the Statement of Work dated March 15, 2016, (the "SOW"), between ICF Incorporated, LLC ("ICF") and Liberty Utilities (Energy North Natural Gas) Corp., ("Client").

WHEREAS: ICF and Client have signed a Master Services Agreement dated March 15, 2016;

WHEREAS: ICF and Client have signed a Statement of Work dated March 15, 2016 for the provision of services.

The parties hereby agree to amend the Agreement as follows:

1. Section 1 *Scope Overview* is amended to include four additional franchise towns: Swanzey; Raymond; Epping; and Candia (the "Additional Towns").
2. The *Project Timeline and Fee Schedule* is amended to include the following fees associated with the inclusion of the Additional Towns:
 - a) One-time setup fee of \$8,500.00
 - b) SIMS monthly license fee of \$250.00 per month in addition to the licensing fees outlined in the SOW. Such license fee will commence upon completion of the setup phase and will continue for the same period as the SOW
 - c) Data purchases for the Additional Towns will be consistent with the fees in the SOW; \$70.00 per 1,000 records.

Other than the changes above, the terms and conditions of the Agreement remain unchanged and in full force and effect.

The Effective Date of this Amendment One is 5/17/16.

ACCEPTED & AGREED:

For ICF Resources, LLC

By: 

Name: Victoria H. White

Title: Sr. Contracts Administrator

For Liberty Utilities

By: 

Name: DAVID SWAIN

Title: PRESIDENT

STATEMENT OF WORK

This Statement of Work (the "SOW") is entered into on **March 15, 2016** (the "SOW Effective Date") is an attachment to the Master Services Agreement (the "Agreement") dated **March 15, 2016**, between **ICF INCORPORATED, LLC** ("ICF"), and **Liberty Utilities** (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities (the "Client") (each a "Party" and collectively, the "Parties") under and in accordance with the terms and conditions of the Master Services Agreement.

In addition to the work and services to be performed by ICF pursuant to the Agreement and any other SOWs now or hereafter existing under the Agreement, ICF shall perform the services specified herein (the "Services") in accordance with the terms and conditions of the Agreement.

Except as specifically stated herein, each capitalized term used in this SOW shall have the same meaning as is assigned to it in the Agreement. In the event of any conflict between this SOW and the Agreement, the terms of the Agreement shall govern.

PROJECT DEVELOPMENT - SCOPE AND APPROACH

1. Scope Overview

The Client has contracted with ICF to provide the Client with the necessary tools and services to improve the performance of its gas conversion program and assess opportunities to expand its gas infrastructure. ICF will use its Gas Analytics Module that leverages ICF's proprietary Strategic Intelligence Management System (SIMS) and accompanying staff expertise to:

- Acquire relevant demographic, firmographic, and property data for the Client's New Hampshire service territory and franchise towns.
- Identify the attributes of potential customer segments that are optimal targets for natural gas conversion that are on-main (within 100 feet of the main) and off-main (beyond 100 feet of the main) and map the location of top targets for location-based outreach within the Client's service territory (including the franchise towns).
- Use consumption data loaded into SIMS for New Hampshire on current residential and commercial customers to estimate the potential load for non-customer premises. As part of the standard setup, it is anticipated that up to four residential consumption clusters will be generated based on demographic and property attributes and that up to eight commercial customer consumption clusters will be generated based on entities with similar firmographic characteristics.
- Each non-customer target premise will be assigned the following data:
 - SIMS targeting score based on propensity to convert to natural gas
 - Estimated distance from main. Note that all distances will have a level of uncertainty to be calculated and communicated to the Client after data is received and sample data is tested.
- Provide the Client with results from above via the SIMS online mapping user interface.
- Franchise towns include:
 - Pelham
 - Keene
 - Windham
 - Hanover
 - Lebanon

The SIMS User Interface is the dashboard that visualizes the data to highlight potential customer targets and track marketing campaigns. The dashboard has drill down capabilities based on hierarchies pre-defined in consultation with the Client. The Client will have the ability to drill down using the maps, filters, and selection tools to pull their data extracts from the user interface. ICF will provide the Client



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with the Gas Analytics via an analytics-as-a-service retainer model that includes both professional consulting services and deployment of software-as-a-service solutions to support the professional consulting services. As part of this SOW, ICF will deploy its SIMS in support of its Analytics Services. Use of the SIMS is governed by the Software Access and License Agreement executed separately as part of the Agreement.

In addition to standard SIMS Gas Conversion setup and analytics described above, the client may request additional time and materials support for business development assessments such as the high level screening of potential liquefied natural gas distribution locations based on the prospective customer population surrounding the locations or market assessments for alternative pipeline build out scenarios. Time and materials support beyond the included analytics support hours can be addressed through additional SOWs.

This SOW describes the deliverables for ICF & Client for deployment of the SIMS Gas Analytics, the purchase of 3rd party data, and the Analytics Retainer that covers included professional services from ICF staff to manage the project, define analytical questions, and deliver actionable results.

2. Project Approach

The Client requires ICF Services for the duration of the Project. The ICF Consultant(s) assigned to this Project will assist in the implementation of the ICF's Gas Analytics and assist the Client in gaining a better understanding of this module.

The scope of the Project is described below and also includes certain responsibilities and assumptions and associated delivery dates that are the responsibility of the Client. In addition to the tasks specified in the SOW hereto, the Client agrees to provide appropriate Project resources, including but not limited to data, information, and appropriate and cooperative personnel, to facilitate the performance of the Services. The Client shall designate a Program Manager to work with the ICF Consultant(s) to facilitate the provision of the Services. It is mutually understood that business requirements, resources and dates may change.

The Project is estimated to start on March 15, 2016 and has a projected completion date of June 30, 2018. The Consultants will work on the Project during this time, and provide support as specified by the scope of work.

3. SIMS Use Case Specifications

As a result of the implementation of the project, the Client will have the ability to login to and interact with the SIMS user interface. SIMS will be utilized to transform raw data into insights and present the insights back to the Client as highly actionable intelligence. The standard SIMS software and associated analytical services will provide the following capabilities:

- Profile generation
- Geospatial visualizations
- Filtering functionality
- List generation capabilities to managers through the SIMS user interface or provided by ICF staff



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4. Project Data Requirements

Multiple utility and non-utility datasets will be stitched together in the SIMS to enable deployment of the Gas Analytics. Available data along with formats and mechanisms for transfer will be defined during project initiation. The following sections are designed to set expectations about the type of data that will be included in the analysis for this project (if available). Acquisition of required third party datasets will be facilitated by ICF. Third party demographic, firmographic, and property data can be acquired for both Client customers and non-customers who live within Client's service territory and franchise towns and may serve as targets for new customer acquisition based on attributes and locations.

4.1. Client Data

Client is responsible for providing the following data during Project Initiation. To meet the proposed timelines for project initiation, the following data (along with any lookup tables required to interpret the data) must be provided by Client in full in an agreed upon format no later than April 15, 2016.

- Locations of Client's existing natural gas infrastructure/GIS mappings
- Service territory and new franchise town boundaries
- Customer geospatial locations if available (latitude/longitude preferred)
- Customer names
- Customer service addresses
- At minimum twelve months of historical billing data (monthly data)
- Additional relevant customer information system data such as customer type
- Past program participation if available (energy efficiency and/or fuel conversion)
- Known restrictions for where pipe can be put in
- Capacity constraints (optional)

4.2. Third Party Data

The following third party data sets are expected to be acquired and integrated into the SIMS by ICF in support of the Gas Analytics.

- Demographic data for residential customers and non-customers within the service territory and franchise towns may include:
 - o Age
 - o Household composition
 - o Length of residence
 - o Income
 - o Home ownership status
 - o Education level
 - o Dwelling type



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- o Behavior/Lifestyle predictors
- Firmographic data for commercial customers and non-customers within the service territory may include:
 - o NAICS code
 - o Revenue range
 - o Number of employees
 - o Years in business
 - o Contact name / phone
- Property attribute data for residential and commercial structures may include:
 - o Building owner
 - o Building owner contact info
 - o Property value
 - o Year built
 - o Square footage
 - o Heating system type
- Weather data from NOAA weather stations to disaggregate natural gas consumption data into baseloads and seasonal loads

5. Project Phases

The Gas Analytics project and costing structure is broken into the following phases including: Project Initiation, Third Party Data Purchasing, Analytics Retainer, and Time and Materials Support. These sections are designed to provide the Client with an understanding of the major work conducted in each task and the deliverables and timelines associated with those tasks.

5.1 Project Initiation

Project initiation covers the startup phase of the project that requires gathering project requirements, understanding available data, identifying data gaps, working with the Client staff to formulate key initial analytical questions and business use cases and to prototype, presenting proposed initial analysis parameters for approval, and provisioning access to the SIMS online interface for receiving gas analyses results. This phase runs concurrently with Data Acquisition. Major activities are expected to include:

- Conducting a virtual kickoff meeting with the Client Project Manager, Client Data Lead, and other client team members as appropriate
- Setting up of the SIMS for processing Client and third party data
- Working with the Client Data Lead to define data transfer formats, receive the data files, and process the Client customer and natural gas main data in SIMS.
- Establish formats for sharing gas conversion marketing outreach and program conversion data.
- Obtaining and processing weather data from NOAA weather stations as appropriate to run weather normalization and load disaggregation on Client billing data.
- Receiving and processing third party data acquired during the Data Acquisition task



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- Configuring the gas analytics to align with Client's specific business rules
- Generating the first round of results including:
 - Calculating SIMS targeting score, distance from main estimate, and estimated load for all non-customer premises in the service territory and franchise town boundaries
 - Displaying the gas analytics results on the user interface that will include basic, geo-spatial data visualization and analysis capabilities
 - Provisioning access to the SIMS user interface.

It is anticipated that the project initiation phase will last approximately three months from the project start date assuming timely access to Client data and participation from the Client staff in defining the priority business use cases (estimated dates March 15, 2016 – June 30, 2016). The delivery of the first round of targeting results and SIMS login provisioning will occur within three months of ICF receiving Client customer data, past gas conversion participation data and any non-customer premise data (in Client service territory or franchise towns) that will be provided by Client. The formal deliverables anticipated during the Project Initiation Phase are:

- 1) Data Request Template: ICF to provide Client with a data request template that will specify to Client's data lead the requested data fields in advance of the kickoff meeting.
- 2) Analysis Request Template: Provisioning by ICF to Client of an analysis request template. The analysis request template will be used by Client staff in coordination with the ICF Project Manager and ICF Lead Gas Analytics Representative to specify the parameters of analyses, timelines, and requested delivery formats (e.g. Excel spreadsheet with specific included fields or map-based visualizations) during both project initiation and throughout the analytics retainer period.
- 3) Kickoff Meeting: ICF facilitation of the virtual kickoff meeting. Kickoff activities will include resolving any questions regarding data to be provisioned and working with Client staff to define initial analyses using the analysis request template.
- 4) Business Requirements Documentation: ICF provides documentation of the business requirements and analytical questions that will guide the remainder of the work.
- 5) Data Load Report: Generation of a SIMS data load report that will summarize the Client and Third Party data loaded to SIMS and the data that has been excluded. For excluded data, the report will include reasons for exclusions. This report will also include data acquired and integrated by franchise town.
- 6) First Round of Targeting Results: Generating and delivering the first round of targeting results specified in the analysis request template.
- 7) SIMS Login Provisioning: Provisioning authorized Client staff with logins to the SIMS user interface

5.2. Data Acquisition

The Data Acquisition task involves acquiring the third party datasets for customers and non-customers required to be integrated in SIMS to support the Gas Analytics deployment. It is assumed that third party datasets will be updated annually to account for changes in service area population.



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Data can be appended to the Client's customer records or can be acquired for non-Client customers by purchasing records that lie within the Client's service territory and suppressing the Client's customers from appearing on that list.

5.3. Analytics Retainer

In deploying Gas Analytics, ICF uses the concept of an Analytics Retainer in lieu of separate software licensing, hosting, and time and materials project support costs for base services. The goal of the Analytics Retainer is to include all of the technical system hosting, data updating, analytics calculations, requirements definition, staff expertise availability, and project management in one consistent monthly charge that allows the Client to leverage ICF's analytical expertise as an extension of its staff without being charged for every incremental contact. The following ICF activities are included in the Analytics Retainer:

- Hosting and maintenance of the SIMS used to support Gas Analytics deployment by housing and staging for analysis both Client customer and non-customer datasets.
- Integration of the annually updated third party data including the franchise data.
- Integration of biannually (twice per year) updated Client customer data
- Integration of marketing outreach and program participation data in an agreed upon format at up to weekly intervals as appropriate to the business needs of the program
- Biannual updating of the Gas Analytics results based on incremental program results and incremental data loads
- Delivery of results via SIMS user interface. The Gas Analytics interface will be provided to an unlimited number of authorized users as selected by the Client. Authorized users will have access to analytics results with the ability to view and work with the results through maps and intuitive visual displays.
- ICF Gas Analytics representative(s) serving as an extension of the Client's analytics staff to manage the project, define analytical questions, and deliver actionable results. Up to 50 hours per year of analytics support for ad hoc inquiries beyond the standard SIMS gas analytics and data updating services described above are included in the annual retainer.

The Analytics Retainer will begin after Project Initiation is complete and run monthly for the duration of the contract (estimated time period June 15, 2016 – June 15, 2018). During the analytics retainer period, the ICF Project Manager and the Client Program Manager will mutually determine deliverables for formal acceptance review using the analytics request template provided during project initiation.

6. Time and Materials Support

Time and materials support from the ICF team in excess of the standard SIMS setup and analytics retainer services may be procured at any time during the project period at the rates listed in the Master Services Agreement.

7. Value-Add – Gas Conversion Service Availability Tool

As a value-add, ICF can provide our Gas Conversion Service Availability Tool for the Client. One of the key aspects of this service is to provide the Client's customers with a quick and easy



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Figure 2

If the system cannot match the address or there are multiple potential matching results the user will be prompted to select the correct matching address. See Figure 3.

CHECK AVAILABILITY

services vary by location. Enter the full address where you want the service, including apartment or unit number.

Street Address

346

346

346

346

346

346

CONTINUE

Figure 3

Once a user selects the correct address from the options they will be able to validate the location on the map as in Figure 3. After the user validates their address the tool will query the ICF spatial database and determine if the customer address is located in a geographic area being supported by the gas conversion program. If the customer falls inside of the program footprint they will be informed to continue on and submit a program application. If the customer's address falls outside of the geographic area being supported by the program, they will be presented with a message informing them that the service is not currently available in their area. Geographic areas being supported by the program will be updated quarterly based on actual or projected pipeline builds as provided by the client.

Other Functionality

In addition to the public facing portion of the tool, ICF will be actively compiling information on the key usage metrics of the tool. These metrics will include the standard metrics captured by Google Analytics in addition to the number of unique visitors, all addresses searched (addresses that were not located by the tool will be flagged separately) and whether the addresses were within the program footprint or not. This data and a summary report will be provided back to the Client on a monthly basis.

8. Project Organization

Successful development and deployment of a custom Gas Analytics for the Client involves many interrelated project activities. The sections below are designed to aid the Client in understanding major components of a successful Gas Analytics project including the key project roles to be staffed, the Client and third party datasets expected to be acquired, integrated, and analyzed, and the major project tasks with timelines.



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Client agrees to provide appropriate Project resources including but not limited to, data, information, and appropriate and cooperative personnel, all as necessary to facilitate ICF's performance of the Services.

Client will allocate personnel to the Project with the appropriate knowledge of the indicated area and the skills to perform the Client tasks, and any additional personnel that may be necessary for Client to perform its obligations under the implementation work plan.

8.1. Project Roles

For the successful implementation of this project, ICF and Client must assign staff with the appropriate qualifications and authority to the following roles. As the period of performance for this contract spans multiple years, the staff assigned to these roles may change with the proper notification and approval of both parties so long as the replacement staff are properly qualified.

8.2. Key ICF Project Roles

ICF Gas Analytics Representatives: ICF will designate a Project Manager and Lead Gas Analytics Representative for the Client Gas Analytics Project. The Project Manager will have authority to make project commitments on behalf of ICF. The Project Manager and Lead Gas Analytics Representative will serve as liaisons between Client and the ICF analytics team to gather project requirements, understand available data, identify data gaps, work with Client staff to formulate key initial and ongoing analytical questions and business use cases, present proposed analysis parameters for approval, facilitate updating of analyses over time to drive continuous value and maximize received value, and train Client staff in how to access and use the actionable intelligence delivered.

8.3. Key Client Project Roles

Client will allocate the following described personnel to the Project appropriate knowledge of the indicated area and the skills to perform the Client tasks, and any additional personnel that may be necessary for the Client to perform its obligations under the implementation work plan.

8.3.1. Client Program Manager: The Client Program Manager will serve as the primary point of contact for the ICF Gas Analytics Representatives. The Client Program Manager will aid in the coordination of project initiation meetings and tasks and work to define the analytical questions that will drive program success for the Client. The Client Program Manager will approve the proposed analysis parameters, designate the Client Data Lead, and control Client access to authorized SIMS logins. The initial Client Program Manager is Linda Melitz.

8.3.2. Client Data Lead: The Client Data Lead will work with designated ICF staff to obtain and securely transfer required Client datasets in an agreed upon format. The Client Data Lead is responsible for providing required Client Data in agreed upon formats in a timely manner to avoid delays in project timelines.

9. Project Governance

The Project will have sponsorship from ICF's and Client's senior management, who will be available on a timely and regular basis to monitor the Project progress and to act as a decision maker for policy decisions.



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10. Deliverables Acceptance Procedure

This project will include numerous formal and informal deliverables over the period of performance. Some deliverables (e.g. provisioning of the user interface) are more substantial while other deliverables (e.g. delivery of an individual targeting output) will be smaller in scope. The acceptance procedure for all formal Deliverables outlined in this SOW will be as follows. Please note that the client may elect to follow step D for any deliverable to indicate approval without further action

- A. ICF will work with Client personnel to gather input and review draft Deliverables
- B. When complete, final Deliverables will be reviewed and signed off by Client utilizing a mutually agreed Acceptance Form.
- C. The Acceptance Form should be physically signed (or electronically signed) indicating approval or disapproval within five (5) business days.
- D. If a Deliverable is neither approved nor rejected or a reasonable request to extend is not made and accepted within five (5) business days, the Deliverable will be deemed to have been approved without change or comment.
- E. If Client is not able to approve a Deliverable, Client will provide ICF with a description of why the Deliverable cannot be approved. If required, the parties will meet to discuss the deficiency of the Deliverable in detail.



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PROJECT TIMELINE AND PAYMENT SCHEDULE

ICF will work aggressively to meet the timeline described below (the "Project Timeline"). The following is a list of tasks within each phase of the project based on the Parties' understanding of the scope of the project at the time of this SOW. Specific analytical deliverable timelines after project initiation will be agreed upon by ICF and Client as scope is defined and will be delivered under the analytics retainer. ICF has prepared this submission on a Firm Fixed Price basis for the setup and deployment of the Gas Analytics ,the ongoing Analytics Retainer, and the integration of Third Party Data.

Project Timeline and Fees Schedule



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Phase	Description	Timeline	Billing
Project Initiation	<ul style="list-style-type: none"> Project kickoff meeting Gathering of data requirements Loading of Client and third party data to SIMS Application of Gas Analytics to raw data based on business rules of the Client's program and generation of results Delivery of first Gas Analytics results to authorized Client users via SIMS User Interface 	March 15, 2016 – June 30, 2016 (3 months)	<ul style="list-style-type: none"> \$30,000 billed at project start (March 15, 2016) \$30,000 billed upon delivering 1st round of results
SIMS Analytics Retainer	<ul style="list-style-type: none"> Hosting and maintenance of the SIMS to support Gas Analytics and integration of the annually updated third party data Integration of biannually (twice per year) updated Client customer and outreach data Biannual updating of the Client results based on incremental program results and incremental data loads Delivery of results via SIMS User Interface ICF Gas Analytics representative(s) serving as an extension of the Client's analytics staff to manage the project, define analytical questions, and deliver actionable results. Up to 50 ad hoc analytics support hours per year. 	Starts after setup is complete and until end of contract period.	<ul style="list-style-type: none"> \$5,000/month for SIMS billed first week of each month
Third Party Data Purchasing	<p>Costs to be invoiced based on actual data records matched.</p> <ul style="list-style-type: none"> Known Customer (residential & commercial) or Non-Customer properties where Liberty Utilities has secured the premise address and occupant identity information and provided it to ICF in an electronic, machine readable format - \$35 per 1,000 matched records Unknown Non-Customers (data not provided by Liberty Utilities): \$70 per 1,000 matched records <p>Invoiced based on cost as data is purchased. Cost based on actual data match rates. Data anticipated to be purchased during project initiation with annual incremental updates thereafter.</p>	<p>\$35/1,000 current Liberty Utility customers and known non-customers matched</p> <p>\$70/1,000 non-customers where premise address and occupant identity information is not provided</p>	Billed at cost. Note, ICF will provide estimate of data purchase to Liberty Utilities prior to purchasing the data. Liberty Utilities will need to approve estimate prior to ICF purchasing the data.



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Project Timeline and Fees Schedule

Phase	Description	Timeline	Billing
Gas Conversion Service Availability Tool Setup	<ul style="list-style-type: none"> Set up of the standard Gas Conversion Service Availability Tool 	Upon completion of SIMS Initiation Phase (3 Months)	<ul style="list-style-type: none"> \$6,000 billed as start of Gas Conversion Service Availability Tool Setup \$6,000 billed upon user acceptance of the Gas Conversion Service Availability Tool delivery.
Gas Conversion Service Availability Tool Maintenance	<ul style="list-style-type: none"> Quarterly update of gas service availability Hosting and maintenance of the SIMS to support Gas Analytics and the Gas Conversion Service Availability Tool deployment 	Starts after setup is complete and until end of contract period.	<ul style="list-style-type: none"> \$700/month hosting and maintenance fee for Gas Conversion Availability Tool

^A Required client data must be provided in full by April 15, 2016 to meet this timeline. Delay in data delivery will result in a corresponding delay in delivery data for the SIMS User Interface.

As outlined above, this project is estimated to require a minimum of three months to complete. Term may be extended at for up to three additional one year periods with monthly analytics and lookup tool hosting fees increasing by up to 5% per year for extension years. Renewal and termination of this SOW shall follow the terms of the Master Services Agreement.



STATEMENT OF WORK

In addition to the firm fixed and cost recovery phases outlined above, the Client may wish to engage with ICF on additional scope on a Time and Materials (T&M) basis. T&M scope would be defined and approved via the Change Order process outlined in Appendix A to the SOW. For T&M work, in addition to consulting fees, Client will reimburse ICF for reasonable and customary expenses including without limitation, expenses incurred for travel, such as local transportation, lodging, meals, telephone, shipping, and duplicating. These expenses will be billed to Client at actual cost and will include an administrative fee of 13%.

All invoices shall be paid in accordance with the terms of the Master Services Agreement. ICF will invoice the Client in December 2016 for all 2016 SIMS Analytics Retainer fees and 6 months of 2017 fees. ICF will invoice Client in 2017 on a monthly basis for the remaining maintenance SIMS Analytics Retainer fees at \$2500/month. The Gas Conversion Service Availability Tool Maintenance will be invoiced monthly at \$700/month once set up is complete.

PROJECT ASSUMPTIONS AND EXCLUSIONS

This section lists known assumptions and constraints that may impact the scope of the Services, the fees, and Project Timeline. Should any of the assumptions listed below change during the term of this SOW, Client recognizes that the Project Timeline and fees may be affected.

General Assumptions

1. Client will provide one (1) authorized point of contact for project management, approvals, and communications on the Client side.
2. ICF will source a team for production once the SOW is fully executed.
3. Staff may be added or removed based on project requirements. ICF cannot guarantee availability of resources or a firm deliverable date until a signed SOW is received from the Client.
4. ICF will create, develop, and produce the specified application according to this SOW based upon the Project Timeline and estimated fees. Any changes to the Services, Project Timeline, or fees will be documented and implemented following execution of an agreed upon modification to this SOW.
5. Lengthy delays in Client review and approval time may result in extended delivery dates and additional cost.
6. Client will provide ICF with access to all applicable systems, applications, and data. Client subject matter experts will be available for meetings within a reasonable time upon request.
7. Client will work with ICF to schedule multiple meetings on single days improving efficiency and reducing the travel and expenses for the engagement.
8. ICF travel costs for the kickoff meeting are included in the setup fee. ICF will only seek reimbursement for travel to address material scope beyond the standard SIMS deployment or if Client requests additional onsite visits after the kickoff.
9. Client will ensure that appropriate expertise is available to answer questions about the source and quality of the Client's datasets.
10. The Client will assign appropriately qualified and authorized staff to key project roles.



STATEMENT OF WORK

11. Deliverables and project schedule depend on timely review and input from various stakeholders. ICF and the Client will jointly define review dates as part of the work plan and will work to mitigate potential schedule risk that could arise from delays in review and comments.
12. It is mutually understood that business requirements, resources and dates may change subject to the applicable terms of this SOW and that any such material change requested by the Client or as a result of the Client's inability to provide agreed upon resources and to perform its other responsibilities set forth herein or the result of Client errors or omissions may result in a Change Order in accordance with the Change Order Procedure defined in accordance with Appendix A to the SOW.
13. ICF is purchasing the third party data on behalf of Client. The Client will retain and own its copy of the data for its direct business uses only. The Client will not be permitted to resell that data to third parties. Ownership of the original third party datasets remains with the vendor that provides it.
14. For data updates to occur in the SIMS, Client must provide their Client Data clean in the previously agreed upon format. Any changes in the specified data formats or ICF reloading of data due to errors found in the Client Data may result in additional charges to the Client.

In-Scope Assumptions

1. Datasets and tasks considered in-scope are outlined explicitly in this SOW.
2. The data analytics license includes the standard project administrative and management support hours required to define and deliver gas conversion analytics to Client staff plus up to 50 ad hoc analytics support hours per year.
3. Each data update pushed to the SIMS interface will completely refresh the available data to present the Client with the most currently available information. While a copy of the previous dataset may be archived upon request, past data will not be readily available online. However, information on who has received past outreach initiatives can be included in the published results if provided to the SIMS team by the Client.
4. Gas Conversion Service Availability Tool
 - a. Client will provide ICF with the raw dimensions (pixels) available for our tool
 - b. The tool will be deployed in a fixed width/height iframe
 - c. Client will provide ICF with a Style Guide
 - d. ICF will share with Client monthly usage metrics
 - e. The application will be supported for the following desktop browsers: Chrome, Firefox, Safari 5+, Opera 12+ and IE 7-11.
 - f. The application will be supported for the following mobile browsers: Safari for iOS 3-7+, Android browser 2.2+, 3.1+, 4+, Chrome for Android 4+ and iOS, Firefox for Android, Other WebKit browsers (webOS, Blackberry 7+, etc.), and IE10/11 for Win8 devices.
5. At Client's request, ICF can provide targeting results as geospatial layers that can be imported into Client systems. ICF and Client will work to agree on a mutually acceptable format for export.



STATEMENT OF WORK



PRIVATE AND CONFIDENTIAL
Page 16 of 18

Liberty Utilities
ICF Project Code: XXXX

STATEMENT OF WORK

ICF AND CLIENT CONTACTS

Client and ICF agree that the individuals listed below have full authority to direct and provide feedback relating to the Services described in this SOW.

ICF Project Manager

Liberty Utilities Project Manager

Name: Michael Whitaker

Linda Melitz

Title: Vice President

Program Manager

Phone: 303-579-4198

603-216-3542

E-mail: Michael.whitaker@icfi.com

Linda.melitz@libertyutilities.com

IN WITNESS WHEREOF, the Parties hereto, each acting under due and proper authority, have executed this SOW as of the SOW Effective Date.

By: ICF INCORPORATED, LLC

Liberty Utilities

Name: Joseph S. McGrath

Alan Swain

Title: Director, Contracts

PRESIDENT U.I.

Date: _____

2/26/16



STATEMENT OF WORK

Appendix A – Change Requests

For the duration of the SOW, ICF or Client may request a change to the scope or nature of the services described in the SOW (the “Change Request”). ICF shall have no obligation to commence work, nor shall Client have any obligation to pay ICF, in connection with any change until the fee and or schedule impact of the change is agreed upon, in writing, and executed by both ICF and Client.

If Client requests a change, ICF shall submit a Change Request, which will describe, in sufficient detail the impact the requested changes will have on schedule and fees as well as on the Services and Deliverables. If ICF initiates the Change Request the rationale for the change will also be included in the description.

No change shall be effective unless it is in writing and signed by Client and ICF.

Change Request Process

If a Change Request becomes necessary, the steps involved are:

- The ICF Program Account Manager or Program Executive provides Client management with a change request document that will serve as the basis for an amendment to the SOW.
- If the change is approved, Client and ICF shall execute the SOW amendment, which will authorize the work and indicate any additional fees associated with implementation.
- If the Parties do not agree upon a Change Request, the content of any such Change Request shall not become a part of the Services or Deliverables delivered by ICF.
- If the Parties do agree upon the Change Request, the Project work plan will be updated in accordance with the approved Change Request.
- Pricing for services provided for in the Change Request will be defined at the time of the Change Request and mutually agreed to by ICF and Client.

Change Request Execution

All Change Requests will require written or electronic execution by the following parties:

For ICF: Contracts

For Client: Project Sponsor or Program Manager





Gain Peace of Mind.

STOP:

- 1 Prepaying for fuel to heat your home.
- 2 Scheduling fuel deliveries.
- 3 Running out of heating fuel.
- 4 Wasting space used for fuel storage.

Use Natural Gas.

CHOOSE LIBERTY. CHOOSE NATURAL GAS



Liberty Utilities

www.libertyutilities.com



Liberty Utilities

130 Elm Street
Manchester NH 03101

1. A free natural gas connection requires an inspection by Liberty Utilities because certain conditions may require additional work, such as adding service or a 30' fuel, vent gas and vent cross-connection restriction, and/or natural gas piping. The customer will be responsible for the entire cost of this service if the not in accordance with the code. The natural gas service must be used as the primary heating source. Liberty Utilities is not responsible for oil tank removal and/or disposal. This offer is only valid for residential customers with Liberty Utilities existing in service areas, and does not apply to future construction contracts or industrial accounts. Some conditions apply including terms of Liberty Utilities tariff.
2. Eligibility for energy efficiency rebates will be determined separately and conform with the requirements for Liberty Utilities approved energy efficiency programs. Participation in the free bed from other does not guarantee that customers will be eligible for or receive an energy efficiency rebate.
3. Liberty Utilities is not responsible for redlines provided to customers from preferred contractors. The installation may vary by season or contractor.
4. When installation varies with type of equipment purchased, participation in this free offer does not guarantee that customer will be eligible for or receive a reduced rate financing. Reduced rate financing can not be used in conjunction with Gas Meter Rebate.
5. Subject to the "NH Green Investments Board's Normal Value" The board of date 24 July 2015.

Heating Season is Right Around the Corner!

The kids are back in school, summer vacations are over, and now it is time to start gearing up for the winter. Whether you are looking to reduce utility bills, add ambiance, or gain convenience, natural gas is the right fuel choice for you!

- Natural gas is always there when you need it.
- No more shoveling around oil fills or propane tanks to receive fuel deliveries.
- Keep your home as warm as you want without worrying about running out of fuel or paying high utility bills. Go ahead, Crank up the heat and

GET COZY!



DID YOU KNOW...?

On average, the resale value of a home heated with natural gas is **\$11 higher** per square foot than a home heated with oil.⁵

Natural Gas is the Natural Choice

- A **\$4,200** natural gas service line installation **FREE OF CHARGE!**¹
- REBATES** for energy efficient equipment up to **\$2,300** while funds last.²
- FREE**, no obligation, in home estimate by one of our preferred contractors.³
- REDUCED RATE** financing available.⁴

Contact your Liberty Utilities Account Manager **TODAY** to learn more about an exclusive offer that is only available until **DECEMBER 31, 2016**



CALL: 800-833-4200 (opt 5)

EMAIL: nhsalesmarketing@libertyutilities.com

VISIT: www.libertyutilities.com

Smart Business Decisions Start with Natural Gas



Clean, safe, and affordable natural gas is the smart choice when it comes to operating your business.

-  By switching to natural gas, companies can realize significant savings per year on fuel.
-  Natural gas is piped directly into your building, eliminating the need to monitor fuel levels and schedule deliveries.
-  Burning natural gas in the place of other fossil fuels emits fewer harmful chemicals into the atmosphere.
-  With most production occurring domestically, the natural gas industry helps to produce new US jobs.



Liberty Utilities

Liberty Utilities

130 Elm St
Manchester, NH 03101

HERE FOR YOU. HERE FOR YOUR BUSINESS.

Recognizing that no two businesses are alike, we provide commercial and industrial customers with an experienced account manager to help meet the distinct needs of each company. From switching over to natural gas, to maximizing equipment efficiency, your account manager is there to help.

OTHER SERVICES OFFERED

- On site construction meetings
- Personalized fuel consumption analysis
- Competitive price options
- Excellent customer service

Did You Know?

44% of the natural gas used in the United States is consumed by the commercial and industrial markets.[†]

† naturalgas.org

CONTACT US TODAY

to find out how natural gas
can improve your bottom line.

CALL: 1.800.833.4200 (option 5)

EMAIL: nhsalesmarketing@libertyutilities.com

VISIT: www.libertyutilities.com



«Date»

«Owner_First_Name_» «Owner_Last_Name_»
«House_» «Street_Name_» «Street_Suffix_» «Unit_Type» «Unit_Number_»
«City_Town_», «State_» «Zip_Code»

Dear «Owner_First_Name_»,

I am a «Liberty_Employee_Title_» with Liberty Utilities, and I am writing to inquire if you would be interested in taking advantage of natural gas if it was available to you? As a growing company, we are always looking for opportunities to extend our natural gas distribution system, and I believe your neighborhood is a prime candidate. While I cannot guarantee your neighborhood will be selected, high participation rates can increase your chances.

I have included some information on natural gas, as well as my contact information. Should you be interested, please contact me as soon as possible. I'd welcome the opportunity to walk you through the process, and help you determine if natural gas is the right choice for you.

Sincerely,

«Liberty_Employee_Name_», «Liberty_Employee_Title_»
«Liberty_Employee_Phone_Number_»
«Liberty_Employee_Email»

130 Elm St., Manchester, NH 03101
www.libertyutilities.com

What Will You Use Natural Gas For?



Natural gas can be used in a variety of ways.

INSIDE

- Heating
- Cooling
- Cooking
- Clothes Drying
- Indoor Fireplaces

OUTSIDE

- Pool Heaters
- Grills
- Backup Generators
- Outdoor Fireplaces

Did You Know...?

Over half of the homes in the United States use natural gas for heating, cooling, and cooking.[†]



Liberty Utilities

Bring Comfort Home



«Date»

«Owner_First_Name_» «Owner_Last_Name_»
«House_» «Street_Name_» «Street_Suffix_» «Unit_Type_» «Unit_»
«City_Town_», «State_» «Zip_Code_»

Dear «Owner_First_Name_»,

I am a «Liberty_Employee_Title_» with Liberty Utilities, and I am writing to inform you that we will be on your street in the near future to install a new gas service line for one of your neighbors.

If you are not currently a natural gas customer, now is the ideal time to consider it.

- We already plan to have a work crew on your street in the near future.
- Barring any unforeseen circumstances (ledge removal, steep grades, etc.), we can install a natural gas service line to your home for free (first 100 feet).

I'd welcome the opportunity to walk you through the process, and help you determine if it makes sense for you to convert to clean and affordable natural gas.

Sincerely,

«Liberty_Employee_Name_», «Liberty_Employee_Title_»
«Liberty_Employee_Phone_Number_»
«Liberty_Employee_Email_»

Kindly reference: "Neighbor Letter" when you contact me.



**Improve Your Bottom Line
NATURALLY.**

Liberty Utilities is the largest regulated natural gas distribution company in NH. With a local approach to management and support, we deliver dependable services to meet the needs of our customers. We provide a superior customer experience to our 89,000 residential and business customers through walk-in customer centers, energy efficiency initiatives, and programs for businesses and residential customers.

**HERE FOR YOU.
HERE FOR YOUR BUSINESS.**

Recognizing that no two businesses are alike, we provide commercial and industrial customers with an experienced account manager to help meet the distinct needs of each company. From switching over to natural gas to maximizing its efficiency, your account manager is there to help.

OTHER SERVICES OFFERED

- On site construction meetings
- Personalized fuel consumption analysis
- Competitive price options

WHY NATURAL GAS?

- Cost Effective
- Convenient
- Economical Input
- Versatile
- Environmentally Friendly

Contact us today to find out how **natural gas** can improve your bottom line!

1-800-833-4200 (OPT 5)
nhsalesmarketing@libertyutilities.com
www.libertyutilities.com



Liberty Utilities



**Choose Liberty
 Choose Natural Gas**

Looking for a safe, efficient, and cost effective way to fuel your home? Look no further than right outside your front door! Choose the convenience of natural gas, then sit back, relax, and enjoy.



RELIABLE :

Piped directly to your home, natural gas is always there when you need it. Enjoy the freedom of never worrying about fuel deliveries.



CLEAN :

Natural gas is the cleanest burning fossil fuel, making it the responsible choice for your family and the environment.



ECONOMICAL :

Natural gas is the most economical fuel source available.

Current Heating Fuel Values - Updated October 18, 2016

Fuel Type	Price/Unit	Heat Content Per BTU	Price Per Million BTU
Fuel Oil (#2)	\$2.06/gallon	138,690	\$14.82
Propane	\$2.94/gallon	91,333	\$32.15
Electricity	\$0.16/kwh	3,412	\$47.76
Natural Gas (1st Tier)	\$0.87/therm	100,000	\$8.71
Natural Gas (2nd Tier)	\$0.81/therm	100,000	\$8.11

Office of Energy and Planning, October 24, 2016.



VERSATILE:

Natural gas can be used for heating, water heating, cooking, and a host of other uses.



DOMESTIC:

Domestic production of natural gas means new jobs, a positive economical impact, and energy independence.

Easy as 1,2,3.

We want to make the process of bringing natural gas to your home as simple as possible. From marking underground utilities to installing your gas meter, we make the process easy. All you need to do is follow these three steps;

1. Complete an application for service with your Sales Representative.
2. Contact a licensed contractor for a free, no obligation conversion cost estimate.
3. Sit back and relax! We will call you with a service installation date.

.....
CONTACT US TODAY TO GET STARTED!



CALL: 800-833-4200 (opt 5)
EMAIL: nhsalesmarketing@libertyutilities.com
VISIT: www.libertyutilities.com

Did You Know...?

Converting your home to natural gas can increase its value. In a study done by the Boston Globe, it was found that natural-gas homes command \$11 more per square foot than homes that heat with oil.



Whats In It For You?

- A **\$4,200** service line installation **FREE OF CHARGE***
- Rebates for energy efficient equipment up to **\$2,300** while funds last*
- 2% FINANCING** for natural gas energy efficiency improvements*

* Conditions Apply. Call to speak with an Account Manager for more details.

www.libertyutilities.com

Choose Liberty. Choose Natural Gas.



R-3 Residential Heating

Customer Charge per Month	Number of months	Total CC	Yearly ADTH	Yearly therms 80 used	799	Order Rates
\$ 15.02	12	\$ 180.24			All Therms	\$ 0.5631

Month	Actual Therms Used *	Weather Normalized	All therms Distribution	LDAC	LDAC Total	COG	COG Total	Gas Bill
Aug-18	14	14	\$ 7.88	\$ 0.0945	\$ 1.32	\$ 0.3665	\$ 5.13	\$ 29.36
Sep-17	14	14	\$ 7.88	\$ 0.0640	\$ 0.90	\$ 0.4725	\$ 6.62	\$ 30.41
Oct-17	22	22	\$ 12.39	\$ 0.0640	\$ 1.41	\$ 0.4725	\$ 10.40	\$ 39.21
Nov-17	51	53	\$ 30.13	\$ 0.0856	\$ 4.37	\$ 0.6445	\$ 32.87	\$ 82.38
Dec-17	90	88	\$ 49.41	\$ 0.0856	\$ 7.70	\$ 0.6445	\$ 58.01	\$ 130.14
Jan-18	117	129	\$ 72.67	\$ 0.0856	\$ 10.02	\$ 0.6445	\$ 75.41	\$ 173.11
Feb-18	141	149	\$ 84.16	\$ 0.0856	\$ 12.07	\$ 0.8056	\$ 113.59	\$ 224.84
Mar-18	130	154	\$ 86.67	\$ 0.0856	\$ 11.13	\$ 0.8056	\$ 104.73	\$ 217.55
Apr-18	89	83	\$ 46.91	\$ 0.0856	\$ 7.62	\$ 0.8056	\$ 71.70	\$ 141.25
May-18	51	51	\$ 28.72	\$ 0.0945	\$ 4.82	\$ 0.3133	\$ 15.98	\$ 64.54
Jun-18	25	25	\$ 14.08	\$ 0.0945	\$ 2.36	\$ 0.3916	\$ 9.79	\$ 41.25
Jul-18	16	16	\$ 9.01	\$ 0.0945	\$ 1.51	\$ 0.3665	\$ 5.86	\$ 31.41
Yearly Distribution Total	760	799	\$ 449.91		\$ 65.22		\$ 510.07	\$ 1,205.44

Customer Yearly Total Cost	NH Office of Strategic Initiatives Pricing as of 8/1/2018	Propane	Price p/gallon	Annual Consumption	Annual Total Cost	Switch to Gas Savings	Percent
\$ 1,205.44			\$ 2.84	878	\$ 2,493.53	\$ 1,288	52%
Average Price per therm	\$ 1.51	Oil	\$ 2.84	577	\$ 1,638.35	\$ 432.91	26%

* Based on Actuals contained in DG17-048 Cost of Gas Filing

MEP R-6 Residential Heating

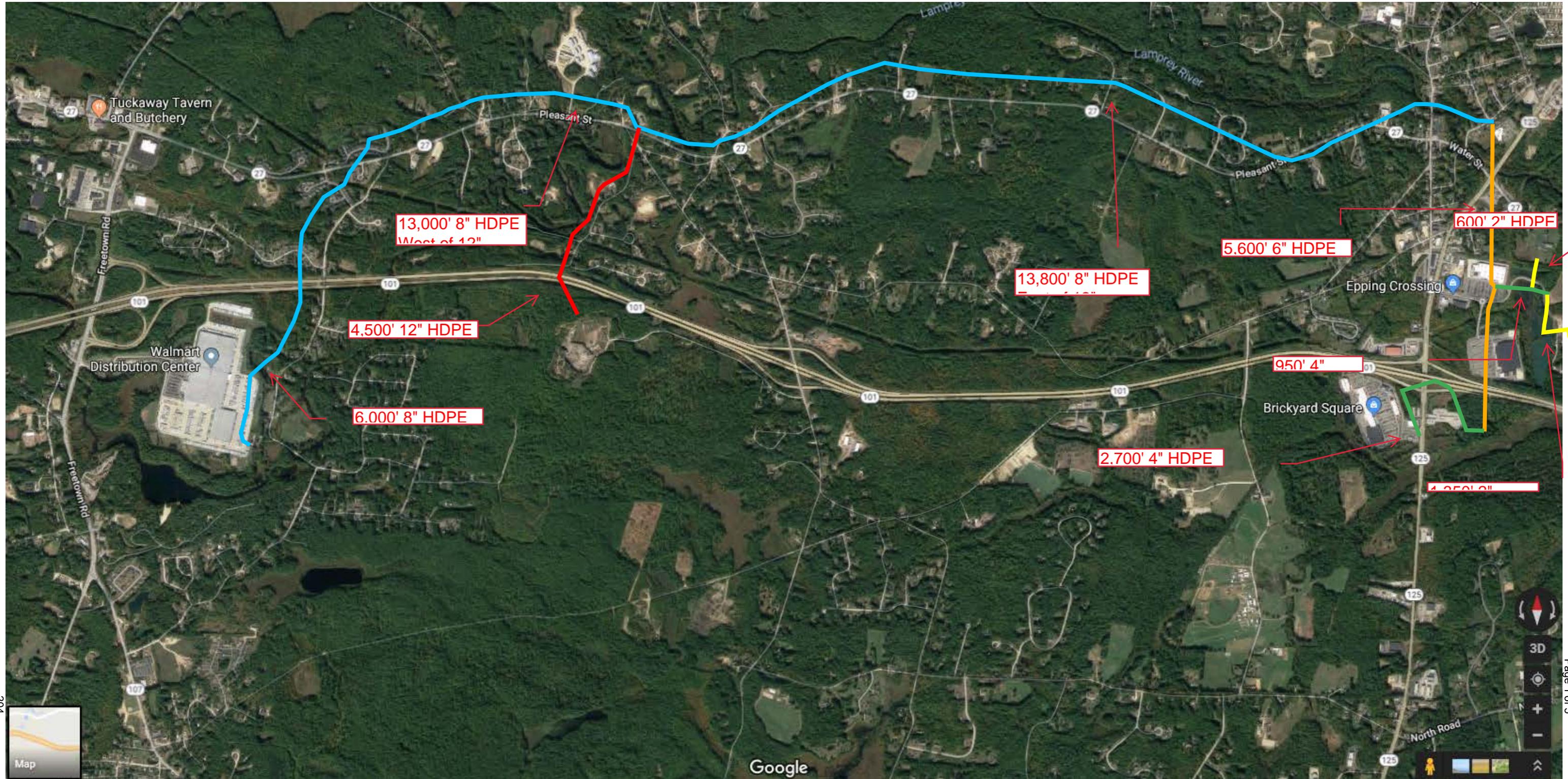
Customer Charge per Month	Number of months	Total CC	Yearly ADTH	Yearly therms 80 used	799	Order Rates
\$ 19.52	12	\$ 234.24			All Therms	\$ 0.7320

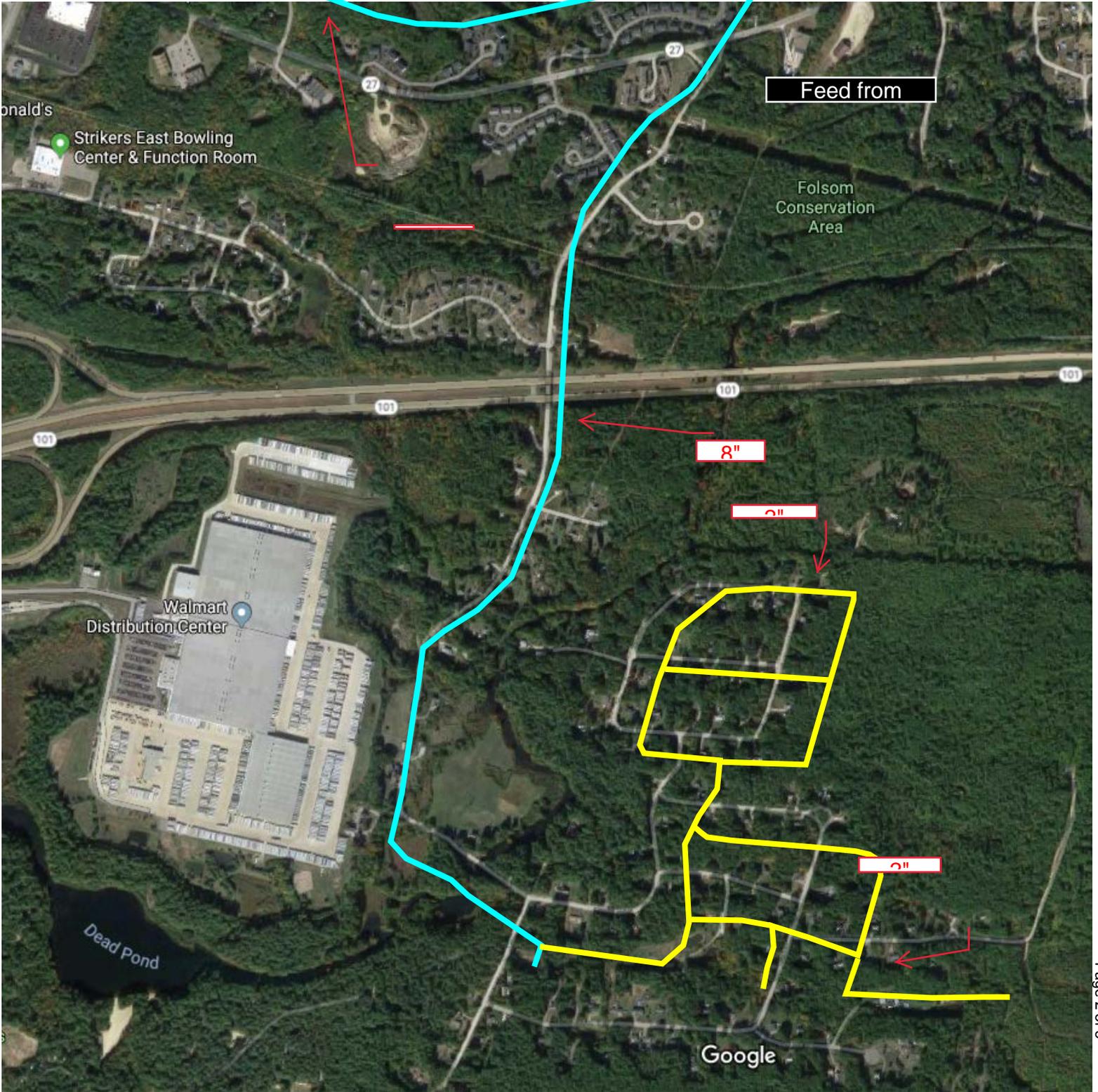
Month	Actual Therms Used *	Weather Normalized	All Therms Distribution	LDAC	LDAC Total	COG	COG Total	Gas Bill
Aug-17	14	14	\$ 10.25	\$ 0.0945	\$ 1.32	\$ 0.3665	\$ 5.13	\$ 36.22
Sep-17	14	14	\$ 10.25	\$ 0.0640	\$ 0.90	\$ 0.4725	\$ 6.62	\$ 37.28
Oct-17	22	22	\$ 16.10	\$ 0.0640	\$ 1.41	\$ 0.4725	\$ 10.40	\$ 47.43
Nov-17	51	53	\$ 39.16	\$ 0.0856	\$ 4.37	\$ 0.6445	\$ 32.87	\$ 95.92
Dec-17	90	88	\$ 64.23	\$ 0.0856	\$ 7.70	\$ 0.6445	\$ 58.01	\$ 149.46
Jan-17	117	129	\$ 94.47	\$ 0.0856	\$ 10.02	\$ 0.6445	\$ 75.41	\$ 199.41
Feb-17	141	149	\$ 109.40	\$ 0.0856	\$ 12.07	\$ 0.8056	\$ 113.59	\$ 254.58
Mar-17	130	154	\$ 112.67	\$ 0.0856	\$ 11.13	\$ 0.8056	\$ 104.73	\$ 248.05
Apr-17	89	83	\$ 60.98	\$ 0.0856	\$ 7.62	\$ 0.8056	\$ 71.70	\$ 159.82
May-17	51	51	\$ 37.33	\$ 0.0945	\$ 4.82	\$ 0.3133	\$ 15.98	\$ 77.65
Jun-17	25	25	\$ 18.30	\$ 0.0945	\$ 2.36	\$ 0.3916	\$ 9.79	\$ 49.97
Jul-17	16	16	\$ 11.71	\$ 0.0945	\$ 1.51	\$ 0.3665	\$ 5.86	\$ 38.61
Yearly Distribution Total	760	799	\$ 584.86		\$ 65.22		\$ 510.07	\$ 1,394.39

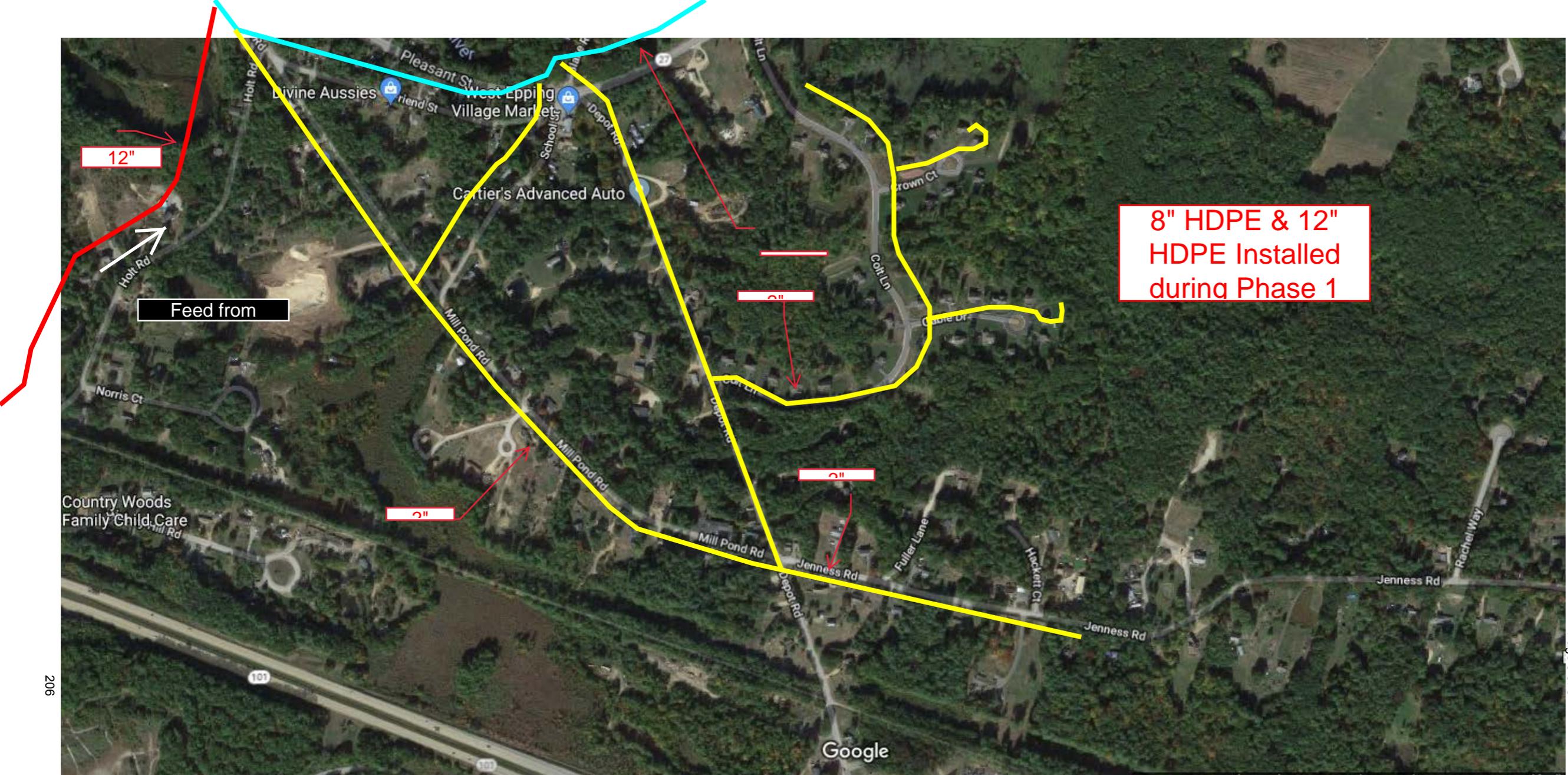
Customer Yearly Total	Price p/gallon	Annual Consumpti	Annual Total Cost	Switch to Gas Savings	Percent	
\$ 1,394.39	Propane	\$ 2.84	878	\$ 2,493.53	\$ 1,099	44%
Average Price per therm	Oil	\$ 2.84	577	\$ 1,638.35	\$ 243.96	15%

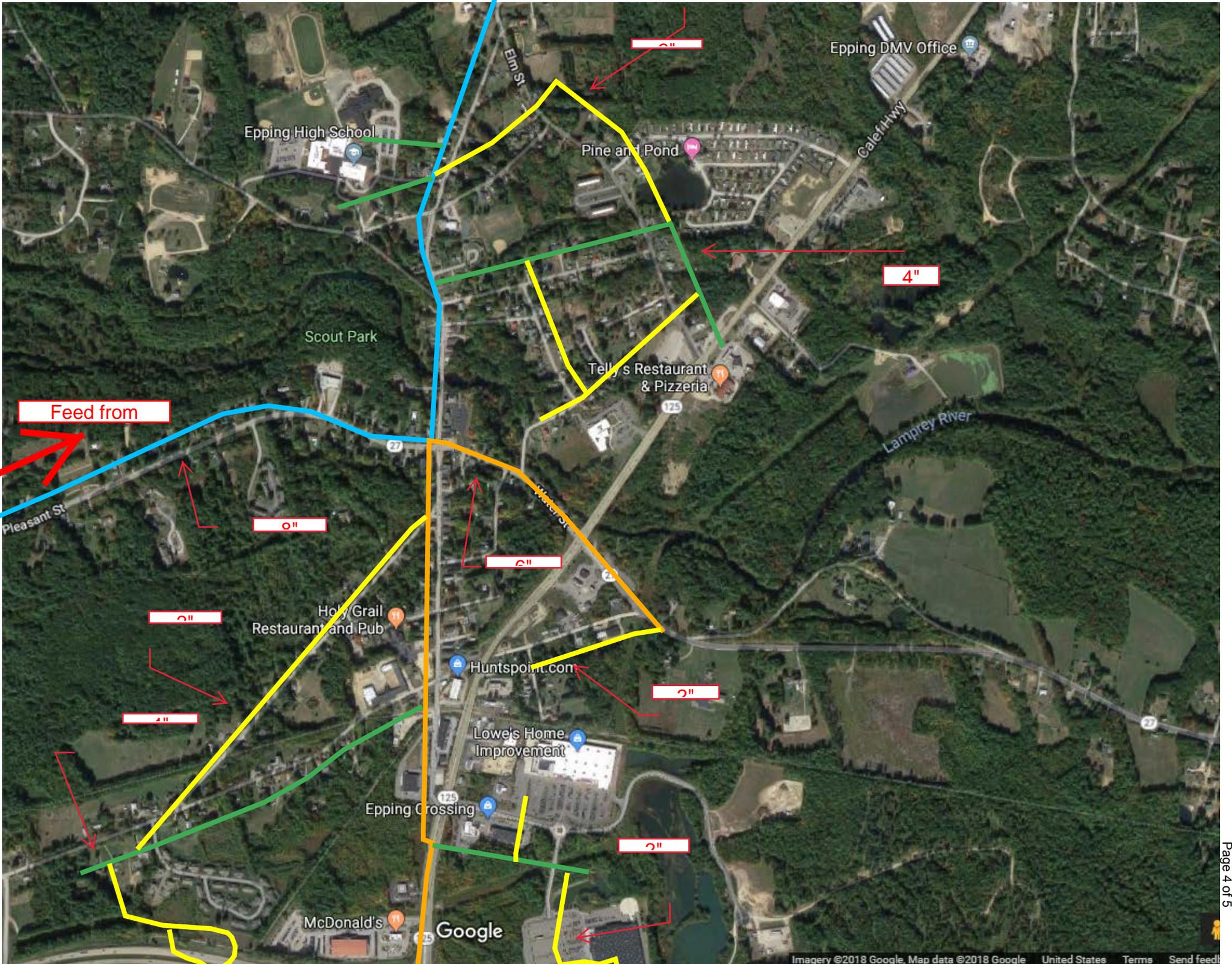
* Based on Actuals contained in DG17-048 Cost of Gas Filing

NH Office of
Strategic
Initiatives
Pricing as of
8/1/2018









Feed from

Pleasant St

Epping High School

Scout Park

Pine and Pond

Telly's Restaurant & Pizzeria

Holy Grail Restaurant and Pub

Huntspoint.com

Lowe's Home Improvement

Epping Crossing

McDonald's

Google

Epping DMV Office

Caler Hwy

Lamprey River

4"

8"

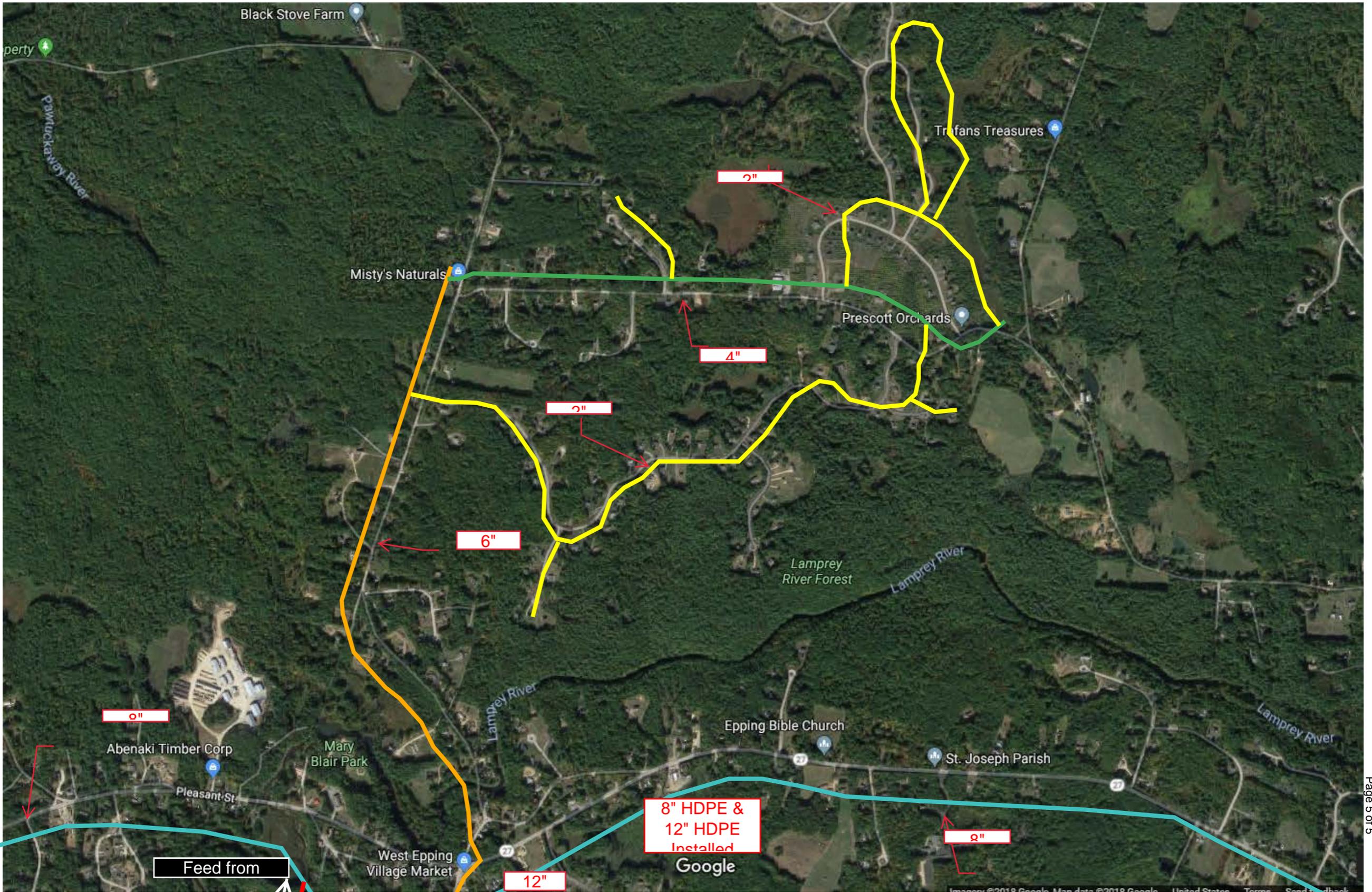
6"

8"

4"

8"

8"



0"

6"

2"

4"

2"

8" HDPE &
12" HDPE
Installed

12"

2"

Feed from

208

Rate Base model

Purchase Price	\$	4,637,215
Decompression (Broken Bridge)		
Total Cost	\$	4,637,215
Required Return (pre tax)		8.53%
Depreciation	\$	93,319
Customers		59
NPV		\$324,944

CapEx

Weighted Average Cost of Capital Calculation:

	Ratio	Rate	Weighted Rate	PreTax
Long Term Debt	49.85%	4.42%	2.20%	2.20%
Short Term Debt	0.95%	2.49%	0.02%	0.02%
Common Equity	49.21%	9.30%	4.58%	6.30%
			<u>6.80%</u>	<u>8.53%</u>

	Tax Depr. Rates	Tax Deprec	Accumulated Tax Deprec	Book Depr	Accumulated Book Deprec	Excess Tax Deprec.	Tax Rate	ADIT	Rate Base	Return Required	Property Tax 1.4%	O&M - Ins per customer	Revenue Requirement	Distribution Revenues	Delta
1	3.7500%	\$ 173,896	\$ 173,896	\$ 93,319	\$ 93,319	80,576	27.48%	(22,142)	\$ 4,637,215	\$390,528	\$61,044	\$ 35.00	\$ 546,956	\$ 508,196	\$ (38,760)
2	7.2190%	334,761	508,656	93,319	186,639	322,017	27.48%	(88,490)	4,521,753	378,797	58,888	2,100	533,104	516,835	(16,269)
3	6.6770%	309,627	818,283	93,319	279,958	538,325	27.48%	(147,932)	4,209,325	365,475	56,826	2,136	517,756	525,622	7,865
4	6.1770%	286,441	1,104,724	93,319	373,277	731,446	27.48%	(201,001)	4,062,936	352,720	54,850	2,172	503,061	534,557	31,496
5	5.7130%	264,924	1,369,648	93,319	466,597	903,051	27.48%	(248,158)	3,922,460	340,488	52,953	2,209	498,970	543,645	54,675
6	5.2850%	245,077	1,614,725	93,319	559,916	1,054,809	27.48%	(289,861)	3,787,438	328,741	51,130	2,247	475,438	552,887	77,449
7	4.8880%	226,667	1,841,392	93,319	653,235	1,188,156	27.48%	(326,505)	3,657,474	317,443	49,376	2,285	462,423	562,286	99,863
8	4.5220%	209,695	2,051,087	93,319	746,555	1,304,532	27.48%	(358,485)	3,532,175	306,558	47,684	2,324	449,886	571,844	121,959
9	4.4620%	206,913	2,257,999	93,319	839,874	1,418,125	27.48%	(389,701)	3,407,640	295,906	46,003	2,363	437,591	581,566	143,974
10	4.4610%	206,866	2,464,865	93,319	933,193	1,531,672	27.48%	(420,903)	3,283,118	285,286	44,322	2,403	425,331	591,452	166,121
11	4.4620%	206,913	2,671,778	93,319	1,026,513	1,645,265	27.48%	(452,119)	3,158,583	274,667	42,641	2,444	413,071	601,507	188,436
12	4.4610%	206,866	2,878,644	93,319	1,119,832	1,758,812	27.48%	(483,322)	3,034,061	264,047	40,960	2,486	400,812	611,733	210,921
13	4.4620%	206,913	3,085,556	93,319	1,213,151	1,872,405	27.48%	(514,537)	2,909,527	253,428	39,279	2,528	388,554	622,132	233,578
14	4.4610%	206,866	3,292,423	93,319	1,306,471	1,985,952	27.48%	(545,740)	2,785,005	242,808	37,598	2,571	376,296	632,708	256,412
15	4.4620%	206,913	3,499,335	93,319	1,399,790	2,099,545	27.48%	(576,955)	2,660,470	232,189	35,916	2,615	364,039	643,464	279,425
16	4.4610%	206,866	3,706,201	93,319	1,493,109	2,213,092	27.48%	(608,158)	2,535,948	221,569	34,235	2,659	351,783	654,403	302,620
17	4.4620%	206,913	3,913,114	93,319	1,586,429	2,326,685	27.48%	(639,373)	2,411,413	210,950	32,554	2,704	339,528	665,528	326,001
18	4.4610%	206,866	4,119,980	93,319	1,679,748	2,440,232	27.48%	(670,576)	2,286,891	200,330	30,873	2,750	327,273	676,842	349,569
19	4.4620%	206,913	4,326,893	93,319	1,773,067	2,553,825	27.48%	(701,791)	2,162,357	189,711	29,192	2,797	315,019	688,349	373,329
20	4.4610%	206,866	4,533,759	93,319	1,866,387	2,667,372	27.48%	(732,994)	2,037,835	179,091	27,511	2,845	302,766	700,050	397,284
21	2.2310%	103,456	4,637,215	93,319	1,959,706	2,677,509	27.48%	(735,779)	1,941,730	169,684	26,213	2,893	292,110	711,951	419,842
22	0.0000%	-	4,637,215	93,319	2,053,025	2,584,190	27.48%	(710,135)	1,874,054	162,701	25,300	2,942	284,262	724,054	439,793
23	0.0000%	-	4,637,215	93,319	2,146,345	2,490,870	27.48%	(684,491)	1,806,379	156,930	24,386	2,992	277,627	736,363	458,736
24	0.0000%	-	4,637,215	93,319	2,239,664	2,397,551	27.48%	(658,847)	1,738,704	151,158	23,473	3,043	270,993	748,882	477,888
25	0.0000%	-	4,637,215	93,319	2,332,983	2,304,232	27.48%	(633,203)	1,671,029	145,387	22,559	3,095	264,360	761,613	497,252
26	0.0000%	-	4,637,215	93,319	2,426,303	2,210,912	27.48%	(607,559)	1,603,354	139,616	21,645	3,147	257,728	774,560	516,832
27	0.0000%	-	4,637,215	93,319	2,519,622	2,117,593	27.48%	(581,915)	1,535,678	133,845	20,732	3,201	251,097	787,728	536,631
28	0.0000%	-	4,637,215	93,319	2,612,941	2,024,274	27.48%	(556,270)	1,468,003	128,074	19,818	3,255	244,466	801,119	556,653
29	0.0000%	-	4,637,215	93,319	2,706,261	1,930,954	27.48%	(530,626)	1,400,328	122,302	18,904	3,311	237,837	814,738	576,901
30	0.0000%	-	4,637,215	93,319	2,799,580	1,837,635	27.48%	(504,982)	1,332,653	116,531	17,991	3,367	231,208	828,588	597,380
31	0.0000%	-	4,637,215	93,319	2,892,899	1,744,316	27.48%	(479,338)	1,264,978	110,760	17,077	3,424	224,581	842,674	618,094
32	0.0000%	-	4,637,215	93,319	2,986,219	1,650,996	27.48%	(453,694)	1,197,303	104,989	16,164	3,482	217,954	857,000	639,046
33	0.0000%	-	4,637,215	93,319	3,079,538	1,557,677	27.48%	(428,050)	1,129,627	99,218	15,250	3,542	211,328	871,569	660,240
34	0.0000%	-	4,637,215	93,319	3,172,857	1,464,358	27.48%	(402,406)	1,061,952	93,446	14,336	3,602	204,704	886,386	681,682
35	0.0000%	-	4,637,215	93,319	3,266,177	1,371,038	27.48%	(376,761)	994,277	87,675	13,423	3,663	198,080	901,454	703,374
36	0.0000%	-	4,637,215	93,319	3,359,496	1,277,719	27.48%	(351,117)	926,602	81,904	12,509	3,725	191,458	916,779	725,321
37	0.0000%	-	4,637,215	93,319	3,452,815	1,184,400	27.48%	(325,473)	858,927	76,133	11,596	3,789	184,836	932,364	747,528
38	0.0000%	-	4,637,215	93,319	3,546,135	1,091,080	27.48%	(299,829)	791,252	70,362	10,682	3,853	178,216	948,214	769,998
39	0.0000%	-	4,637,215	93,319	3,639,454	997,761	27.48%	(274,185)	723,576	64,591	9,768	3,918	171,597	964,334	792,737
40	0.0000%	-	4,637,215	93,319	3,732,773	904,442	27.48%	(248,541)	655,901	58,819	8,855	3,985	164,978	980,728	815,749
41	0.0000%	-	4,637,215	93,319	3,826,093	811,122	27.48%	(222,896)	588,226	53,048	7,941	4,053	158,361	997,400	839,039
42	0.0000%	-	4,637,215	93,319	3,919,412	717,803	27.48%	(197,252)	520,551	47,277	7,027	4,122	151,745	1,014,356	862,610
43	0.0000%	-	4,637,215	93,319	4,012,731	624,484	27.48%	(171,608)	452,876	41,506	6,114	4,192	145,131	1,031,600	886,469
44	0.0000%	-	4,637,215	93,319	4,106,051	531,164	27.48%	(145,964)	385,200	35,735	5,200	4,263	138,517	1,049,137	910,620
45	0.0000%	-	4,637,215	93,319	4,199,370	437,845	27.48%	(120,320)	317,525	29,963	4,287	4,336	131,905	1,066,972	935,067
46	0.0000%	-	4,637,215	93,319	4,292,689	344,526	27.48%	(94,676)	249,850	24,192	3,373	4,409	125,294	1,085,111	959,817
47	0.0000%	-	4,637,215	93,319	4,386,009	251,206	27.48%	(69,032)	182,175	18,421	2,459	4,484	118,684	1,103,558	984,874
48	0.0000%	-	4,637,215	93,319	4,479,328	157,887	27.48%	(43,387)	114,500	12,650	1,546	4,560	112,075	1,122,117	1,010,243
49	0.0000%	-	4,637,215	93,319	4,572,647	64,568	27.48%	(17,743)	46,825	6,879	632	4,638	105,468	1,141,398	1,035,930
50	0.0000%	-	4,637,215	64,568	4,637,215	-	27.48%	-	-	1,997	-	4,717	71,281	1,160,801	1,089,520

100.0000%			\$	4,637,215
	Check		\$	-

Rate Base model

Purchase Price	\$	4,637,215
Decompression (Broken Bridge)		
Total Cost	\$	4,637,215
Required Return (pre tax)		8.53%
Depreciation	\$	93,319
Customers		59
NPV		\$1,555,123

CapEx

Weighted Average Cost of Capital Calculation:

	Ratio	Rate	Weighted Rate	PreTax
Long Term Debt	49.85%	4.42%	2.20%	2.20%
Short Term Debt	0.95%	2.49%	0.02%	0.02%
CommonEquity	49.21%	9.30%	4.58%	6.30%
			6.80%	8.53%

	Tax Depr. Rates	Tax Deprec	Accumulated Tax Deprec	Book Depr	Accumulated Book Deprec	Excess Tax Deprec.	Tax Rate	ADIT	Rate Base	Return Required	Property Tax 1.4%	O&M - Ins per customer	Revenue Requirement	Distribution Revenues	Delta
1	3.7500%	\$ 173,896	\$ 173,896	\$ 93,319	\$ 93,319	80,576	27.48%		\$ 4,637,215	\$197,726	\$62,602	\$ 35.00	\$ 2,065.00	\$ 659,391	\$ 303,679
2	7.2190%	334,761	508,656	93,319	186,639	322,017	27.48%	(88,490)	4,362,086	\$383,720	\$58,888	\$ 2,100.11	\$538,028	670,601	\$ 132,573
3	6.6770%	309,627	818,283	93,319	279,958	538,325	27.48%	(147,932)	4,209,325	\$365,475	\$56,826	\$ 2,135.81	\$517,756	682,001	\$ 164,245
4	6.1770%	286,441	1,104,724	93,319	373,277	731,446	27.48%	(201,001)	4,062,936	\$352,720	\$54,850	\$ 2,172.12	\$503,061	693,595	\$ 190,534
5	5.7130%	264,924	1,369,648	93,319	466,597	903,051	27.48%	(248,158)	3,922,460	\$340,488	\$52,953	\$ 2,209.04	\$488,970	705,386	\$ 216,416
6	5.2850%	245,077	1,614,725	93,319	559,916	1,054,809	27.48%	(289,861)	3,787,438	\$328,741	\$51,130	\$ 2,246.60	\$475,438	717,378	\$ 241,940
7	4.8880%	226,667	1,841,392	93,319	653,235	1,188,156	27.48%	(326,505)	3,657,474	\$317,443	\$49,376	\$ 2,284.79	\$462,423	729,573	\$ 267,150
8	4.5220%	209,695	2,051,087	93,319	746,555	1,304,532	27.48%	(358,485)	3,532,175	\$306,558	\$47,684	\$ 2,323.63	\$449,886	741,976	\$ 292,900
9	4.4620%	206,913	2,257,999	93,319	839,874	1,418,125	27.48%	(389,701)	3,407,640	\$295,906	\$46,003	\$ 2,363.13	\$437,591	754,589	\$ 316,998
10	4.4610%	206,866	2,464,865	93,319	933,193	1,531,672	27.48%	(420,903)	3,283,118	\$285,286	\$44,322	\$ 2,403.30	\$425,331	767,417	\$ 342,086
11	4.4620%	206,913	2,671,778	93,319	1,026,513	1,645,265	27.48%	(452,119)	3,158,583	\$274,667	\$42,641	\$ 2,444.16	\$413,071	780,463	\$ 367,392
12	4.4610%	206,866	2,878,644	93,319	1,119,832	1,758,812	27.48%	(483,322)	3,034,061	\$264,047	\$40,960	\$ 2,485.71	\$400,812	793,731	\$ 392,919
13	4.4620%	206,913	3,085,556	93,319	1,213,151	1,872,405	27.48%	(514,537)	2,909,527	\$253,428	\$39,279	\$ 2,527.97	\$388,554	807,225	\$ 418,671
14	4.4610%	206,866	3,292,423	93,319	1,306,471	1,985,952	27.48%	(545,740)	2,785,005	\$242,808	\$37,598	\$ 2,570.94	\$376,296	820,948	\$ 444,651
15	4.4620%	206,913	3,499,335	93,319	1,399,790	2,099,545	27.48%	(576,955)	2,660,470	\$232,189	\$35,916	\$ 2,614.65	\$364,039	834,904	\$ 470,864
16	4.4610%	206,866	3,706,201	93,319	1,493,109	2,213,092	27.48%	(608,158)	2,535,948	\$221,569	\$34,235	\$ 2,659.10	\$351,783	849,097	\$ 497,314
17	4.4620%	206,913	3,913,114	93,319	1,586,429	2,326,685	27.48%	(639,373)	2,411,413	\$210,950	\$32,554	\$ 2,704.30	\$339,528	863,532	\$ 524,004
18	4.4610%	206,866	4,119,980	93,319	1,679,748	2,440,232	27.48%	(670,576)	2,286,891	\$200,330	\$30,873	\$ 2,750.28	\$327,273	878,212	\$ 550,939
19	4.4620%	206,913	4,326,893	93,319	1,773,067	2,553,825	27.48%	(701,791)	2,162,357	\$189,711	\$29,192	\$ 2,797.03	\$315,019	893,141	\$ 578,122
20	4.4610%	206,866	4,533,759	93,319	1,866,387	2,667,372	27.48%	(732,994)	2,037,835	\$179,091	\$27,511	\$ 2,844.58	\$302,766	908,325	\$ 605,559
21	2.2310%	103,456	4,637,215	93,319	1,959,706	2,677,509	27.48%	(735,779)	1,941,730	\$169,684	\$26,213	\$ 2,892.94	\$292,110	923,766	\$ 631,657
22	0.0000%	-	4,637,215	93,319	2,053,025	2,584,190	27.48%	(710,135)	1,874,054	\$162,701	\$25,300	\$ 2,942.12	\$284,262	939,470	\$ 655,208
23	0.0000%	-	4,637,215	93,319	2,146,345	2,490,870	27.48%	(684,491)	1,806,379	\$156,930	\$24,386	\$ 2,992.13	\$277,627	955,441	\$ 677,814
24	0.0000%	-	4,637,215	93,319	2,239,664	2,397,551	27.48%	(658,847)	1,738,704	\$151,158	\$23,473	\$ 3,043.00	\$270,993	971,684	\$ 700,691
25	0.0000%	-	4,637,215	93,319	2,332,983	2,304,232	27.48%	(633,203)	1,671,029	\$145,387	\$22,559	\$ 3,094.73	\$264,360	988,202	\$ 723,842
26	0.0000%	-	4,637,215	93,319	2,426,303	2,210,912	27.48%	(607,559)	1,603,354	\$139,616	\$21,645	\$ 3,147.34	\$257,728	1,005,002	\$ 747,274
27	0.0000%	-	4,637,215	93,319	2,519,622	2,117,593	27.48%	(581,915)	1,535,678	\$133,845	\$20,732	\$ 3,200.85	\$251,097	1,022,087	\$ 770,990
28	0.0000%	-	4,637,215	93,319	2,612,941	2,024,274	27.48%	(556,270)	1,468,003	\$128,074	\$19,818	\$ 3,255.26	\$244,466	1,039,462	\$ 794,996
29	0.0000%	-	4,637,215	93,319	2,706,261	1,930,954	27.48%	(530,626)	1,400,328	\$122,302	\$18,904	\$ 3,310.60	\$237,837	1,057,133	\$ 819,296
30	0.0000%	-	4,637,215	93,319	2,799,580	1,837,635	27.48%	(504,982)	1,332,653	\$116,531	\$17,991	\$ 3,366.88	\$231,208	1,075,104	\$ 843,896
31	0.0000%	-	4,637,215	93,319	2,892,899	1,744,316	27.48%	(479,338)	1,264,978	\$110,760	\$17,077	\$ 3,424.12	\$224,581	1,093,381	\$ 868,801
32	0.0000%	-	4,637,215	93,319	2,986,219	1,650,996	27.48%	(453,694)	1,197,303	\$104,989	\$16,164	\$ 3,482.33	\$217,954	1,111,969	\$ 894,015
33	0.0000%	-	4,637,215	93,319	3,079,538	1,557,677	27.48%	(428,050)	1,129,627	\$99,218	\$15,250	\$ 3,541.53	\$211,328	1,130,872	\$ 919,544
34	0.0000%	-	4,637,215	93,319	3,172,857	1,464,358	27.48%	(402,406)	1,061,952	\$93,446	\$14,336	\$ 3,601.73	\$204,704	1,150,097	\$ 945,393
35	0.0000%	-	4,637,215	93,319	3,266,177	1,371,038	27.48%	(376,761)	994,277	\$87,675	\$13,423	\$ 3,662.96	\$198,080	1,169,649	\$ 971,568
36	0.0000%	-	4,637,215	93,319	3,359,496	1,277,719	27.48%	(351,117)	926,602	\$81,904	\$12,509	\$ 3,725.23	\$191,458	1,189,533	\$ 998,075
37	0.0000%	-	4,637,215	93,319	3,452,815	1,184,400	27.48%	(325,473)	858,927	\$76,133	\$11,596	\$ 3,788.56	\$184,836	1,209,755	\$ 1,024,918
38	0.0000%	-	4,637,215	93,319	3,546,135	1,091,080	27.48%	(299,829)	791,252	\$70,362	\$10,682	\$ 3,852.97	\$178,216	1,230,321	\$ 1,052,105
39	0.0000%	-	4,637,215	93,319	3,639,454	997,761	27.48%	(274,185)	723,576	\$64,591	\$9,768	\$ 3,918.47	\$171,597	1,251,236	\$ 1,079,639
40	0.0000%	-	4,637,215	93,319	3,732,773	904,442	27.48%	(248,541)	655,901	\$58,819	\$8,855	\$ 3,985.08	\$164,978	1,272,507	\$ 1,107,529
41	0.0000%	-	4,637,215	93,319	3,826,093	811,122	27.48%	(222,896)	588,226	\$53,048	\$7,941	\$ 4,053	\$158,361	1,294,140	\$ 1,135,778
42	0.0000%	-	4,637,215	93,319	3,919,412	717,803	27.48%	(197,252)	520,551	\$47,277	\$7,027	\$ 4,122	\$151,745	1,316,140	\$ 1,164,395
43	0.0000%	-	4,637,215	93,319	4,012,731	624,484	27.48%	(171,608)	452,876	\$41,506	\$6,114	\$ 4,192	\$145,131	1,338,514	\$ 1,193,384
44	0.0000%	-	4,637,215	93,319	4,106,051	531,164	27.48%	(145,964)	385,200	\$35,735	\$5,200	\$ 4,263	\$138,517	1,361,269	\$ 1,222,752
45	0.0000%	-	4,637,215	93,319	4,199,370	437,845	27.48%	(120,320)	317,525	\$29,963	\$4,287	\$ 4,336	\$131,905	1,384,411	\$ 1,252,506
46	0.0000%	-	4,637,215	93,319	4,292,689	344,526	27.48%	(94,676)	249,850	\$24,192	\$3,373	\$ 4,409	\$125,294	1,407,946	\$ 1,282,652
47	0.0000%	-	4,637,215	93,319	4,386,009	251,206	27.48%	(69,032)	182,175	\$18,421	\$2,459	\$ 4,484	\$118,684	1,431,881	\$ 1,313,197
48	0.0000%	-	4,637,215	93,319	4,479,328	157,887	27.48%	(43,387)	114,500	\$12,650	\$1,546	\$ 4,560	\$112,075	1,456,223	\$ 1,344,147
49	0.0000%	-	4,637,215	93,319	4,572,647	64,568	27.48%	(17,743)	46,825	\$6,879	\$632	\$ 4,638	\$105,468	1,480,979	\$ 1,375,510
50	0.0000%	-	4,637,215	64,568	4,637,215	-	27.48%	-	-	\$1,997	-	\$ 4,717	\$71,281	1,506,155	\$ 1,434,874
	100.0000%			\$	4,637,215										
		Check		\$	-										

Location 2

RE Owner/Mgmt: [REDACTED] Unknown

1.09

	Propane Yes/No	Metered Yes/No	Supply Line Size	Regulator Line Outlet Size	Projected MCF	Projected ADTH	Rate Class	GPM	6 Year GPM	60% of Revenue	MEP GPM	
1st Strip	[REDACTED]	Yes	Yes	?	?	1500	1635	G-42	\$ 7,569.00	\$ 45,414.00	\$ 27,248	\$ 9,841.00
	[REDACTED]	Yes	Yes	?	?	70	76	G-41	\$ 1,032.00	\$ 6,192.00	\$ 3,715	\$ 1,320.00
2nd Strip	[REDACTED]	Yes	Yes	1/2"	1"	360	392	G-41	\$ 2,497.00	\$ 14,982.00	\$ 8,989	\$ 3,195.00
	[REDACTED]	Yes	Yes	1/2"	1"	360	392	G-41	\$ 2,497.00	\$ 14,982.00	\$ 8,989	\$ 3,195.00
	[REDACTED]	Yes	Yes	1/2"	1"	917	1000	G-42	\$ 5,740.00	\$ 34,440.00	\$ 20,664	\$ 7,462.00
	[REDACTED]	Yes	Yes	1/2"	1"	70	76	G-41	\$ 1,032.00	\$ 6,192.00	\$ 3,715	\$ 1,320.00
	[REDACTED]	Yes	Yes	1/2"	1"	798	870	G-41	\$ 4,423.00	\$ 26,538.00	\$ 15,923	\$ 5,659.00
	[REDACTED]	Yes	Yes	1/2"	1"	917	1000	G-42	\$ 5,740.00	\$ 34,440.00	\$ 20,664	\$ 7,462.00
	[REDACTED]	Yes	Yes	1/2"	1"	70	76	G-41	\$ 1,032.00	\$ 6,192.00	\$ 3,715	\$ 1,320.00
	[REDACTED]	Yes	Yes	1/2"	1"	70	76	G-41	\$ 1,032.00	\$ 6,192.00	\$ 3,715	\$ 1,320.00
Stand Alone	[REDACTED]	Yes	No	?	?	9083	9900	G-42	\$ 30,552.00	\$ 183,312.00	\$ 109,987	\$ 39,720.00
	[REDACTED]	Yes	No	?	?	9083	9900	G-42	\$ 30,552.00	\$ 183,312.00	\$ 109,987	\$ 39,720.00
										\$ 341,028		
								Total	\$ 94,730.00		Total	\$ 122,854.00

Location 3

[REDACTED]

RE Owner/Mgmt: Unknown

1.09

	Propane Yes/No	Metered Yes/No	Supply Line Size	Regulator Line Outlet Size	Projected MCF	Projected ADTH	Rate Class	GPM	6 Year GPM	60% of Revenue	MEP GPM
1st Strip	[REDACTED]	Yes	Yes	?	?	?	G-42	\$ 6,644.00	\$ 39,864.00	\$ 23,918	\$ 8,637.00
	[REDACTED]	Yes	Yes	?	?	?	G-41	\$ 1,032.00	\$ 6,192.00	\$ 3,715	\$ 1,320.00
	[REDACTED]	YES	YES	?	?	?	G-41	\$ 1,032.00	\$ 6,192.00	\$ 3,715	\$ 1,320.00
Stand Alone	[REDACTED]	Yes	No	?	?	?	G-42	\$ 7,569.00	\$ 45,414.00	\$ 27,248	\$ 9,841.00
	[REDACTED]	Yes	No	?	?	?	G-42	\$ 7,569.00	\$ 45,414.00	\$ 27,248	\$ 9,841.00
	[REDACTED]	Yes	No	?	?	?	G-41	\$ 1,032.00	\$ 6,192.00	\$ 3,715	\$ 1,320.00
										\$ 89,561	
							Total	\$ 24,878.00		Total	\$ 32,279.00

Location 4

1.09

NAME	Fuel	MCF	ADTH	Rate Class	GPM	MEP GPM
[REDACTED]	propane	410	447	G-41	\$ 2,753.00	\$ 3,522.00
[REDACTED]	propane	650	709	G-41	\$ 3,836.00	\$ 4,909.00
[REDACTED]	propane	950	1036	G-42	\$ 5,847.00	\$ 7,602.00
[REDACTED]	propane	950	1036	G-42	\$ 5,847.00	\$ 7,602.00
[REDACTED]	propane	70	76	G-41	\$ 1,032.00	\$ 1,320.00
[REDACTED]	propane	70	76	G-41	\$ 1,032.00	\$ 1,320.00
[REDACTED]	propane	70	76	G-41	\$ 1,032.00	\$ 1,320.00
[REDACTED]	propane	70	76	G-41	\$ 1,032.00	\$ 1,320.00
[REDACTED]	propane	70	76	G-41	\$ 1,032.00	\$ 1,320.00
[REDACTED]	propane	450	491	G-41	\$ 2,952.00	\$ 3,777.00
[REDACTED]	propane	1500	1635	G-42	\$ 7,569.00	\$ 9,841.00
[REDACTED]	Mix		102877	G-43	\$ 253,707.00	\$ 329,849.00
				Total	\$ 287,671.00	\$ 373,702.00

R-3 Residential Heating

Customer Charge per Month	Number of months	Total CC	Yearly ADTH	Yearly therms 80 used	799 All Therms	Order Rates \$ 0.5631
\$ 15.02	12	\$ 180.24				

Month	Actual Therms Used *	Weather Normalized	All therms Distribution	LDAC	LDAC Total	COG	COG Total	Gas Bill	
Aug-18	14	14	\$ 7.88	\$ 0.0945	\$ 1.32	\$ 0.3665	\$ 5.13	\$ 29.36	1.75%
Sep-18	14	14	\$ 7.88	\$ 0.0945	\$ 1.32	\$ 0.3916	\$ 5.48	\$ 29.71	1.75%
Oct-18	22	22	\$ 12.39	\$ 0.0945	\$ 2.08	\$ 0.3916	\$ 8.62	\$ 38.10	2.75%
Nov-18	51	53	\$ 30.13	\$ 0.0660	\$ 3.37	\$ 0.7411	\$ 37.80	\$ 86.31	6.70%
Dec-18	90	88	\$ 49.41	\$ 0.0660	\$ 5.94	\$ 0.7411	\$ 66.70	\$ 137.07	10.98%
Jan-18	117	129	\$ 72.67	\$ 0.0856	\$ 10.02	\$ 0.6445	\$ 75.41	\$ 173.11	16.15%
Feb-18	141	149	\$ 84.16	\$ 0.0856	\$ 12.07	\$ 0.8056	\$ 113.59	\$ 224.84	18.71%
Mar-18	130	154	\$ 86.67	\$ 0.0856	\$ 11.13	\$ 0.8056	\$ 104.73	\$ 217.55	19.26%
Apr-18	89	83	\$ 46.91	\$ 0.0856	\$ 7.62	\$ 0.8056	\$ 71.70	\$ 141.25	10.43%
May-18	51	51	\$ 28.72	\$ 0.0945	\$ 4.82	\$ 0.3133	\$ 15.98	\$ 64.54	6.38%
Jun-18	25	25	\$ 14.08	\$ 0.0945	\$ 2.36	\$ 0.3916	\$ 9.79	\$ 41.25	3.13%
Jul-18	16	16	\$ 9.01	\$ 0.0945	\$ 1.51	\$ 0.3665	\$ 5.86	\$ 31.41	2.00%
100%									
Yearly Distribution Total		760	799	\$ 449.91	\$ 63.56	\$ 520.78	\$ 1,214.48		

				Price p/gallon	Annual Consumption	Annual Total Cost	Switch to Gas Savings	Percent
Customer Yearly Total Cost	\$ 1,214.48		NH Office of Strategic Initiatives Pricing as of 8/1/2018	Propane \$ 2.84	878	\$ 2,493.53	\$ 1,279	51%
Average Price per therm	\$ 1.52			Oil \$ 2.84	577	\$ 1,638.35	\$ 423.87	26%

* Based on Actuals contained in DG17-048 EnergyNorth Rate Case

MEP R-6 Residential Heating

Customer Charge per Month	Number of months	Total CC	Yearly ADTH	Yearly therms 80 used	799 All Therms	Order Rates \$ 0.7320
\$ 19.52	12	\$ 234.24				

Month	Actual Therms Used *	Weather Normalized	All Therms Distribution	LDAC	LDAC Total	COG	COG Total	Gas Bill
Aug-18	14	14	\$ 10.25	\$ 0.0945	\$ 1.32	\$ 0.3665	\$ 5.13	\$ 36.22
Sep-18	14	14	\$ 10.25	\$ 0.0945	\$ 1.32	\$ 0.3916	\$ 5.48	\$ 36.57
Oct-18	22	22	\$ 16.10	\$ 0.0945	\$ 2.08	\$ 0.3916	\$ 8.62	\$ 46.32
Nov-18	51	53	\$ 39.16	\$ 0.0660	\$ 3.37	\$ 0.7411	\$ 37.80	\$ 99.84
Dec-18	90	88	\$ 64.23	\$ 0.0660	\$ 5.94	\$ 0.7411	\$ 66.70	\$ 156.39
Jan-18	117	129	\$ 94.47	\$ 0.0856	\$ 10.02	\$ 0.6445	\$ 75.41	\$ 199.41
Feb-18	141	149	\$ 109.40	\$ 0.0856	\$ 12.07	\$ 0.8056	\$ 113.59	\$ 254.58
Mar-18	130	154	\$ 112.67	\$ 0.0856	\$ 11.13	\$ 0.8056	\$ 104.73	\$ 248.05
Apr-18	89	83	\$ 60.98	\$ 0.0856	\$ 7.62	\$ 0.8056	\$ 71.70	\$ 159.82
May-18	51	51	\$ 37.33	\$ 0.0945	\$ 4.82	\$ 0.3133	\$ 15.98	\$ 77.65
Jun-18	25	25	\$ 18.30	\$ 0.0945	\$ 2.36	\$ 0.3916	\$ 9.79	\$ 49.97
Jul-18	16	16	\$ 11.71	\$ 0.0945	\$ 1.51	\$ 0.3665	\$ 5.86	\$ 38.61

Yearly Distribution Total	760	799	\$ 584.86	\$ 63.56	\$ 520.78	\$ 1,403.43
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	Price p/gallon	Annual Consumpti	Annual Total Cost	Switch to Gas Savings	Percent
Customer Yearly Total	\$ 3.14	878	\$ 2,756.93	\$ 1,354	49%
Average Price per therm	\$ 3.07	577	\$ 1,771.03	\$ 367.60	21%
		799	\$ 1,703.43		

* Based on Actuals contained in DG17-048 EnergyNorth Rate Case

NH Office of
Strategic
Initiatives
Pricing as of
8/1/2018

Propane

Oil

NE MNC

G-41 Small Commercial

Customer Charge per Month	Number of months	Total CC	Yearly ADTH	491	Yearly therms used Based on 80/20 split	4910							Order Rates
\$ 56.58	12	\$ 678.96											Winter 1st 1000 therm rate \$ 0.4639
													Winter over 1000 therm rate \$ 0.3116
													Summer 1st 400 therm rate \$ 0.4639
													Summer over 400 therm rate \$ 0.3116

Month	Actual Therms Used	1st 1000 therms winter	over 1000 therms winter	1st 400 therms summer	over 400 therms summer	Monthly Total Distribution	LDAC	LDAC Total	COG	COG Total	Gas Bill
Aug-18	54			\$ 25.06	\$ -	\$ 25.06	\$ 0.0763	\$ 4.12	\$ 0.3604	\$ 19.47	\$ 105.22
Sep-18	54			\$ 25.06	\$ -	\$ 25.06	\$ 0.0763	\$ 4.12	\$ 0.3855	\$ 20.82	\$ 106.58
Oct-18	246			\$ 113.89	\$ -	\$ 113.89	\$ 0.0763	\$ 18.73	\$ 0.3855	\$ 94.64	\$ 283.84
Nov-18	638	\$ 296.11	\$ -			\$ 296.11	\$ 0.0757	\$ 48.32	\$ 0.7403	\$ 472.53	\$ 873.54
Dec-18	791	\$ 366.72	\$ -			\$ 366.72	\$ 0.0757	\$ 59.84	\$ 0.7403	\$ 585.21	\$ 1,068.35
Jan-18	1031	\$ 463.90	\$ 9.69			\$ 473.59	\$ 0.0674	\$ 69.50	\$ 0.6433	\$ 663.31	\$ 1,262.97
Feb-18	854	\$ 396.33	\$ -			\$ 396.33	\$ 0.0674	\$ 57.58	\$ 0.8041	\$ 686.97	\$ 1,197.47
Mar-18	570	\$ 264.22	\$ -			\$ 264.22	\$ 0.0674	\$ 38.39	\$ 0.8041	\$ 457.98	\$ 817.17
Apr-18	417	\$ 193.61	\$ -			\$ 193.61	\$ 0.0674	\$ 28.13	\$ 0.8041	\$ 335.59	\$ 613.91
May-18	147			\$ 68.33	\$ -	\$ 68.33	\$ 0.0763	\$ 11.24	\$ 0.3084	\$ 45.43	\$ 181.58
Jun-18	54			\$ 25.06	\$ -	\$ 25.06	\$ 0.0763	\$ 4.12	\$ 0.3855	\$ 20.82	\$ 106.58
Jul-18	54			\$ 25.06	\$ -	\$ 25.06	\$ 0.0763	\$ 4.12	\$ 0.3604	\$ 19.47	\$ 105.22

Yearly Distribution Total	4910					\$ 2,273.01		\$ 348.21		\$ 3,422.24	\$ 6,722.43
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							Rolling 12 month Average CGA	\$ 0.5602		Equivalent Gallons	Price Per Gallon	Yearly Total	Savings vs Current Rates	Savings percent	
Customer Yearly Total	\$ 6,722.43					Customer GPM	\$ 2,952 6			Oil	3,553	\$ 1.50	\$ 5,329	\$ (1,393)	-26%
Average Price per therm	\$ 1.37						\$ 17,711.83			Propane	5,390	\$ 1.50	\$ 8,085	\$ 1,362	17%

G-42 Mid Customer

Customer Charge per Month	Number of months	Total CC	Yearly ADTH	1308	Yearly therms used Based on 80/20 split	13080							Order Rates
\$ 167.06	12	\$ 2,004.72											Winter 1st 1000 therm rate \$ 0.4152
													Winter over 1000 therm rate \$ 0.2766
													Summer 1st 400 therm rate \$ 0.4152
													Summer over 400 therm rate \$ 0.2766

Month	Actual Therms Used	1st 1000 therms winter	over 1000 therms winter	1st 400 therms summer	over 400 therms summer	Monthly Total Distribution	LDAC	LDAC Total	COG	COG Total	Gas Bill
Aug-18	144			\$ 59.74	\$ -	\$ 59.74	\$ 0.0763	\$ 10.98	\$ 0.3604	\$ 51.85	\$ 289.63
Sep-18	144			\$ 59.74	\$ -	\$ 59.74	\$ 0.0763	\$ 10.98	\$ 0.3855	\$ 55.47	\$ 293.24
Oct-18	654			\$ 166.08	\$ 70.26	\$ 236.34	\$ 0.0763	\$ 49.90	\$ 0.3855	\$ 252.12	\$ 705.41
Nov-18	1700	\$ 415.20	\$ 193.73			\$ 608.93	\$ 0.0757	\$ 128.72	\$ 0.7403	\$ 1,258.81	\$ 2,163.52
Dec-18	2106	\$ 415.20	\$ 305.89			\$ 721.09	\$ 0.0757	\$ 159.42	\$ 0.7403	\$ 1,558.98	\$ 2,606.54
Jan-18	2747	\$ 415.20	\$ 483.16			\$ 898.36	\$ 0.0674	\$ 185.13	\$ 0.6433	\$ 1,767.02	\$ 3,017.58
Feb-18	2276	\$ 415.20	\$ 352.92			\$ 768.12	\$ 0.0674	\$ 153.40	\$ 0.8041	\$ 1,830.07	\$ 2,918.64
Mar-18	1517	\$ 415.20	\$ 143.08			\$ 558.28	\$ 0.0674	\$ 102.26	\$ 0.8041	\$ 1,220.04	\$ 2,047.65
Apr-18	1112	\$ 415.20	\$ 30.92			\$ 446.12	\$ 0.0674	\$ 74.94	\$ 0.8041	\$ 894.00	\$ 1,582.12
May-18	392			\$ 162.92	\$ -	\$ 162.92	\$ 0.0763	\$ 29.94	\$ 0.3084	\$ 121.02	\$ 480.94
Jun-18	144			\$ 59.74	\$ -	\$ 59.74	\$ 0.0763	\$ 10.98	\$ 0.3855	\$ 55.47	\$ 293.24
Jul-18	144			\$ 59.74	\$ -	\$ 59.74	\$ 0.0763	\$ 10.98	\$ 0.3604	\$ 51.85	\$ 289.63
Yearly Distribution Total	13080					\$ 4,639.12		\$ 927.62		\$ 9,116.69	\$ 16,688.15

							Rolling 12 month Average CGA	\$ 0.5602		Equivalent Gallons	Price Per Gallon	Yearly Total	Savings vs Current Rates	Savings percent	
Customer Yearly Total	\$ 16,688.15					Customer GPM	\$ 6,644 6			Oil	9,465	\$ 1.50	\$ 14,197	\$ (2,491)	-18%
Average Price per therm	\$ 1.28						\$ 39,863.05			Propane	14,358	\$ 1.50	\$ 21,537	\$ 4,849	23%

G-43 Large Customer

Customer Charge per Month	Number of months	Total CC	Yearly ADTH	102,877	Yearly therms used Based on 80/20 split	1028770	Order Rates
\$ 716.95	12	\$ 8,603.40					Winter therm rate \$ 0.2552
							Summer therm rate \$ 0.1185

Month	Actual Therms Used	All therms winter	All therms summer	Monthly Total Distribution	LDAC	LDAC Total	COG	COG Total	Gas Bill
Aug-18	11316		\$ 1,341.00	\$ 1,341.00	\$ 0.0763	\$ 863.45	\$ 0.3604	\$ 4,078.46	\$ 6,999.85
Sep-18	11316		\$ 1,341.00	\$ 1,341.00	\$ 0.0763	\$ 863.45	\$ 0.3855	\$ 4,362.50	\$ 7,283.90
Oct-18	51439		\$ 6,095.46	\$ 6,095.46	\$ 0.0763	\$ 3,924.76	\$ 0.3855	\$ 19,829.54	\$ 30,566.71
Nov-18	133740	\$ 34,130.47		\$ 34,130.47	\$ 0.0757	\$ 10,124.13	\$ 0.7403	\$ 99,007.80	\$ 143,979.35
Dec-18	165632	\$ 42,269.28		\$ 42,269.28	\$ 0.0757	\$ 12,538.34	\$ 0.7403	\$ 122,617.35	\$ 178,141.92
Jan-18	216042	\$ 55,133.84		\$ 55,133.84	\$ 0.0674	\$ 14,561.21	\$ 0.6433	\$ 138,979.63	\$ 209,391.63
Feb-18	179006	\$ 45,682.33		\$ 45,682.33	\$ 0.0674	\$ 12,065.00	\$ 0.8041	\$ 143,938.71	\$ 202,402.99
Mar-18	119337	\$ 30,454.88		\$ 30,454.88	\$ 0.0674	\$ 8,043.34	\$ 0.8041	\$ 95,959.14	\$ 135,174.31
Apr-18	87445	\$ 22,316.08		\$ 22,316.08	\$ 0.0674	\$ 5,893.82	\$ 0.8041	\$ 70,314.89	\$ 99,241.74
May-18	30863		\$ 3,657.28	\$ 3,657.28	\$ 0.0763	\$ 2,354.85	\$ 0.3084	\$ 9,518.18	\$ 16,247.26
Jun-18	11316		\$ 1,341.00	\$ 1,341.00	\$ 0.0763	\$ 863.45	\$ 0.3855	\$ 4,362.50	\$ 7,283.90
Jul-18	11316		\$ 1,341.00	\$ 1,341.00	\$ 0.0763	\$ 863.45	\$ 0.3604	\$ 4,078.46	\$ 6,999.85
Yearly Distribution Total	1028770			\$ 245,103.63		\$ 72,959.24		\$ 717,047.13	\$ 1,043,713.40

Customer Yearly Total	\$ 1,043,713.40	Customer GPM	\$ 253,707	Rolling 12 month average CGA	\$ 0.5602	Equivalent Gallons	Price Per Gallon	Yearly Total	Savings vs Current Rates	Savings percent	
Average Price per therm	\$ 1.01					Oil	744407	\$ 1.50	\$ 1,116,610	\$ 72,897	7%
						Propane	1129276	\$ 1.50	\$ 1,693,913	\$ 650,200	38%

G-44 MEP Small Commercial

Customer Charge per Month	Number of months	Total CC	Yearly ADTH	491	Yearly therms used Based on 80/20 split	4910	Order Rates
\$ 72.38	12	\$ 868.56					Winter 1st 1000 therm rate \$ 0.5936 Winter over 1000 therm rate \$ 0.3987 Summer 1st 400 therm rate \$ 0.5936 Summer over 400 therm rate \$ 0.3987

Month	Actual Therms Used	1st 1000 therms winter	over 1000 therms winter	1st 400 therms summer	over 400 therms summer	Monthly Total Distribution	LDAC	LDAC Total	COG	COG Total	Gas Bill
Aug-18	54			\$ 32.06	\$ -	\$ 32.06	\$ 0.0763	\$ 4.12	\$ 0.3604	\$ 19.47	\$ 128.03
Sep-18	54			\$ 32.06	\$ -	\$ 32.06	\$ 0.0763	\$ 4.12	\$ 0.3855	\$ 20.82	\$ 129.38
Oct-18	246			\$ 145.73	\$ -	\$ 145.73	\$ 0.0763	\$ 18.73	\$ 0.3855	\$ 94.64	\$ 331.48
Nov-18	638	\$ 378.89	\$ -			\$ 378.89	\$ 0.0757	\$ 48.32	\$ 0.7403	\$ 472.53	\$ 972.13
Dec-18	791	\$ 469.25	\$ -			\$ 469.25	\$ 0.0757	\$ 59.84	\$ 0.7403	\$ 585.21	\$ 1,186.68
Jan-18	1031	\$ 593.60	\$ 12.40			\$ 606.00	\$ 0.0674	\$ 69.50	\$ 0.6433	\$ 663.31	\$ 1,411.18
Feb-18	854	\$ 507.14	\$ -			\$ 507.14	\$ 0.0674	\$ 57.58	\$ 0.8041	\$ 686.97	\$ 1,324.07
Mar-18	570	\$ 338.09	\$ -			\$ 338.09	\$ 0.0674	\$ 38.39	\$ 0.8041	\$ 457.98	\$ 906.84
Apr-18	417	\$ 247.74	\$ -			\$ 247.74	\$ 0.0674	\$ 28.13	\$ 0.8041	\$ 335.59	\$ 683.84
May-18	147			\$ 87.44	\$ -	\$ 87.44	\$ 0.0763	\$ 11.24	\$ 0.3084	\$ 45.43	\$ 216.48
Jun-18	54			\$ 32.06	\$ -	\$ 32.06	\$ 0.0763	\$ 4.12	\$ 0.3855	\$ 20.82	\$ 129.38
Jul-18	54			\$ 32.06	\$ -	\$ 32.06	\$ 0.0763	\$ 4.12	\$ 0.3604	\$ 19.47	\$ 128.03

Yearly Distribution Total	4910			\$ 2,908.51		\$ 2,908.51	\$ 348.21		\$ 3,422.24	\$ 7,547.53
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Customer Yearly Total	\$ 7,547.53			Customer GPM	\$ 3,777		Rolling 12 month Average CGA	\$ 0.5602	Equivalent Gallons	Price Per Gallon	Yearly Total	Savings vs Current Rates	Savings percent	
Average Price per therm	\$ 1.54				\$ 22,662.45				Oil	3,553	\$ 1.50	\$ 5,329	\$ (2,218)	-42%
									Propane	5,390	\$ 1.50	\$ 8,085	\$ 537	7%

G-45 MEP Mid Customer

Customer Charge per Month	Number of months	Total CC	Yearly ADTH	1308	Yearly therms used Based on 80/20 split	13080						Order Rates
\$ 217.18	12	\$ 2,606.16										Winter 1st 1000 therm rate \$ 0.5398
												Winter over 1000 therm rate \$ 0.3596
												Summer 1st 400 therm rate \$ 0.5398
												Summer over 400 therm rate \$ 0.3596

Month	Actual Therms Used	1st 1000 therms winter	over 1000 therms winter	1st 400 therms summer	over 400 therms summer	Monthly Total Distribution	LDAC	LDAC Total	COG	COG Total	Gas Bill
Aug-18	144			\$ 77.67	\$ -	\$ 77.67	\$ 0.0763	\$ 10.98	\$ 0.3604	\$ 51.85	\$ 357.68
Sep-18	144			\$ 77.67	\$ -	\$ 77.67	\$ 0.0763	\$ 10.98	\$ 0.3855	\$ 55.47	\$ 361.29
Oct-18	654			\$ 215.92	\$ 91.34	\$ 307.26	\$ 0.0763	\$ 49.90	\$ 0.3855	\$ 252.12	\$ 826.46
Nov-18	1700	\$ 539.80	\$ 251.86			\$ 791.66	\$ 0.0757	\$ 128.72	\$ 0.7403	\$ 1,258.81	\$ 2,396.37
Dec-18	2106	\$ 539.80	\$ 397.67			\$ 937.47	\$ 0.0757	\$ 159.42	\$ 0.7403	\$ 1,558.98	\$ 2,873.05
Jan-18	2747	\$ 539.80	\$ 628.15			\$ 1,167.95	\$ 0.0674	\$ 185.13	\$ 0.6433	\$ 1,767.02	\$ 3,337.28
Feb-18	2276	\$ 539.80	\$ 458.82			\$ 998.62	\$ 0.0674	\$ 153.40	\$ 0.8041	\$ 1,830.07	\$ 3,199.27
Mar-18	1517	\$ 539.80	\$ 186.01			\$ 725.81	\$ 0.0674	\$ 102.26	\$ 0.8041	\$ 1,220.04	\$ 2,265.30
Apr-18	1112	\$ 539.80	\$ 40.20			\$ 580.00	\$ 0.0674	\$ 74.94	\$ 0.8041	\$ 894.00	\$ 1,766.12
May-18	392			\$ 211.82	\$ -	\$ 211.82	\$ 0.0763	\$ 29.94	\$ 0.3084	\$ 121.02	\$ 579.95
Jun-18	144			\$ 77.67	\$ -	\$ 77.67	\$ 0.0763	\$ 10.98	\$ 0.3855	\$ 55.47	\$ 361.29
Jul-18	144			\$ 77.67	\$ -	\$ 77.67	\$ 0.0763	\$ 10.98	\$ 0.3604	\$ 51.85	\$ 357.68
Yearly Distribution Total	13080					\$ 6,031.27		\$ 927.62		\$ 9,116.69	\$ 18,681.74

Customer Yearly Total	\$ 18,681.74	Customer GPM	\$ 8,637.6	Rolling 12 month Average CGA	\$ 0.5602	Equivalent Gallons	Price Per Gallon	Yearly Total	Savings vs Current Rates	Savings percent
Average Price per therm	\$ 1.43		\$ 51,824.56			Oil	9,465 \$ 1.50	\$ 14,197	\$ (4,485)	-32%
						Propane	14,358 \$ 1.50	\$ 21,537	\$ 2,855	13%

G-46 MEP Large Customer

Customer Charge per Month	Number of months	Total CC	Yearly ADTH	102,877	Yearly therms used Based on 80/20 split	1028770	Order Rates	
\$ 932.04	12	\$ 11,184.48					Winter therm rate \$ 0.3318	
							Summer therm rate \$ 0.1540	

Month	Actual Therms Used	All therms winter	All therms summer	Monthly Total Distribution	LDAC	LDAC Total	COG	COG Total	Gas Bill
Aug-18	11316		\$ 1,742.74	\$ 1,742.74	\$ 0.0763	\$ 863.45	\$ 0.3604	\$ 4,078.46	\$ 7,616.68
Sep-18	11316		\$ 1,742.74	\$ 1,742.74	\$ 0.0763	\$ 863.45	\$ 0.3855	\$ 4,362.50	\$ 7,900.72
Oct-18	51439		\$ 7,921.53	\$ 7,921.53	\$ 0.0763	\$ 3,924.76	\$ 0.3855	\$ 19,829.54	\$ 32,607.87
Nov-18	133740	\$ 44,374.97		\$ 44,374.97	\$ 0.0757	\$ 10,124.13	\$ 0.7403	\$ 99,007.80	\$ 154,438.93
Dec-18	165632	\$ 54,956.69		\$ 54,956.69	\$ 0.0757	\$ 12,538.34	\$ 0.7403	\$ 122,617.35	\$ 191,044.42
Jan-18	216042	\$ 71,682.64		\$ 71,682.64	\$ 0.0674	\$ 14,561.21	\$ 0.6433	\$ 138,979.63	\$ 226,155.51
Feb-18	179006	\$ 59,394.18		\$ 59,394.18	\$ 0.0674	\$ 12,065.00	\$ 0.8041	\$ 143,938.71	\$ 216,329.94
Mar-18	119337	\$ 39,596.12		\$ 39,596.12	\$ 0.0674	\$ 8,043.34	\$ 0.8041	\$ 95,959.14	\$ 144,530.64
Apr-18	87445	\$ 29,014.40		\$ 29,014.40	\$ 0.0674	\$ 5,893.82	\$ 0.8041	\$ 70,314.89	\$ 106,155.15
May-18	30863		\$ 4,752.92	\$ 4,752.92	\$ 0.0763	\$ 2,354.85	\$ 0.3084	\$ 9,518.18	\$ 17,557.99
Jun-18	11316		\$ 1,742.74	\$ 1,742.74	\$ 0.0763	\$ 863.45	\$ 0.3855	\$ 4,362.50	\$ 7,900.72
Jul-18	11316		\$ 1,742.74	\$ 1,742.74	\$ 0.0763	\$ 863.45	\$ 0.3604	\$ 4,078.46	\$ 7,616.68
Yearly Distribution Total	1028770			\$ 318,664.39		\$ 72,959.24		\$ 717,047.13	\$ 1,119,855.24

Customer Yearly Total	\$ 1,119,855.24	Customer GPM	\$ 329,849	Rolling 12 month average CGA	\$ 0.5602	Equivalent Gallons	Price Per Gallon	Yearly Total	Savings vs Current Rates	Savings percent	
Average Price per therm	\$ 1.09					Oil	744407	\$ 1.50	\$ 1,116,610	\$ (3,245)	0%
						Propane	1129276	\$ 1.50	\$ 1,693,913	\$ 574,058	34%



**COMPARATIVE ANALYSIS OF THE
RETAIL NATURAL GAS SERVICE PROPOSALS
SUBMITTED TO THE TOWN OF EPPING
FROM
LIBERTY UTILITIES (ENERGYNORTH)
AND
NORTHERN UTILITIES (UNITIL)
PREPARED FOR:
THE TOWN OF EPPING, NH**

October 2018

Introduction

The Town of Epping, NH is the subject of a Petition for Authority to Operate as a Public Utility, filed with the New Hampshire Public Utilities Commission (“NHPUC”) by Northern Utilities (“NU”), a subsidiary of Unitil Corporation (“Unitil”), which, in effect, would give NU the exclusive franchise rights to supply natural gas service in Epping. Unitil serves NH towns to the east of Epping, including Exeter and, in 2014 received the franchise rights from the NHPUC to extend into Brentwood. Liberty Utilities (“LU”) has filed a Petition to Approve Firm Supply and Transportation Agreements and the Granite Bridge Project with the NHPUC which includes the construction of a high-pressure natural gas transmission main on the NH Rt. 101 highway corridor from the seacoast to the Merrimack River. In addition, LU is proposing to construct a cryogenic liquefied natural gas storage tank in the southwest section of the Town of Epping with direct access to the natural gas pipeline proposed on the NH Rt. 101 corridor. This tank will liquify natural gas from the pipeline, presumably during the off-peak summer season, and re-gasify the gas for injection back into the pipeline during the on-peak winter season in order to supply gas to customers in its service territories. LU has also stated that the Granite Bridge Project will present the opportunity to provide natural gas service to municipalities along the route, such as Epping.

Due to the expressed mutual interest by NU and LU to supply natural gas service to the Town of Epping, and rather than standby while the NHPUC evaluates NU’s gas franchise application in isolation, without comparison to what LU may be able to offer epping, the Selectmen of the Town of Epping issued a Request for Proposal (“RFP”) for the Town’s natural gas distribution service in Epping.

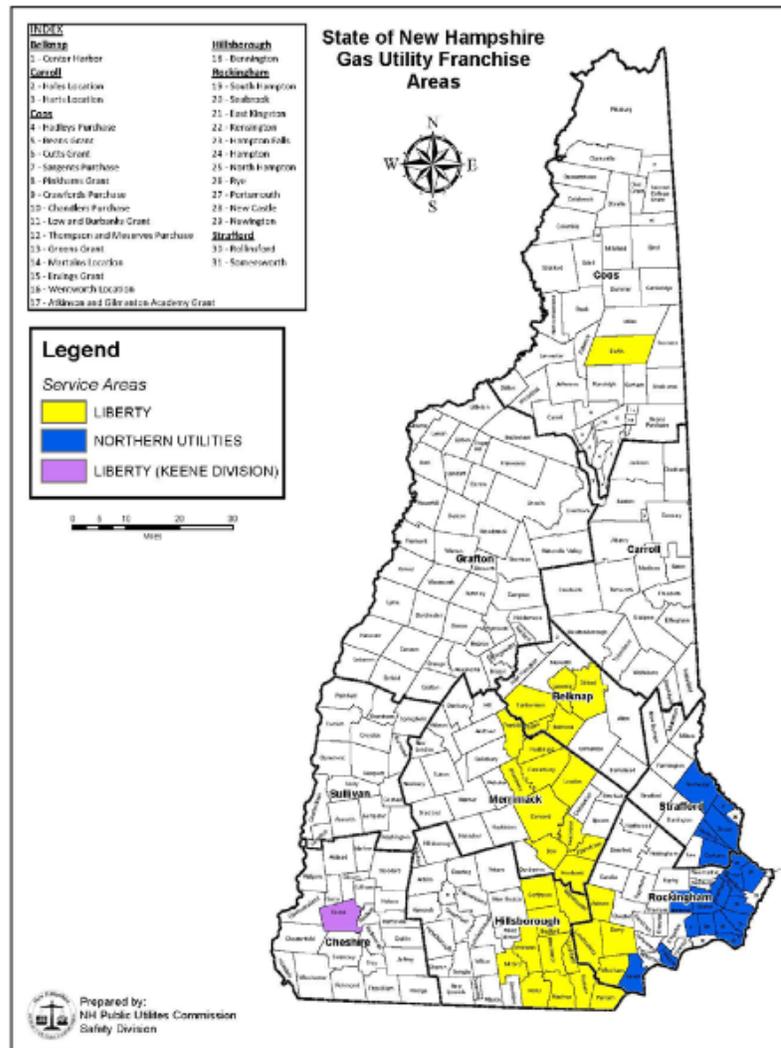
Both NU and LU have submitted responses to the Epping Selectmen’s RFP to supply natural gas distribution service in Epping. This report analyzes and compares the merits of NU’s and LU’s RFP responses.

NU is one of three wholly-owned subsidiaries of Unitil. NU provides natural gas service to customers in southeastern New Hampshire and southern and central Maine. NU’s sister subsidiaries are Unitil Energy Systems, Inc., providing electric service in the southeastern seacoast and state capital regions of New Hampshire, and Fitchburg Gas and Electric Light Company, providing electric and natural gas service in north central Massachusetts, including Fitchburg, MA. Unitil acquired NU, as well as Granite State Gas Transmission, Inc., in 2008

LU is the rate regulated generation, transmission, and distribution subsidiary of Algonquin Power and Utilities Corporation (“APUC”) and provides electricity, natural gas, and water utility service in twelve U.S. states. APUC’s non-regulated assets are included in its Liberty Power Group. In New England, LU serves electricity customers in New Hampshire as Granite State Electric Co. and natural gas customers in New Hampshire and Massachusetts. LU acquired its current gas distribution system, formerly EnergyNorth Natural Gas, as well as Granite State Electric, from National Grid in July of 2012.

Franchise maps for New Hampshire, Massachusetts, and Maine are provided in Figure 1, Figure 2, and Figure 3, respectively. NU and its Massachusetts' affiliate, Fitchburg Gas and Electric, as well as LU, and its affiliate Granite State Electric, are included in these maps.

Figure 1



Communities Served

Liberty Utilities (Natural Gas)			Unitil/Northern Utilities (Natural Gas)			NH Gas Corp. (Propane)	Concord Steam Corp. (Steam)
Allenstown	Franklin	Merrimack	Atkinson	Hampton	Portsmouth	Keene	Concord
Amherst	Gilford	Milford	Dover	Hampton Beach	Rochester		
Auburn	Goffstown	Nashua	Durham	Hampton Falls	Rollinsford		
Bedford	Hollis	Northfield	East Kingston	Kensington	Salem		
Belmont	Hooksett	Pelham	East Rochester	Madbury	Seabrook		
Berlin	Hudson	Pembroke	Exeter	Newington	Somersworth		
Boscawen	Laconia	Sanbornton	Gonic	North Hampton	Stratham		
Bow	Litchfield	Tilton	Greenland	Plaistow			
Canterbury	Londonderry	Windham					
Concord	Loudon						
Derry	Manchester						

Figure 2

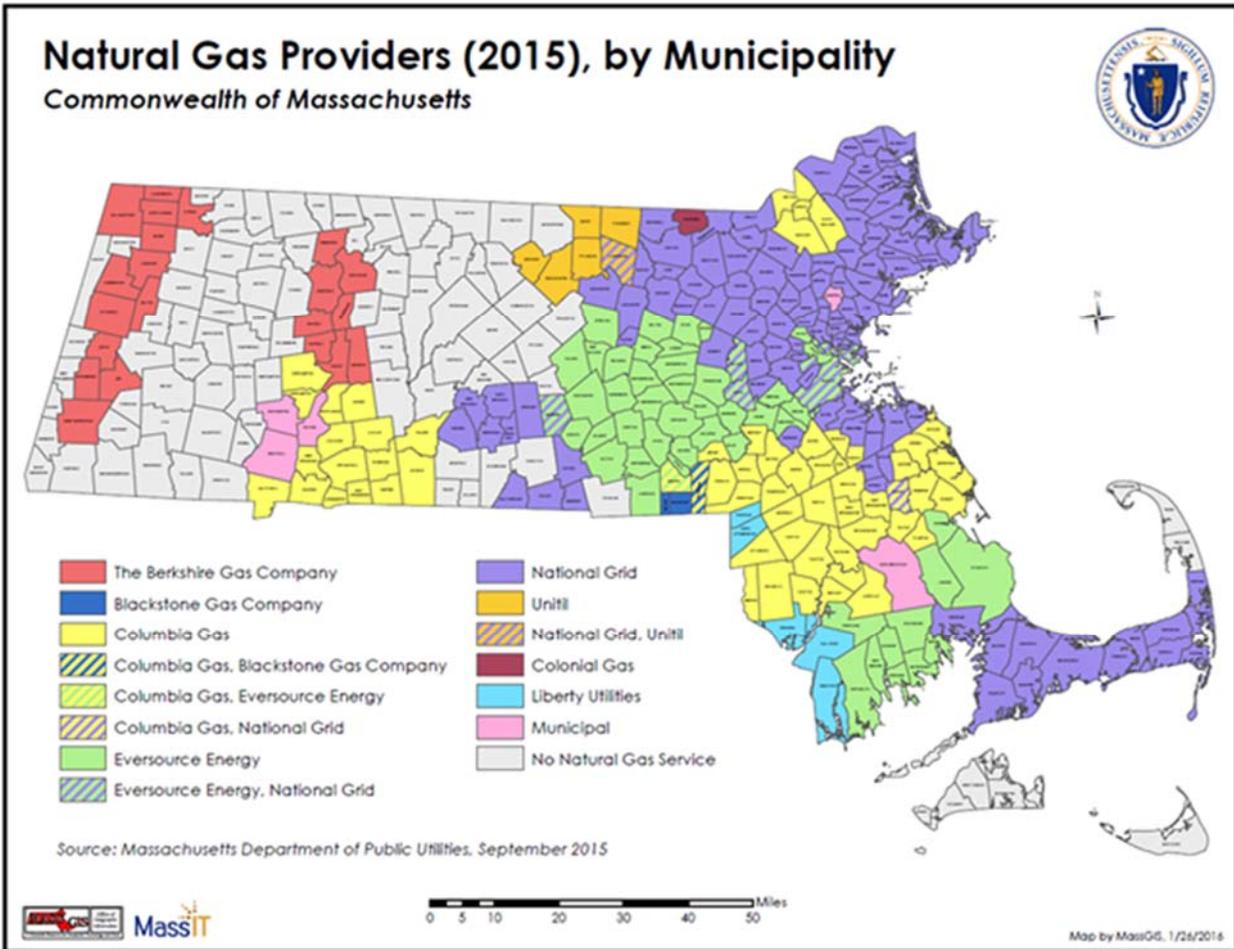
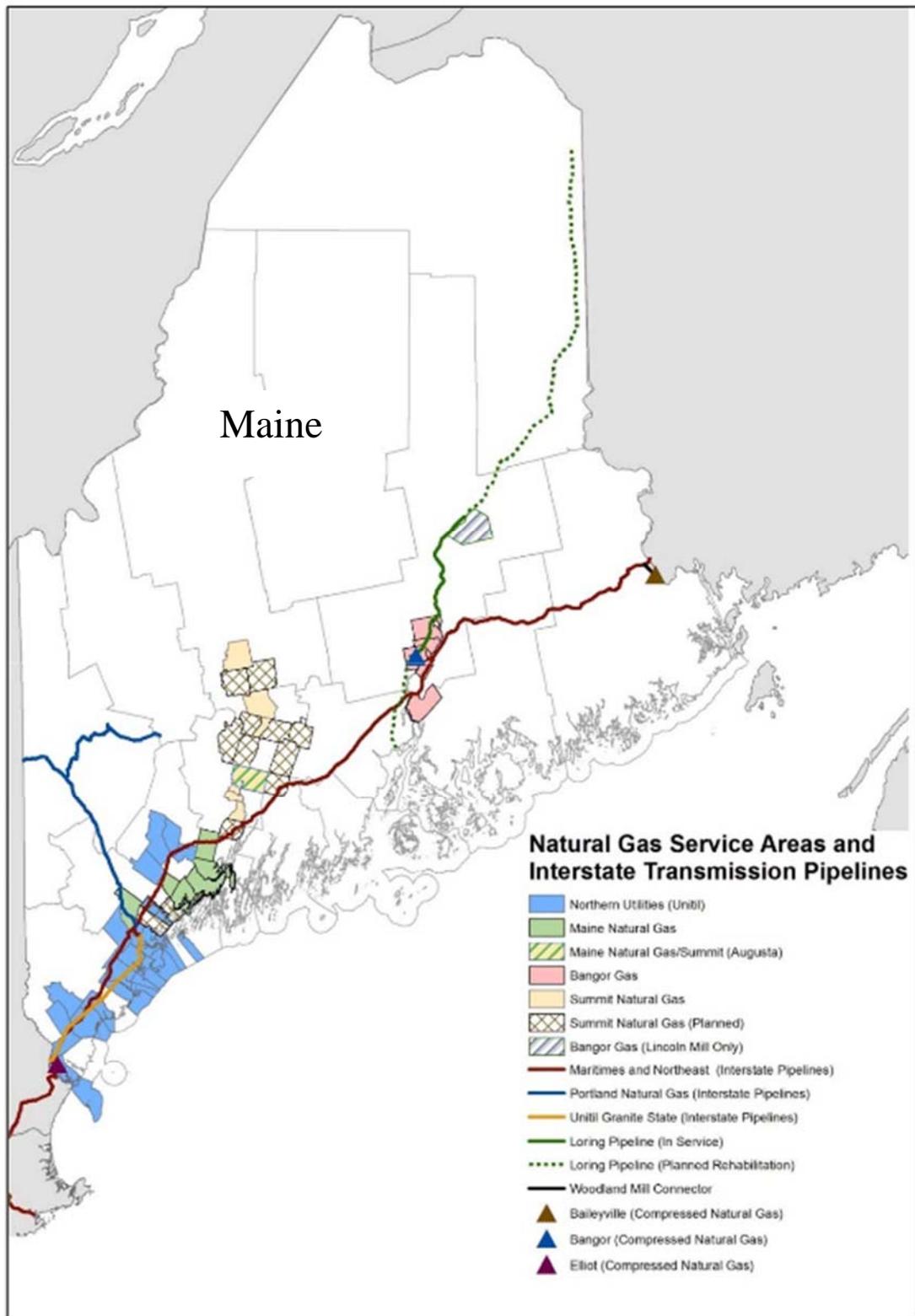


Figure 3



George E. Sansoucy, P.E., LLC
October 31, 2018

Franchising of Retail Gas Distribution

In New Hampshire, the NHPUC has general jurisdiction over the public utilities operating within the state. State law allows for a regulated public, or a public utility seeking to be regulated and operate in the state, to apply for a franchise to operate within the streets of a particular community. Franchise rights permit a utility provider to utilize the public rights-of-way, have use to go over land and land rights within a community, and the authority to acquire by eminent domain any lands needed to provide its utility service. This is true for gas distribution systems, electric distribution and transmission systems, water distribution and transmission systems, and legacy telephone companies. To a limited and lesser extent, utilities such as sewer systems can be structured in a similar fashion. A NHPUC petition for franchise proceeding allows an affected municipality the opportunity to intervene and participate in the process; however, after consideration of a town's perspective, the ultimate decision to grant franchise rights is made by the NHPUC.

Once authority has been granted there is no expiration to the franchise rights, although, subject to NHPUC approval, the rights can be transferred to another regulated company or to a municipal utility through acquisition or otherwise. Franchise authority gives the utility a monopoly to serve a particular community but, while technically it may or may not be exclusive, it is not practical for more than one utility provider to run natural gas pipe within the same road. If a municipality is not prepared to identify and communicate its concerns and desires regarding a potential franchisee, e.g. construction techniques, operating protocols, operating permits, inspections, safety protocols, service area market goals, etc., all decisions will default to the utility. In the absence of community participation, the utility may define its service area and neglect significant areas of a municipality that desire the service. As noted, it is not practical for another service provider to expand into the community to serve territories bypassed by the initial franchisee, leaving areas beyond the initial franchisee's territory with no opportunity for the utility's service.

To date, NU has petitioned the NHPUC for full franchise authority in the Town of Epping. NU's application defines its proposed service area as the commercial zone along NH Rt. 125 and NH Rt. 101 in the vicinity at Exit 7. The town requested and was granted intervenor rights in the proceeding, while Liberty Utilities' request for intervenor rights was denied. In order to explore the potential interest of other natural gas companies in providing natural gas service within the Town of Epping, Epping's Board of Selectmen, issued a RFP inviting any and all gas companies interested in seeking franchise rights within the municipality express its interest and to submit its proposal for the Board's review and evaluation.. Two utility providers with existing franchises within the State of New Hampshire responded to the RFP – Northern Utilities and Liberty Utilities.

Request for Proposals

The Request for Proposals issued by the Town of Epping requested that the following information be submitted for review and evaluation by the Selectmen and its consultants so as to enable the Selectmen to decide which natural gas service provider would best serve the Epping community. Each company provided a response to each item of the RFP. The items that are presented below in *italics and bold* are the items discussed in this comparative analysis, however, a review of each company's complete response is recommended.

1. Company identification including:
 - a. *Full name and official address of the company submitting the proposal, as well the organization chart of itself and related parties;*
 - b. *Identify the countries and/or states that the company or its related parties operate in; and*
 - c. Does the company or its related parties file a FERC Form 1 or FERC Form 2? If so, provide the company name for each entity filing the reporting.
2. Company profile to include, at a minimum the following:
 - a. *Current operating statistics:*
 - i. *quantity in miles of existing natural gas mains network;*
 - ii. *total number of current natural gas customers;*
 - iii. *identify each NH town currently served;*
 - iv. total quantity of natural gas sold;
 - v. quantity of gas sold by customer class – residential, commercial, and industrial;
 - vi. total cost of natural gas sold; and
 - vii. cost of natural gas sold by customer class – residential, commercial, and industrial.
 - b. Summary of the company's:
 - i. current rate structure to include the customer rates by customer class;
 - ii. pass through gas cost per dekatherm per customer class;
 - iii. total annual operations cost;
 - iv. total annual maintenance cost;
 - v. total annual general and administrative cost;
 - vi. current depreciation rate schedule;
 - vii. total depreciation reserves by FERC account number;
 - viii. *overall rate of return on rate base;*
 - ix. *overall return on equity;*
 - x. *cost of debt; and*
 - xi. *debt to equity ratio.*
 - c. Most recent annual report made to the NH PUC (Form F-16).
 - d. Most recent report to NH PUC of customer satisfaction metrics.
 - e. Plans and budgets for planned improvements and replacements to the company's existing gas distribution systems.

3. Description of the proposed Epping service area to include:
 - a. *identification of the geographic areas to be served including a map;*
 - b. *Identification of specific residential, commercial and industrial areas or customers expected to be included in the proposed service area;*
 - c. *timetable for construction;*
 - d. marketing study and conclusions;
 - e. marketing plan to address potential residential, commercial, and industrial customers;
 - f. *density requirements – minimum developed density to initiate service for residential, commercial, and/or industrial customers;*
 - g. *anticipated customer mix and timeframe to execute the mix - number of potential residential, commercial, and industrial customers; and*
 - h. estimated customer investment for each customer class, e.g. scope of work and expense that the customer will be required to pay to connect to the natural gas service.
4. Details of the design and construction of the distribution pipe extensions and include:
 - a. map showing pipe specification in the intended routes and service areas;
 - b. construction specifications and techniques to be utilized for the pipe installation;
 - c. construction plans, anticipated cutting permits, and project supervision;
 - d. anticipated materials and specifications of pipe to include at a minimum the sizes of mains, types of pipes, and maximum allowable operating pressure ratings; and
 - e. *estimated cost by pipe size by foot including all indirect costs.*
5. Specified procedures for disruption of public and private roadways and drives, traffic control, and reconstruction of all disrupted areas.
6. *Planned and anticipated community outreach programs to incentivize customers to connect to the natural gas service.*
7. *Planned and anticipated financial assistance programs to be provided by the company for the cost of conversion to natural gas and assistance with customer's stranded costs.*

Responses to Request for Proposals

Two regulated natural gas distribution companies submitted responses – NU and LU. These responses have been reviewed and analyzed to provide a summary and systematic comparison of each. The following discussion addresses factors and/or responses that we deem are especially relevant for consideration by the Town of Epping. These factors are identified in the preceding RFP in *italics and bold*. Throughout the following discussion, tables will be included that illustrate, and in some cases contrast, each company's submissions. These tables consist of four columns described as follows:

1. Item # - Cross reference to the RFP item being addressed in the response.
2. Request – The request being addressed in the response.
3. Liberty Utilities / EnergyNorth – Summary of LU's response.
4. Northern Utilities / Unitil – Summary of NU's response.

Table 1 provides each company’s response to item 1-a which provides the full name and business address. This information is self-explanatory. Organization charts submitted by each company are provided as Appendix A. Note that, for the purposes of this presentation, the organization charts submitted by the companies have been truncated to highlight each company’s New Hampshire operations. In particular, LU’s organization includes business holdings throughout North America and it submitted multiple charts to define its organizational structure.

Table 1

Item #	Request	Liberty Utilities / EnergyNorth	Northern Utilities / Unitil
1-a.	Full name and official address of the company submitting the proposal, as well the organization chart of itself and related parties.	Liberty Utilities (Energy North Natural Gas) 15 Buttrick Road Londonderry, NH 03053 (LU Reference Page 3)	Northern Utilities 6 Liberty Lane West Hampton, NH 03842 (NU Reference Page 5)

Table 2 provides each company’s response to item 1-b, which is a list of the countries and/or states that the company or its related parties operate in. LU is a diversified utility provider operating throughout portions of the US & Canada. NU operates in the New England states of New Hampshire, Maine, and Massachusetts.

Table 2

Item #	Request	Liberty Utilities / EnergyNorth	Northern Utilities / Unitil
1-b.	Identify the countries and/or states that the company or its related parties operate in.	United States: Arizona, Arkansas, California, Connecticut, Georgia, Illinois, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, Nevada, Oklahoma, Pennsylvania, Texas Canada: Alberta, Manitoba, New Brunswick, Saskatchewan (LU Reference Page 4)	United States: New Hampshire, Maine, Massachusetts (NU Reference Page 5)

Items 2-a(i) – 2-a(iii) requests the quantity of pipe owned, number of customers, and a list of each community served within the state. The company responses are included in Table 3 and represent each company’s size and scope in NH. LU’s presence in NH, based on number of customers, is 2.7 times that of NU. The size and scope of a utility is an important consideration. Larger utility companies can take advantage of economies of scale. For instance, overhead and other fixed operating costs can be spread over a greater number of customers, resulting of generally lower rates on a per customer basis. As is portrayed in the NH Franchise Map (Figure 1), NU’s customers

are focused in the southeastern corner of the state, while LU’s service territory is primarily in the southcentral region of NH.

Table 3

Item #	Request	Liberty Utilities / EnergyNorth	Northern Utilities / Unitil
2-a. i.	Quantity in miles of existing natural gas mains network.	In 2017 1,395 miles of natural gas and 31 miles of propane (LU Reference Page 4)	In 2017 537.37 miles (NU Reference Page 8)
2-a. ii.	Total number of current natural gas customers.	92,044 (LU Reference Page 4)	33,860 (NU Reference Page 8)
2-a. iii.	Identify each NH town currently served.	Allenstown Amherst Auburn Bedford Belmont Berlin Boscawen Bow Canterbury Concord Derry Franklin Gilford Goffstown Hollis Hooksett Hudson Laconia Litchfield Londonderry Loudon Manchester Merrimack Milford Nashua Northfield Pelham Pembroke Sanbornton Tilton Winnisquam (LU Reference Page 5)	Atkinson Brentwood Dover Durham East Kingston Exeter Greenland Hampton Hampton Falls Kensington Madbury Newington North Hampton Plaistow Portsmouth Rochester Rollinsford Salem Seabrook Somersworth Stratham (NU Reference Page 9)

RFP requests 2-b(viii) through 2-b(xi) ask for very specific information regarding each company’s overall rate of return, return on equity, cost of debt, and debt to equity ratio. Each company’s response is summarized in Table 4. This information is essential to the rate-making process and directly affects the rates that are charged by the utility and paid by its customers. In addition to recovering its cost of service, a public utility is allowed to earn a return on its investment. This rate is established during a company’s rate case proceeding and is subject to the authority of the NHPUC. The overall rate of return for LU and NU are 6.8% and 7.59%, respectively. This 12% difference is driven by NU’s slightly higher return on equity, (9.5% compared to LU’s 9.3%) and

significantly higher cost of debt (5.55% compared to LU’s 4.42%). A higher rate of return, all else being equal, directly impacts the cost of service because it translates into higher customer rates. While the return on equity rates are not significantly different, the difference in the cost of debt is substantial, especially when you consider that half of the company’s capital investment in pipes, services, and meters. The debt to equity ratios for both companies are similar and are consistent with the expectations established by the NHPUC under cost of service regulation for public utilities.

Table 4

Item #	Request	Liberty Utilities / EnergyNorth	Northern Utilities / Unitil
2-b. viii.	Overall rate of return on rate base.	6.80% NHPUC Docket No. DG 17-048 (LU Reference Page 6)	7.59% NHPUC Docket No. DG 17-070 (NU Reference Page 10)
2-b. ix.	Overall rate of return on equity.	9.30% NH PUC Docket No. DG 17-048 (LU Reference Page 6)	9.50% NHPUC Docket No. DG 17-070 (NU Reference Page 10)
2-b. x.	Cost of debt.	4.42% (LU Reference Page 7)	5.55% NHPUC Docket No. DG 17-070 (NU Reference Page 10)
2-b. xi.	Debt to equity ratio.	100.01% (Slight difference due to rounding) (LU Reference Page 7)	93% (NU Reference Page 10)

Item 3 of the RFP relates to each company’s proposed expansion into the Town of Epping. Item 3-b asks each company to identify the residential, commercial, and industrial areas and/or customers expected to be included in each company’s proposed Epping service area. This request was designed to solicit the company’s intent in developing its gas system throughout the community, not only in the existing NH Rt. 125 and NH Rt. 101 commercial area, but also the willingness to develop the surrounding commercial and residential areas of the town. LU provides a narrative of its three-phase plan summarizing each phase of construction, the streets to be served, and the adjacent areas where natural gas will be available to those property owners who elect to convert to natural gas appliances. NU proposes two work zones - the first along NH Rt. 27 to the intersection of NH Rt. 125 and a second zone at the south of the entrance ramp onto NH Rt. 101 to the Brentwood town line. NU’s proposed service territories are primarily commercial zones within Epping. Table 5 summarizes each company’s response to item 3-b.

Table 5

Item #	Request	Liberty Utilities / EnergyNorth	Northern Utilities / Unutil
3-b	Identification of specific residential, commercial and industrial areas or customers expected to be included in the proposed service area.	<p align="center">Phase 1:</p> <p>The distribution system will initiate from the proposed gate station with a directional bore under Route 101 onto Holt Road. This bore location will require final approval from NHDOT. The distribution system will continue north on Holt Road passing and providing access to Hickory Hill Road and Norris Court. At Mill Pond Road the system continues north to Route 27 (Pleasant Street), as well as southeast continuing on Mill Pond Road. On Route 27 the system will head west and cross into Raymond. In Raymond the system will turn south onto Prescott Road continuing to the Walmart Distribution Center. This section of the system will allow gas access to the neighborhood in the southwest corner of Epping. Starting from the intersection of Mill Pond Road and Route 27 the system will also head east towards Route 125. At Route 125 the system will proceed south toward Brickyard Plaza. The streets included, or with potential access to natural gas, include:</p> <p>Holt Rd, Mills Pond Rd, Peninsula Dr, Shannon Dr, San Antonio Dr, Algay Dr, Depot Rd, Gable Dr, Fuller Ln, Winslow Way, Franks Way, Hickory Hill Rd, Friend St, Riverview Ct, Wilson Dr, Midnight Sun Dr, Whitey Ct, Colt Ln, Jenness Rd, Old State Rd, Ledgewood Ln, Lamprey Village Dr, Norris Ct, Pleasant St, Joshua Ln, Black Jack Ct, Hunter Dr, School St, Crown Ct, Hackett Ct, Page Ln, Gatchell Way, Hutch Ct. (LU Reference Page 9)</p>	<p>Mains extension will be installed along the Rockingham Rail Trail. Should the route change to follow Route 27, the parcels on the immediate north side of Route 27 will also have access to natural gas. Northern Utilities expects to evaluate additional main extensions following the initial buildout. (NU Reference Page 101)</p>
		<p align="center">Phase 2:</p> <p>This section of the distribution system will commence from piping installed during Phase 1 on Route 27. From the intersection of Route 27 and Main Street the system will head north along Main Street toward, and inclusive of, the Epping School Complex. This portion of the system includes High Street, Cate Street and Elm Street. From the intersection of Route 125 and Main Street the system also extends east along Water Street to Route 125. This section also includes Mill Street. From the intersection of Main Street and route 27 heading south along Main Street the system will include a distribution main on St. Laurent Street, Church Street, Railroad Ave, and a portion of Fremont road. Streets included, or with potential access to natural gas, in this Phase 2 include:</p> <p>Main St, Center Ct, Elm St, Pearson Way, Moore St, St Laurent St, Exeter Rd, Bartlett St, Academy St, Bennington Ct, Pike St, Church St, Fremont Rd, High St, Cate St, Mill St, Water St, Jannell Ct, Leddy Dr. (LU Reference Page 10)</p>	
		<p align="center">Phase 3:</p> <p>This phase would originate at the intersection of Route 27 and Blake Road. The system would continue north along Blake road to Prescott Road. From Blake Road the system would connect to Prescott Road and Old Bridge Lane. This phase of construction would most likely require contributions in aid of construction (CIAC) from customer to receive service, unless more development occurs before construction begins. CIACS are estimated to be less that \$1,500 per customer. Streets included or with potential access to natural gas in this phase include:</p> <p>Blake Rd, Old Bridge Ln, Anthony Ln, Ironwood Dr, Cider St, Cortland Dr, Shepherd Ln, Saddle Brook Ln, Prescott Rd, Debbie Ln, MacIntosh Ln, Wood Dr, Molly Way, Rosewood Ct, Orchard Hill Rd, Apple Way. (LU Reference Page 10)</p>	

Overlay maps, provided as Figures 4 through 13, were developed by our staff based on each company's written description of the its anticipated service area within Epping. Figure 4 represents LU's phase 1 and includes the construction of its distribution line off the new storage tank as the gas feed source to NH Rt. 27 and then traveling west and into Raymond to serve the Walmart Distribution Center and east to serve the Rt. 27 corridor to Rt. 125 and south on Rt. 125 past Rt. 101 to the Brentwood town line. LU's phase 2 proposal, portrayed in Figure 5, is to build-out the Rt. 125 corridor around Main Street in Epping, including Railroad Ave., St. Laurent St., and up to the adjacent western side of Rt. 125, a residential and commercial region. Figure 6 shows LU's proposed third phase to build-out in the area of west Epping with the potential to serve residential subdivisions and small businesses. Figure 7 provides a comprehensive view of LU's three phases combined. Figure 8 is an additional overlay to show the streets and areas that will gain direct access to natural gas as a result of LU's proposal. Note that phase 1, 2 and 3 are shown in blue and the roads that will have access to natural gas are indicated in pink.

Each map is also provided in large format (11 X 17) as Appendix B attached.

Figure 4
Liberty Utilities Phase 1

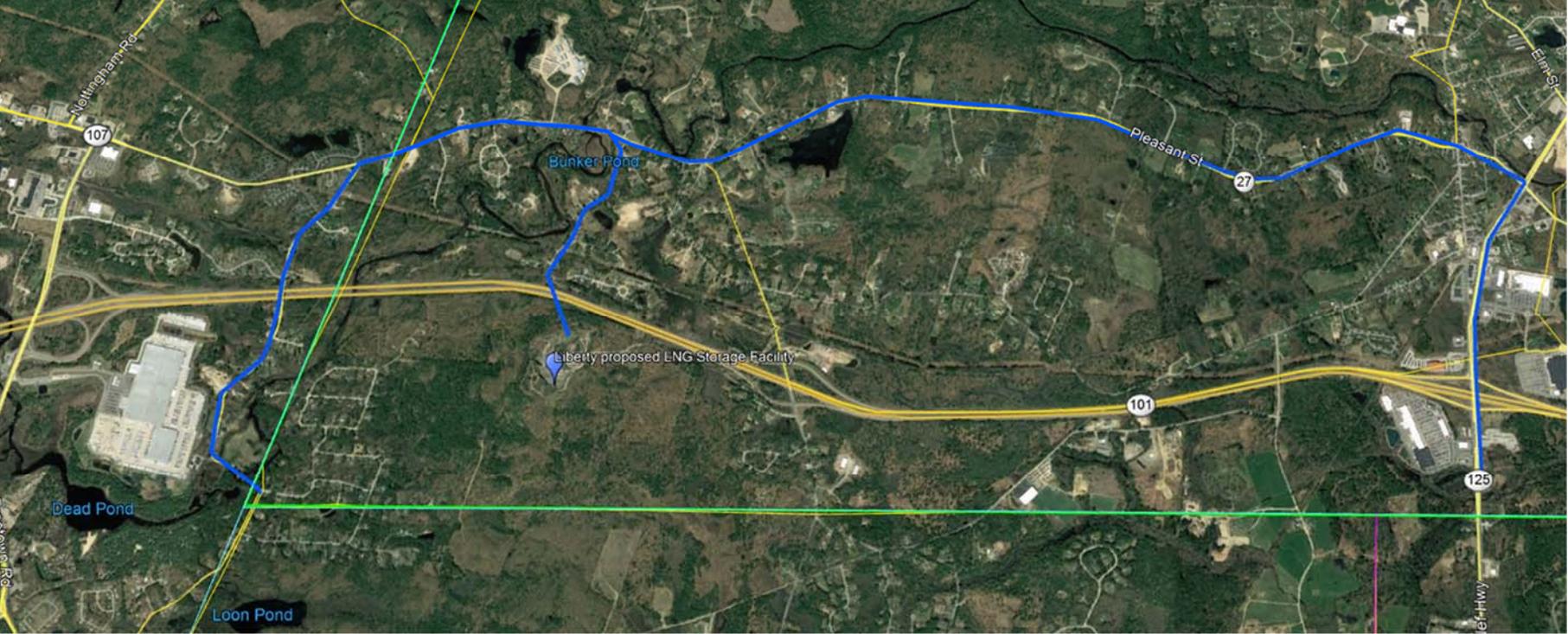
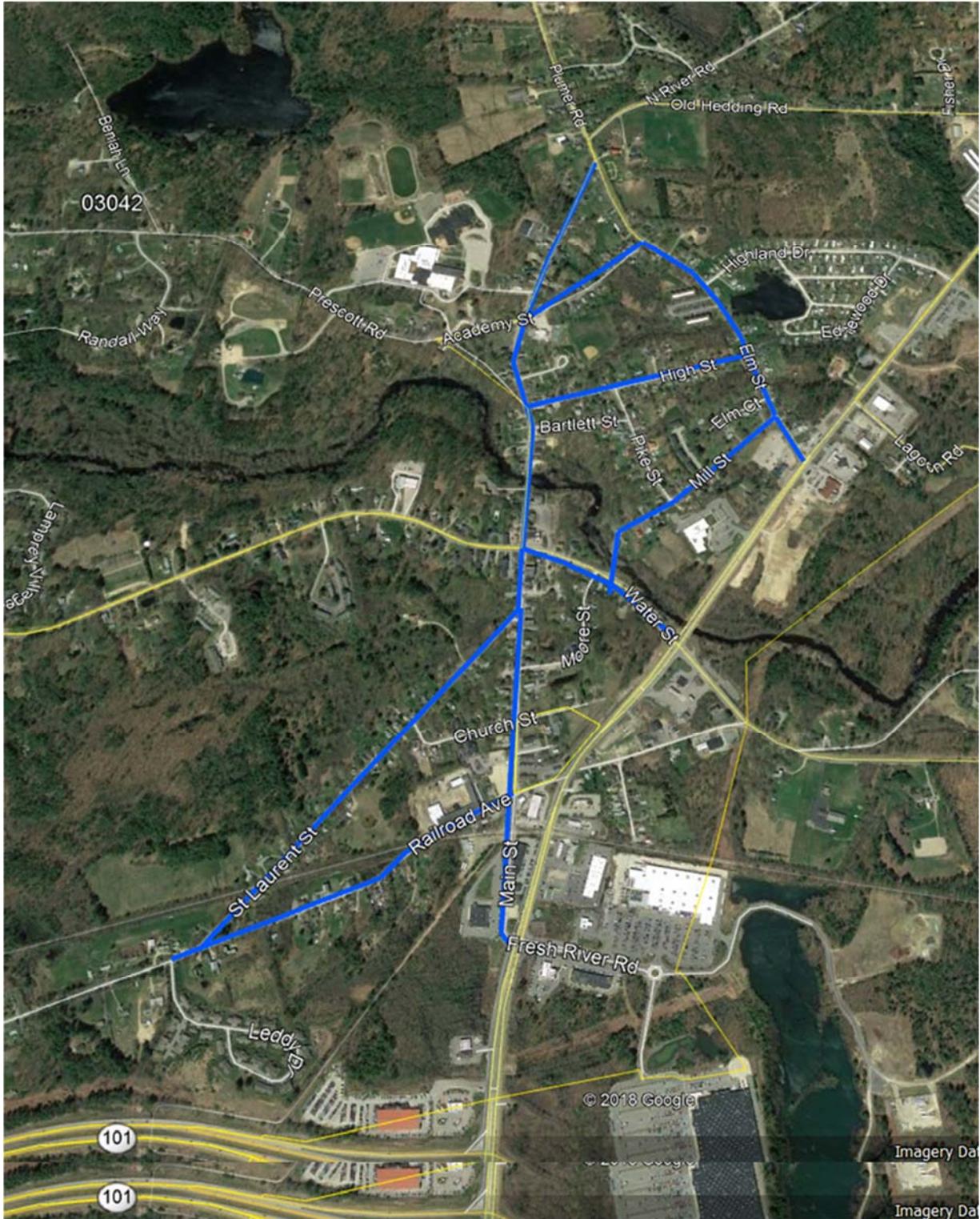
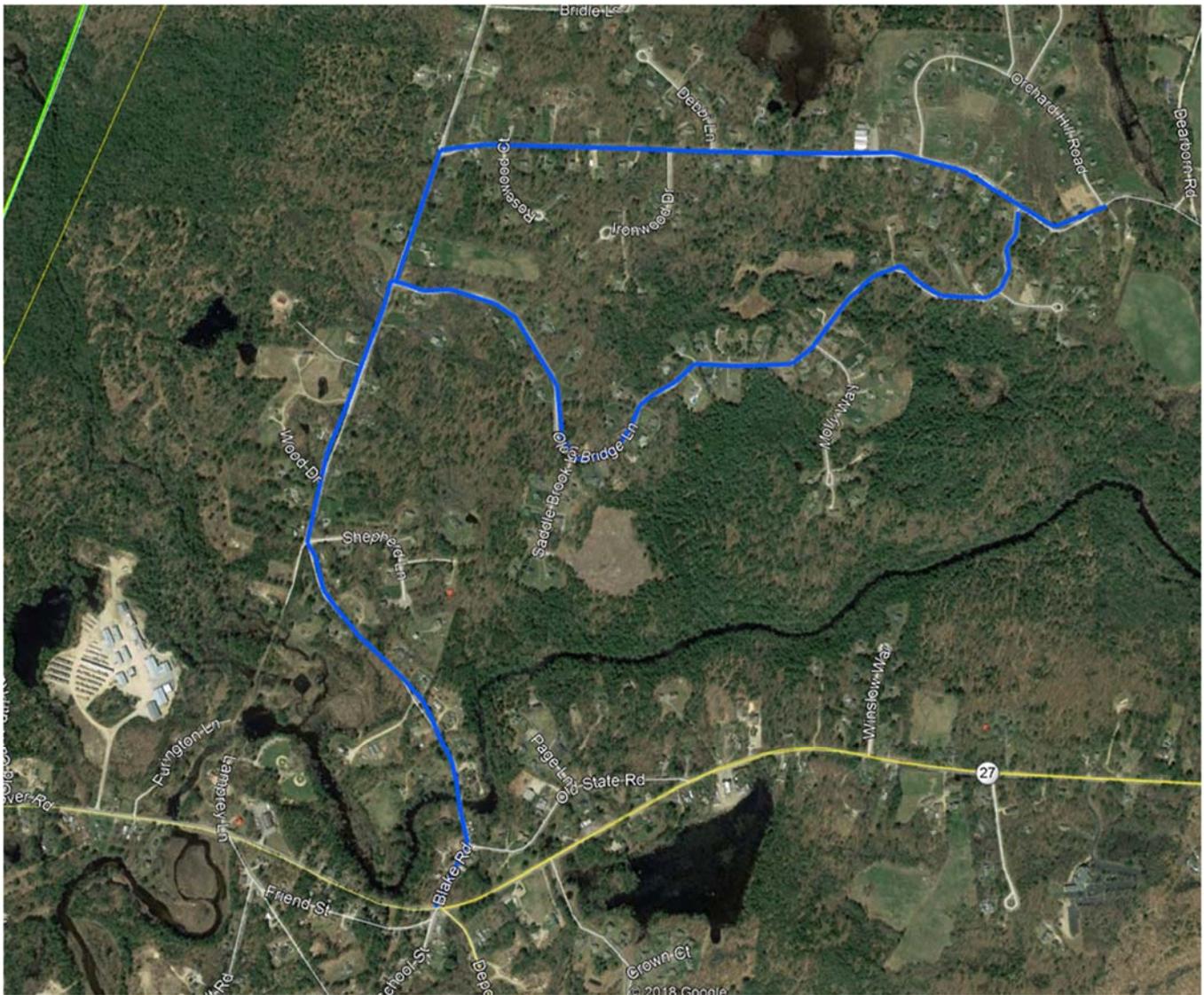


Figure 5
Liberty Utilities Phase 2



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Figure 6
Liberty Utilities Phase 3



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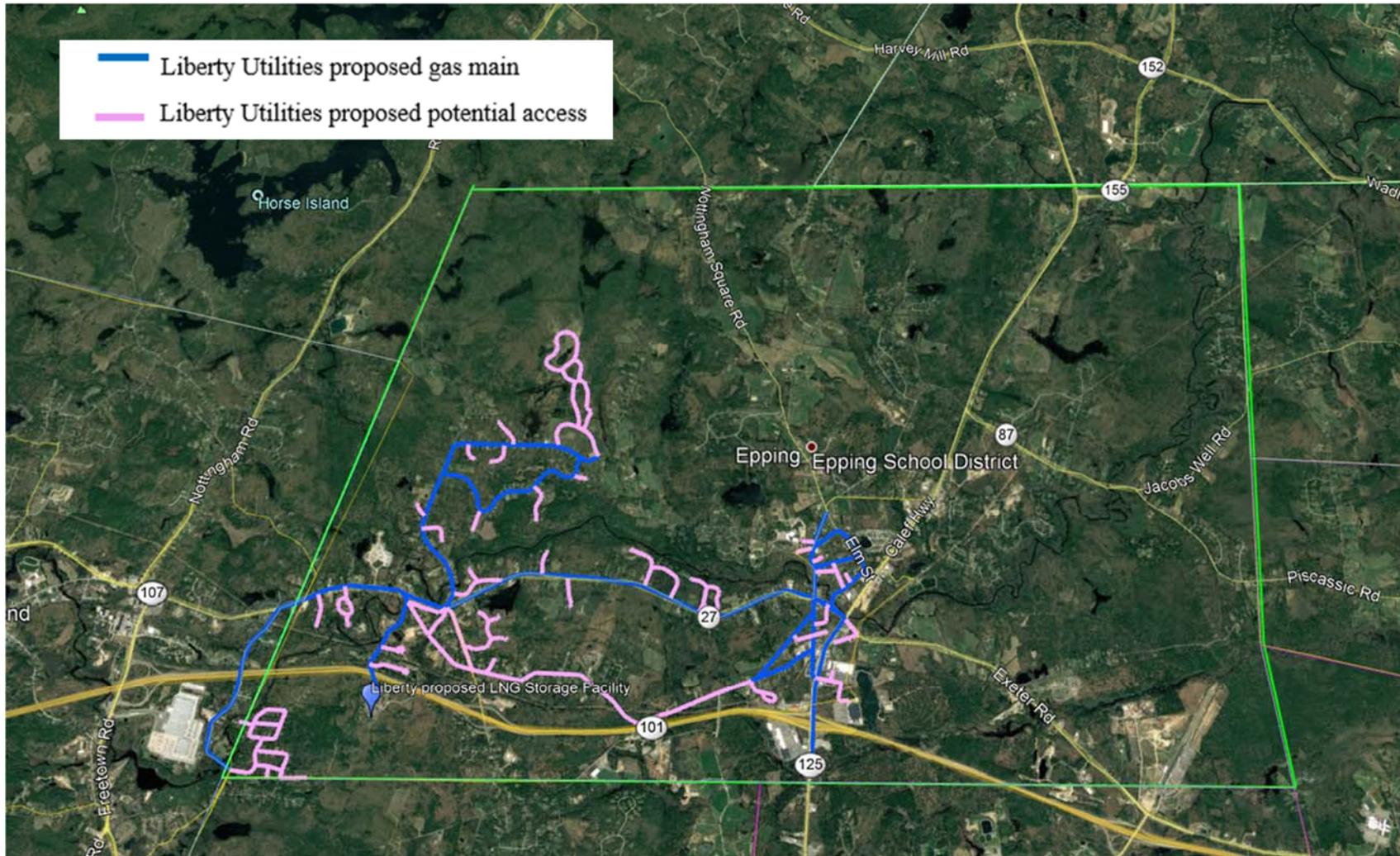
Figure 7

Liberty Utilities Phase 1, 2 & 3



Figure 8

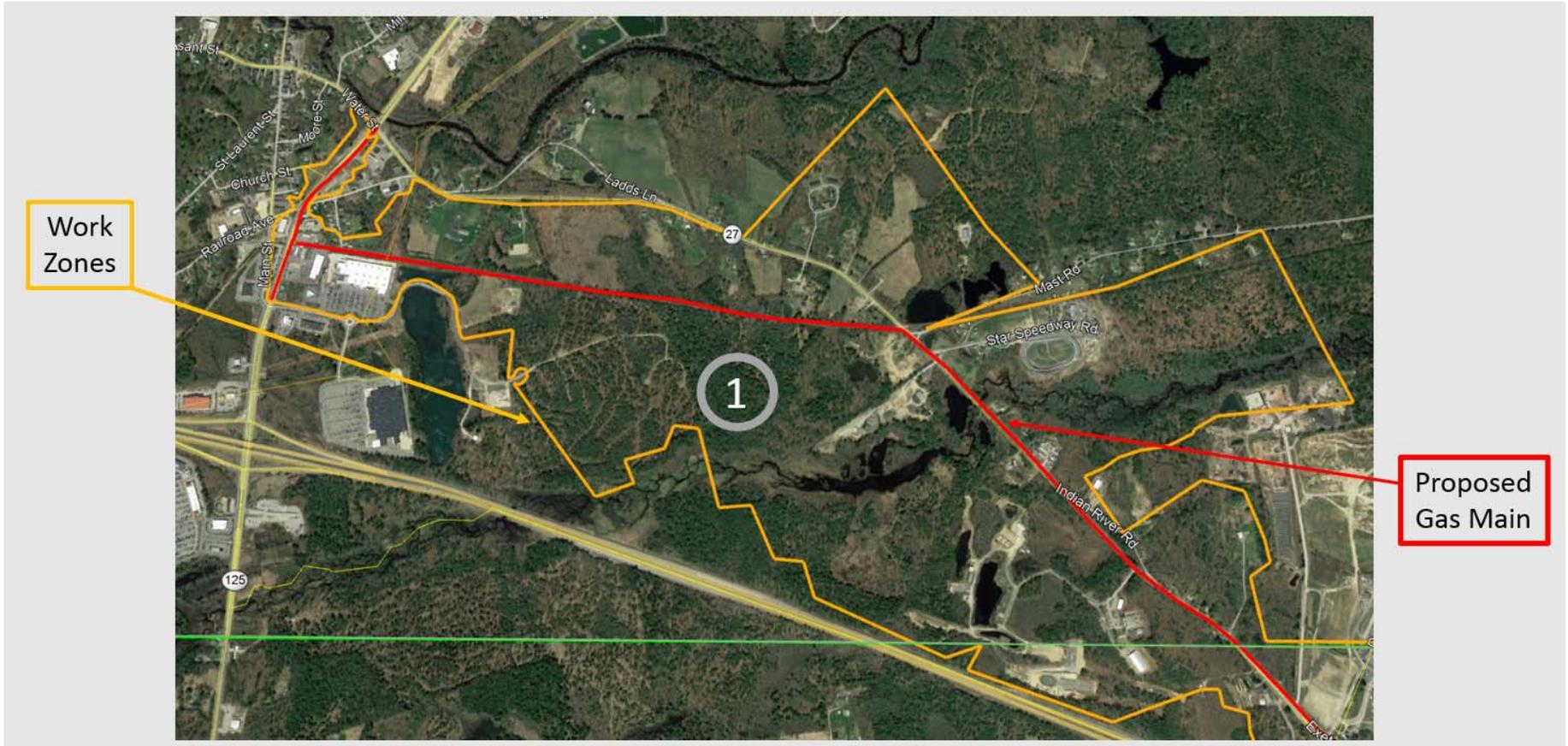
Liberty Utilities Proposed Phase 1, 2 &3 With Potential Gas Access



NU proposes two work zones in the eastern portion of Epping. The first work zone extends the proposed gas main from the Exeter Road to the railroad tracks and then along the railroad tracks to Rt. 125. A north and south spur is proposed on Rt. 125 to the Brentwood town line. Figures 9, 10, and 11 show the NU work zones and pipeline expansion in red. Figure 12 overlays NU's two work zones in red with the LU proposal represented in blue. The final overlay, Figure 13, includes that totality of both NU and LU's proposals – NU in red, LU in blue, and the streets, previously discussed, with access to LU service shown in pink. Figure 13 is a good compilation of each company's proposal on one map.

Figure 9

Northern Utilities Zone 1



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October 31, 2018

Figure 10
Northern Utilities Zone 2

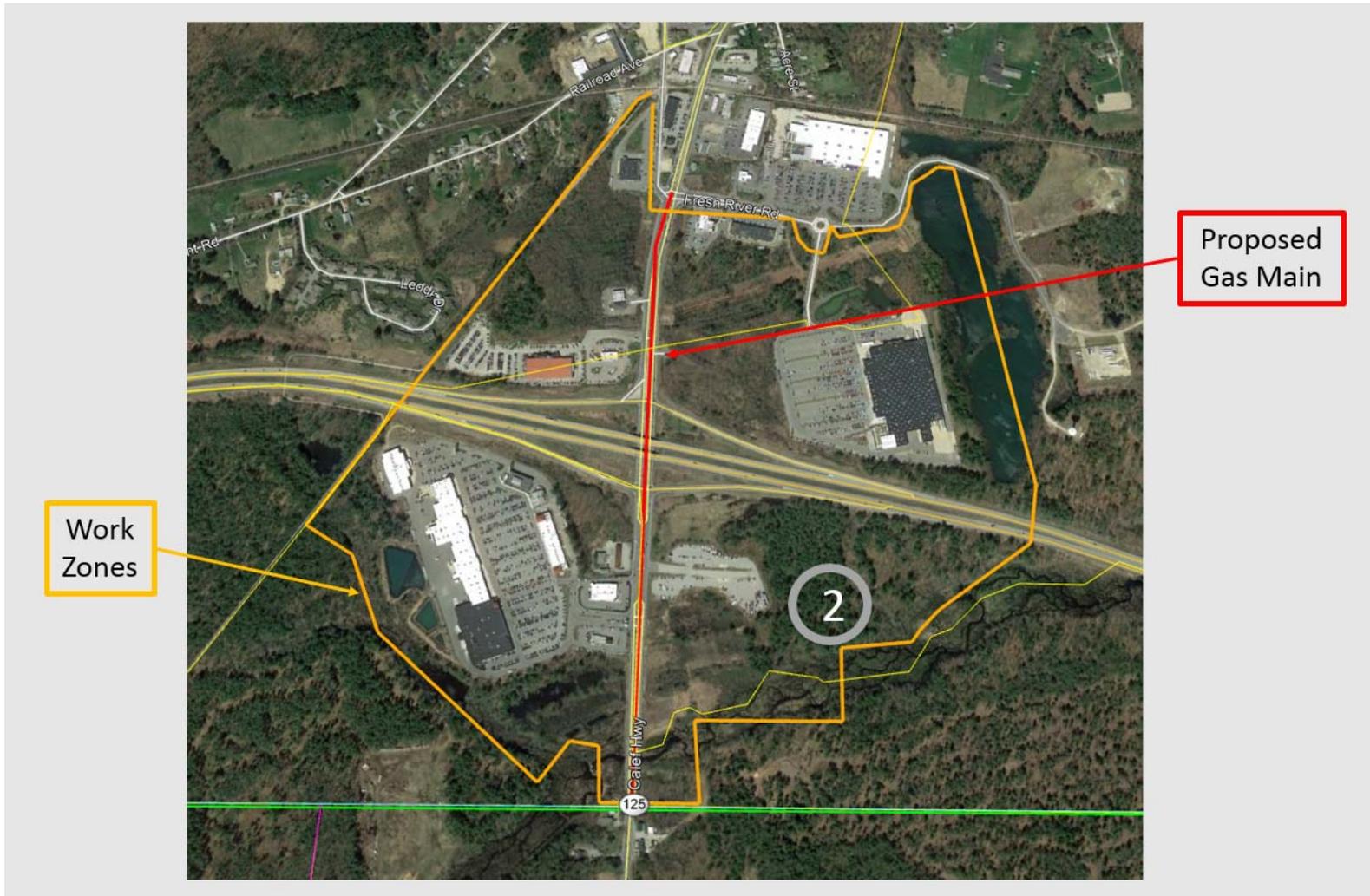


Figure 11

Northern Utilities Zones 1 & 2

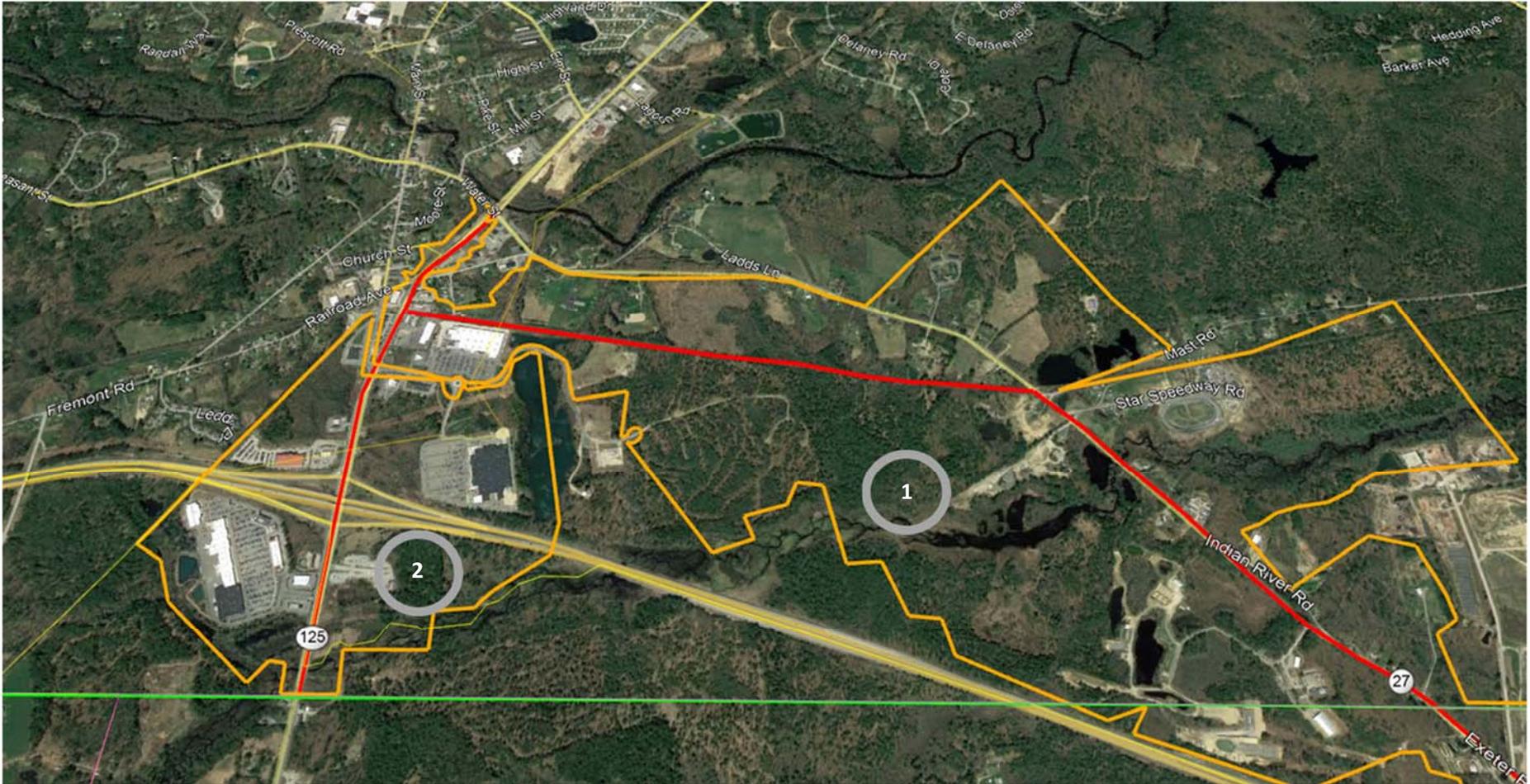


Figure 12

Utility Proposed Gas Main Routes

 Liberty

 Northern

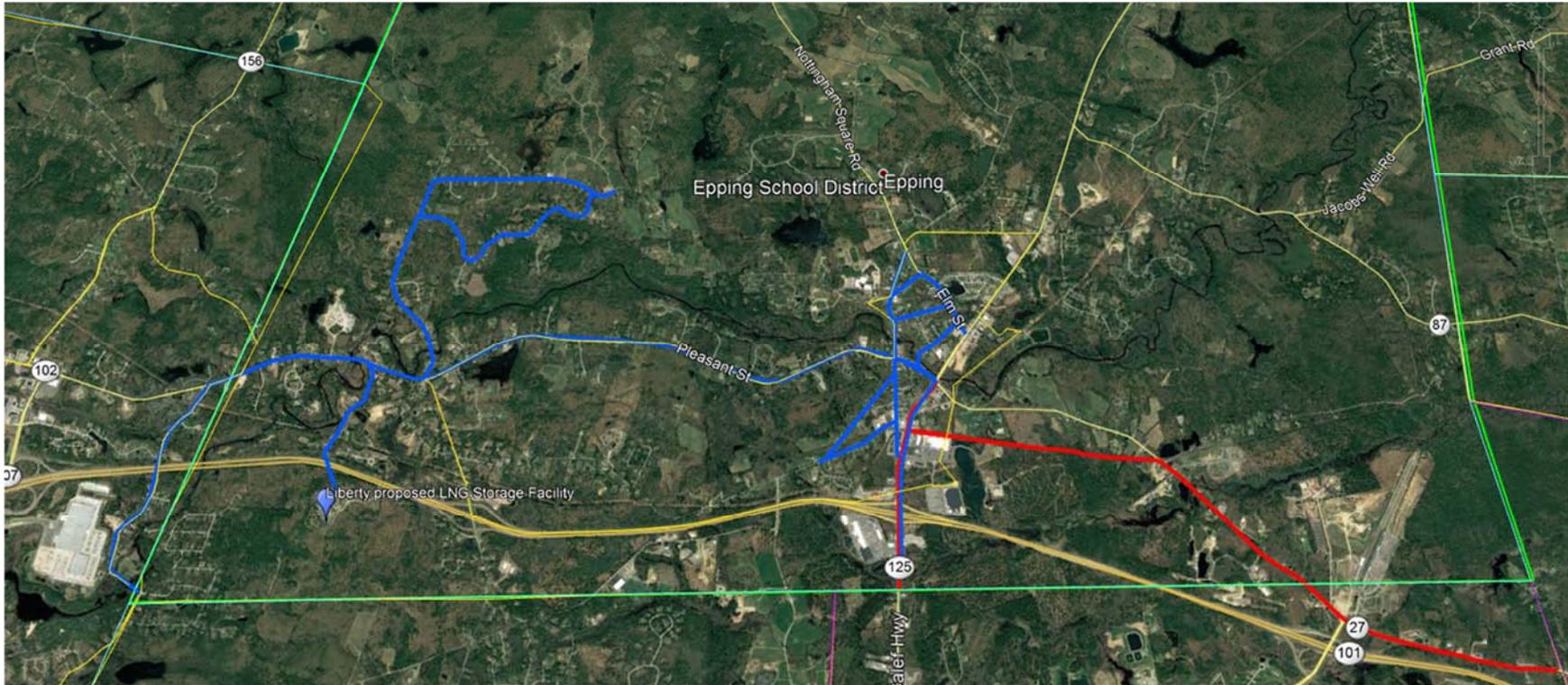
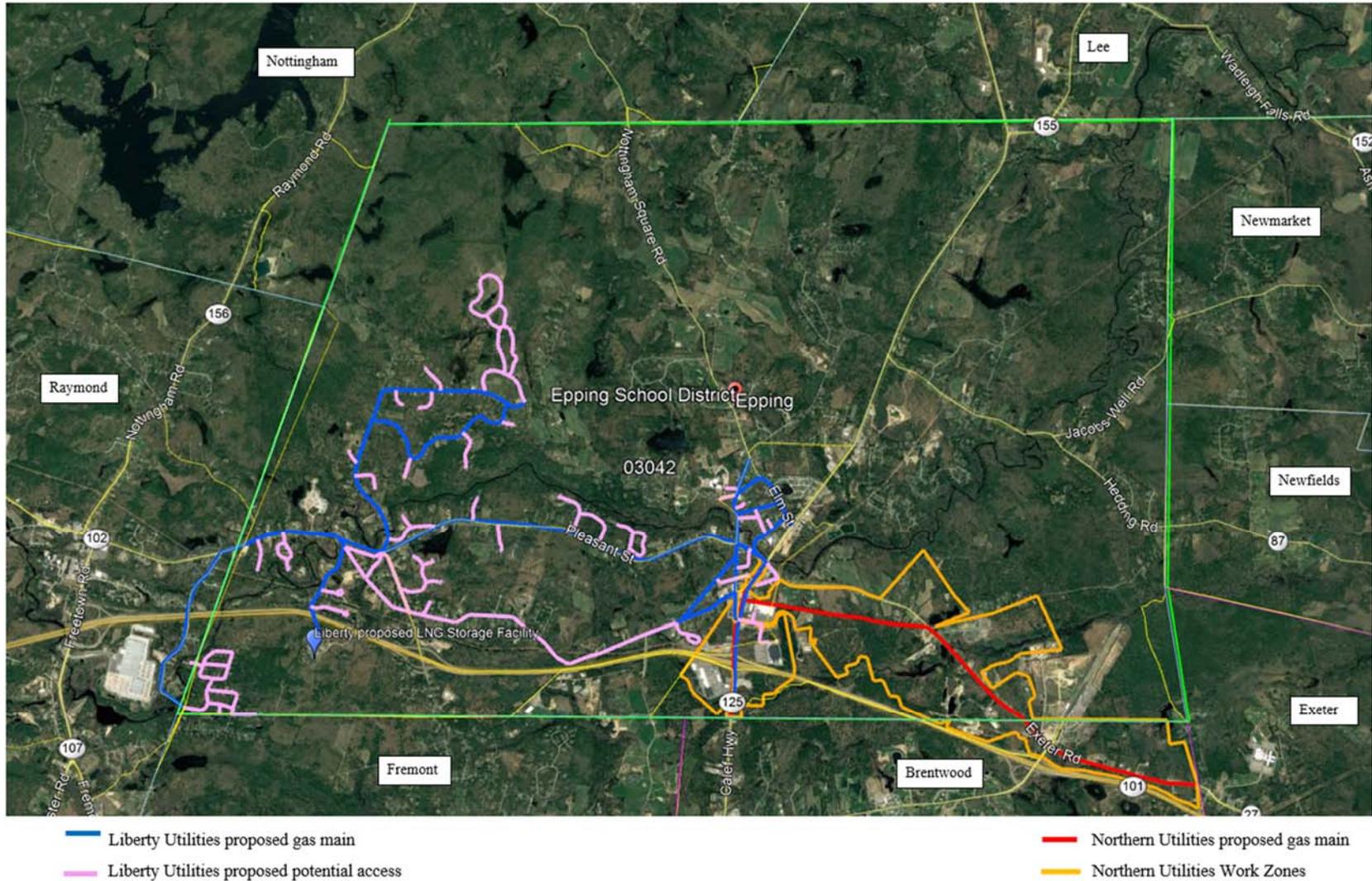


Figure 13

Utility Prosed Gas Main Routes and Liberty Access Areas Opened Up



Each company provided an estimated timetable for construction in their response to Item 3-c which is summarized below in Table 6. LU links its proposed construction time-table to the regulatory process which includes three proceedings. The Granite Bridge project to install a high-pressure gas transmission line down NH Rt. 101, as well as the cryogenic storage tank in the Town of Epping require approvals from the NHPUC and the New Hampshire Site Evaluation Committee (“NHSEC”). In addition, LU will be subject to a franchise petition with the NHPUC to serve the Town of Epping. NU states that it is actively involved in acquiring the necessary state and local permits and approvals for Zone 1. It anticipates completing Zone 1 in 2019 and Zone 2 in 2020.

Table 6

Item #	Request	Liberty Utilities / EnergyNorth	Northern Utilities / Unitil
3-c.	Timetable for construction.	<p>* Construction for the Epping distribution system is dependent on three regulatory approvals. The first two are the NH Public Utilities Commission (NHPUC) and NH site Evaluation Committee (NHSEC). The third would be approval of a franchise petition to serve Epping. If liberty were selected through this RFP process we would immediately file a petition with the NHPUC for the franchise rights to serve Epping.</p> <p>*In late 2017 Liberty filed its request for approval of the Granite Bridge project with the NHPUC, and is planning to file for approval with the NHSEC in early 2019.</p> <p>*Liberty anticipates that any franchise award for Epping would be conditioned on an NHSEC approval of Granite Bridge. Construction of Granite Bridge and the Epping distribution system would begin simultaneously. The company expects the Granite Bridge pipeline construction along with the initial phases of construction of the Epping distribution could be completed in 2022, depending on the length of the NHSEC review. (LU Reference Pages 10-11)</p>	<p>Northern Utilities is currently in the detailed design phase of this project. We have held multiple meetings with the NH DOT. Northern expects to begin construction once it gets all the necessary state and local permits and approvals. It is expected that Zone 1 will be completed in 2019 and Zone 2 will be completed in 2020. (NU Reference Page 102)</p>

Item 3-f summarized in Table 7, asks each company to identify the density requirements and minimum developed density to initiate natural gas service. Both companies report that they do not impose density requirements to initiate service. LU has a “Standard Offer” for a free 100-foot service line from an existing natural gas main. Customer payments are based on a comparison of the anticipated revenue vs. the direct costs of construction. Contribution in Aid of Construction (“CIAC”) are initiated in cases where expected revenues over an eight-year period (6 years for commercial customers) is less than the direct construction costs. No CIAC is required if the expected revenues are more than the construction costs. LU also offers a rate design called “Managed Expansion Program”. Rather than pay the CIAC up front, this rate structure allows a customer to pay over time through a 30% higher distribution rate (a portion of the rate structure) for ten years. NU uses a discounted cash flow method to evaluate main and service line extensions. This requires the company to estimate the cost of capital expenditures associated with the customer extension, the net revenue to be derived from the potential customer, the associated operation and maintenance expenses, depreciation, and property and other taxes. Cash flows are discounted over

twenty years for residential customers and ten years for commercial customers. If the net present value (“NPV”) is zero or greater, no CIAC is required; if the net present value is negative, the excess cost is required to be paid by the initial customer for service.

Table 7

Item #	Request	Liberty Utilities / EnergyNorth	Northern Utilities / Unitil
3-f.	Density requirements – minimum developed density to initiate service for residential, commercial, and/or industrial customers.	Liberty does not have a density requirement. Offers a free 100 foot service line from an existing natural gas main. (LU Reference Pages 13-14)	Unitil does not impose a density requirement For residential customers Unitil offers Standard offer Service ("SOS") and will apply the SOS when a single new service is required for residential gas heating. The SOS provides for installation of 100 feet of service pipe from a gas main at no charge to serve residential heating loads. (NU Reference Pages 103,106)
		Customers that require a main extension and a service line extension, Liberty has a tariff containing a Service and Main Extension Policy that compares the cost of building the new main and services with the expected revenue received from the customers. This is 8 years for residential and 6 years for commercial. If revenues are expected to be greater payment is not required. If it is less the customer would need to make a contribution-in-aid-of-construction payment ("CIAC"). (LU Reference Pages 13-14)	Unitil uses a DCF method when evaluating main and service line extensions. This method considers an estimate of the cost of capital expenditures associated with the proposed extension, an estimate of net revenue, estimate of the associated operation and maintenance expenses, depreciation and property and other taxes. These cash flows are discounted over 20 years for residential customers and 10 years for commercial customers. If the net present value is zero or greater no CIAC is required. If the net present value is negative a CIAC is required. (NU Reference Pages 103,106)
		Liberty offers a rate design called Managed Expansion Program. This rate structure allows customers to pay a 30% higher distribution rate for 10 years instead of paying CIAC. (LU Reference Pages 13-14)	

Item 3-g addresses each company’s anticipated customer mix and number of potential customers. The summarized response is below in Table 8. LU’s proposal anticipates 2,456 residential customers and 403 commercial customers in the Town of Epping. NU estimates that there are approximately 300 potential customers, including commercial and residential in its proposed Epping service area. The company does not expect that this entire market potential will seek natural gas service.

Table 8

Item #	Request	Liberty Utilities / EnergyNorth	Northern Utilities / Unitil
3-g.	Anticipated customer mix and timeframe to execute the mix - number of potential residential, commercial, and industrial customers.	Conservative estimates 2,456 - Residential 403 - Commercial (LU Reference Page 14)	300 potential customers (NU Reference Page 103, Map on Page 104-105)

The most significant capital cost to install the distribution system in the Town is the cost of service mains, e.g. the pipe. Item 4-e requires each company to estimate the total cost (direct & indirect) of pipe by size by foot. LU has provided a cost estimate for 2", 4", 6", 8", and 12" pipe ranging from \$40 per lineal foot to \$110 per lineal foot. NU has estimated the cost for 2", 4", and 8" pipe from approximately \$70 per lineal foot to \$93.50 per lineal foot. This information is summarized in Table 9 on the following page.

Table 9

Item #	Request	Liberty Utilities / EnergyNorth	Northern Utilities / Unutil	
4-e.	Estimated cost by pipe size by foot including all indirect costs.	Cost per foot	Cost per foot	Estimated Length
	2"	\$40.00	\$69.67	4,200
	4"	\$49.00	\$69.26	2,875
	6"	\$61.00	na	n/a
	8"	\$73.00	\$93.50	27,815
	12"	\$110.00	na	n/a
		These estimates are based on over 1000' main extension, primarily installed off-pavement (does not include services). These are approximate estimates based upon preliminary engineering, material costs, and average installation costs. (LU Reference Page 16)	NU's total cost for mains is estimated to be \$3,092,524. Services will be HDPE SDR-11 with an MAOP of 99 psig and individually sized based on the required load. (NU Reference Page 110)	

For Item 6, each company provided a narrative of its planned and anticipated community outreach programs to incentivize customers to connect to natural gas service. Those responses are summarized in Table 10 below.

Table 10

Item #	Request	Liberty Utilities / EnergyNorth	Northern Utilities / Unutil
6	Planned and anticipated community outreach programs to incentivize customers to connect to the natural gas service.	<p>*Liberty believes in local and hands on approach. The sales and marketing team lives and works in the communities it serves. Liberty works with residential and commercial customers, answering questions, concerns and making sure that customers and their contractors have what they need to convert.</p> <p>* Liberty offers managed expansion rates, which pay down up front contributions-in-aid-of-construction over time. (LU Reference Page 18)</p>	<p>*Unutil will focus communicating the benefits of natural gas to its potential customers. This will be communicated through direct mail, print, radio, television, email, online banners and social media.</p> <p>*The company will also reach out to plumbing and heating contractors who serve the region to help assist consumers with the decision process of switching their aging equipment to natural gas. (NU Reference Page 170)</p>

Planned and anticipated financial assistance programs provided by each company was requested for Item 7 of the RFP. These responses are summarized in Table 11. LU has committed to allocate \$500,000 to a natural gas conversion assistance fund to aid in reducing up-front customer costs that may be incurred when switching to natural gas for their heating needs. These funds would not be recovered through customer rates. NU offers natural gas conversion burners and water heaters to residential and commercial property owners through its the EasyCare Rental program. Under this program, the customer pays a monthly fee for the rented equipment and its maintenance, but standard installation of the equipment is free. Both companies subscribe to the New Hampshire Saves program, a collaborative of NH’s electric and natural gas utilities working together to advance energy efficiency in the state. The program provides customers with information and incentives to save energy, reduce costs, and protect NH’s environment. Incentives include rebates for high efficiency furnaces, boilers, water heaters, heating controls, and heat recovery ventilators.

Table 11

Item #	Request	Liberty Utilities / EnergyNorth	Northern Utilities / Unutil
7	Planned and anticipated financial assistance programs to be provided by the company for the cost of conversion to natural gas and assistance with customer’s stranded costs.	<p>1) Company commits to create a natural gas conversion assistance fund to assist customers in switching to natural gas for their heating needs. This fund would allocate \$500,000 to the residents of Epping.</p> <p>2) NHSaves Program (LU Reference Pages 18-19)</p>	<p>1) Unutil offers natural gas conversion burners and water heaters to residential and commercial property owners through the EasyCare Rental Program. This program is the easiest, fastest and most inexpensive way to convert to natural gas. Unutil provides no fees for standard installation of equipment or for its maintenance. The customer pays a low monthly fee.</p> <p>2) NHSaves Program (NU Reference Pages 171-186)</p>

Financial Comparison and Metrics

Of significant importance for the town to consider are the financial operating measurements of each company, their cost of service to the ratepayers, and the imbedded cost of each company's operations. Each company submits an annual report to the NHPUC. Be advised that while LU's annual report consists of the company's NH-only operations, sections of NU's NH annual report reflect its property and operations in Maine, as well as NH. It is assumed that NU makes certain allocations of cost components between its NH and Maine operations. While additional analysis would be required to understand the allocation for each account reported, a competent and reasonable review of the company's financial reporting has been performed to provide a reliable comparison of the companies.

Selected operating data is summarized for LU and NU for the five-year period from 2013 to 2017 in Appendices C and D, respectively. Appendix E provides a side by side look at the LU & NU 2017 operating data. We believe that the 2017 operating results are a reliable proxy for use by the Town of Epping to compare the two company's submitting proposals for gas service to the Town. Leading up to 2017, both companies have grown steadily in number of customers, revenues, cost of service, and quantity of gas sold. Each company has also realized the industry-wide decrease in the cost of gas and each company completed a rate case with the NHPUC in 2016.

When reviewing the operating data for a regulated public utility, it is important to consider the differences between residential vs. commercial service. Residential customers make up the majority of the customer count, however the commercial customers typically consume nearly as much or more of the quantity of gas sold. LU & NU are no exception. Another important factor to consider is the quantity of gas transmitted for others. Each company reports a significant quantity of gas delivered to others under a tariff that pays for the distribution delivery system.

The final section of Appendices C, D, & E, Rate Class Analysis, provides an overview of important cost measurements to consider for each company by rate class – residential, commercial, and transmission for others. Measures of revenues by quantity of gas sold are calculated, as well as the cost of gas per dekatherm (“Dth”) sold. Because of the disparity that exists in rates and quantity of gas sold to each customer class, depending on a single composite measure of revenue per Dth sold in comparing gas companies is unreliable. The Rate Class Analysis allows for a comparison of reported facts and figures for each company under its individual NHPUC cost of service and rate design. Absent a new rate case, these are the regulatory frameworks that customers in the Town of Epping will be subject to.

Notes of comparison are provided as part of the analyses in the tables from Appendices C, D, & E. Additionally, in concert with the table notes, the following is a brief discussion of the measurements that we deem especially significant for the Town's consideration.

- In terms of size and scope, LU is nearly 3 times larger than NU in terms of customer count, sells nearly 2 times the quantity of gas, has more than 2 times the net plant, and realizes 2 times the total gas revenues.
- LU is largely a residential service provider with 55% of its 2017 total operating revenues from residential sales, compared to 42% for NU.
- Total operating revenues per Dth of gas sold is an indication of the rate disparity between LU and NU. In 2017, LU's residential customers paid an average of \$13.04 per Dth purchased while NU customers paid approximately \$16.46 per Dth, or 26% more than LU customers.
- Commercial / Industrial revenues make up 34% and 28% of total revenues for NU and LU, respectively.
- In 2017, NU's commercial / industrial customers paid an average of 6% more than LU's customers per Dth - \$11.60 and 10.93, respectively.
- Each company realized approximately the same portion of their revenues through the transmission of gas for others – 12% for LU and 13% for NU. However, in terms of quantity of gas sold, 42% of LU's gas is sold via the transmissions for others, compared to 52% of NU's gas sold through the transmission for others.
- The total revenues for transmission of gas for others per Dth is \$2.06 for NU and \$2.36 for LU. NU's indicated rate for this customer class is nearly 15% more than LU's rate.
- NU's cost of gas per Dth sold (excluding the transmission of gas for others) was 33% more than LU. NU and LU paid an average of \$8.04 and \$6.02 per Dth of gas sold, respectively. This is an indication of each company's gas commodity purchasing power and is influenced by the size and scope of each company.
- Earnings before interest, tax, depreciation, and amortization ("EBITDA") is an indication of a company's operating performance without considering income taxes, the cost of debt, and depreciation and amortization schedules. In 2017 each company had an EBITDA that was 55% of its gross margin (revenues less the cost of gas sold).

2018 Rate Analysis

Based on annual reporting, the aggregate cost of service for residential customers in 2017 was \$13.04 and \$16.46 per Dth for Liberty Utilities and Northern Utilities, respectively. This calculation indicates that, annually on average, a NU residential customer will pay approximately 26% more than a LU residential customer for natural gas service. To better understand this disparity in charges, an additional analysis of each company's monthly tariffs was also conducted.

A New Hampshire residential customer's monthly bill for natural gas is made up of several distinct rates that include:

1. Monthly Customer / Meter Charge – Fixed monthly charge.
2. Delivery Charge – Calculated on customer usage (therms) per month. This charge is made up of the standard delivery charge plus the local delivery adjustment clause charge (LDAC). Prior to May of 2018 LU and NU had two delivery charge rates. LU had a delivery charge rate for the first 100 therms used and a lower rate for therms used in excess of 100. NU had a delivery charge rate for the first 50 therms used and a lower rate for therms used in excess of 50. As of May 2018, each company charged the same delivery rate for all therms used.
3. Cost of Gas – The pass-through cost of gas calculated on customer usage (therms) per month.

These rates are subject to NHPUC oversight. They are seasonal - designated between summer months (May – October) and winter months (November – April). The cost of gas is subject to adjustment in accordance with the commodity pricing. Both companies completed rate cases in 2017.

The Tables in Appendix F represent the anticipated annual natural gas cost for a residential heating customer during 2018 for LU and NU. The annual therms per residential customer is estimated to be 733.5, based on the average therms used per year, per customer, for both NU – 720 & LU - 747 ($720 + 747 = 1,467 \div 2 + 733.5$). Natural gas usage is not equal on a month to month basis. The estimated amount of gas used per month (column G) is based on the NU & LU combined average monthly dispersion of gas sold in 2017 and is represented in column F. The individual rates for each company are represented in columns B, C, D and E and the calculated monthly charges for each are represented in columns H, I, J, and K. Column L calculates the estimated total bill for each month in 2018.

Based on this estimated 2018 billing analysis, on average, a LU and NU customer will pay a total of \$1,116.79 and \$1,295.53 per year for natural gas. This analysis indicates that, based on the 2018 rate structures of each company, a NU residential customer will pay approximately 16% more than a LU residential customer for natural gas service.

Based on annual reporting, the aggregate cost of service for commercial / industrial customers in 2017 was \$10.96 and \$11.60 per Dth for Liberty Utilities and Northern Utilities, respectively. This calculation indicates that, annually on average, a NU commercial / industrial customer will pay approximately 6% more than a LU commercial / industrial customer for natural gas service. The rate structure for commercial / industrial customers is more complicated because they are based on customer type, time of delivery – low or high peak, and quantity purchased. The distinct rates are similar to those of the residential customers - monthly customer charge, delivery charge, and cost of gas charge. Overall, the commercial / industrial rates can best be compared on a customer by customer basis. The individual rates and rate structures are not conclusive in providing a comparison of the companies.

NHPUC Recent Franchise Proceedings

Since 2014, the NHPUC has seen increased activity in natural gas franchise matters. In 2014, NU filed a petition and was granted franchise rights to serve the Town of Brentwood. NU's primary

reason for extending its gas service into the community was to serve two industrial customers – Owens Corning and Pike Industries. Each had signed CIAC agreements committing to pay half of the estimated \$1.9 million total project costs. In addition to the two primary customers, NU noted that the mains would be in reach of Exeter High School and the Rockingham County Complex, as well as 24 residences, 34 small businesses, and 9 medium-sized businesses. The company said that it would aggressively pursue potential customers along the route. As of 2017, the company had two additional customers for a total of four Brentwood customers.

In 2015, LU filed for franchise rights to serve Pelham and Windham. The proposal would bring gas service to the majority of the commercial corridor along NH Rt. 37 and NH Rt. 11 including local schools and approximately 2,500 residential customers. At the time that the petition was filed, NU held the franchise rights for Pelham, yet had not provided regulated gas service to the community since 2006, nor did it have any immediate plan to do so. In 2017, as a result of this docket, NU's franchise rights were terminated, and LU was granted the franchise rights for both Pelham and Windham.

In 2015, Valley Green Natural Gas, LLC (“Valley Green”) filed for natural gas franchise rights to serve Lebanon and Hanover. Two months later LU filed a petition to serve the same area. After more than a year, LU filed a petition to stay the proceeding so that it could negotiate a reconciliation with Valley Green. As a result, Valley Green withdrew its petition for a franchise. LU then filed a petition to reopen the matter. The petition was denied, noting that LU's business plan was “under development” and that its petition was premature. The NHPUC indicated that it would consider a new petition once LU had fully developed its business plan.

In 2015, LU filed a petition for franchise rights in the towns of Jaffrey, Rindge, Swanzey, and Winchester that depended on the Kinder Morgan Northeast Energy Direct Pipeline. In 2016, Kinder Morgan announced that it would not continue to pursue its NH pipeline plan. As a result, LU filed a petition to amend its request for franchise rights for Swanzey only, noting that it would serve this community through LU's existing infrastructure in Keene. In late 2016, the NHPUC denied the petition to amend noting that the action was premature due to unresolved matters related to its Keene infrastructure and an incomplete economic analysis for this expansion.

In 2016, LU filed a new petition for franchise rights in Lebanon and Hanover. The petition was approved in March of 2018 subject to a settlement agreement executed by LU, the Office of Consumer Advocate, and NHPUC Staff. There is no interstate pipeline system for Liberty to connect to within 50 miles of Hanover and Lebanon. As such, LU's plan is for an off-pipeline system that includes the construction of a liquefied natural gas storage and vaporization facility, a compressed natural gas decompression facility, and four 60,000-gallon horizontal storage vessels. LNG will be trucked to the facility and off loaded into the storage tanks before being treated and injected into the distribution system. LU's market assessment identified 9,225 potential customers in the area, and highlighted ten potential anchor customers including Dartmouth College, Dartmouth Hitchcock Medical Center, and Pike Industries.

Based on a review of these filings, we have made several observations. First, there is robust interest in expanding the current natural gas distribution footprint in New Hampshire. This appears

to be driven by the desire of commercial / industrial customers to take advantage of the current economies of natural gas. Second, the NHPUC demands a rigorous adjudication process in considering a utility's petition to expand into a new service territory. The NHPUC requires safeguards that reduce the risk to the utility's existing customers, as well as any potential new customers. Finally, the commercial / industrial base of a community is what drives expansion into a new territory because of the large quantity of gas that such a customer demands. The value that a utility places on serving residential customers is evident in its planned service territory, its customer mix market analysis, and its marketing plan.

Recommendation

The Town of Epping has identified its priorities relative to natural gas service as follows:

1. The more people/businesses in Epping that can be served by natural gas...the better. There is no preference for industrial/commercial customers over residential. The Town would like natural gas to be offered to all customer classes and as many property owners – businesses & residences - as possible.
2. The Town is concerned with the utility's commitment to the project. If selected, it is important to the Town that the utility follow through with the plan as stated and provide natural gas service to the Epping community. The Town would like to avoid a situation in which a company is selected, holds the franchise, and then neglects to serve the community.
3. Cost of gas and service is important. Lower rates will be viewed favorably.
4. Time is NOT of the essence. The Town is less concerned with "when" the service is started, than other factors.

Based on these priorities, and the proposals submitted by NU and LU, we recommend that the municipality choose Liberty Utilities to provide natural gas distribution service to the Epping community.

Our analysis reveals that LU proposes to serve nearly 3,000 customers in Epping. NU has identified only 300 potential customers in primarily commercial zones of the municipality. LU's plan includes the same commercial/industrial district areas as NU where it will serve these same large-quantity customers, but it also includes almost 2,500 residential customers in numerous residential neighborhoods. In terms of extent of service, LU's plan will encompass a larger geographic area and reach more potential customers.

Both companies appear to be committed to their plans. NU's expansion into Epping dovetails from their recent expansion into Brentwood. LU has significant interests in the community by way of the Granite Bridge Project.

The financial analysis provided within this report compares the operating data of NU and LU. This information indicates that NU's residential customers paid 26% more per Dth and its commercial/industrial customers pay 6% more per Dth than LU's customers in 2017. Based on the approved 2018 rates, we estimate that NU's residential customers will pay approximately 16% more than LU customers for service. Factors that influence this disparity in rates are:

1. NU's cost of gas sold is 34% more than LU's cost of gas sold. This expense is a pass through to the rate-payer and directly affects the customer's overall cost of gas.

2. Based on each company's most recent rate case at the NHPUC, NU's cost of debt is 5.55% and LU's cost of debt is 4.42%. The utility's cost of debt is passed on to its rate-payers as a factor in the company's overall rate of return. The higher the overall rate of return, the higher the rates paid by the utility's customers.
3. Similar to the cost of debt, the company's return on equity is passed on to its rate-payers as a factor of the company's overall rate of return. LU's return on equity is 9.3% compared to NU's higher rate of 9.5%. Again, the higher the overall rate of return, the higher the rates paid by the utility's customers.

NU's higher debt and equity costs result in an overall rate of return that is nearly 12% higher than LU's overall rate of return. This, combined with the higher cost of gas, results in a higher cost of service to NU customers. As such, based on cost to potential Epping customers, we believe that LU's rates will be lower than NU's rates.

As noted, LU does not plan to commence construction of its distribution system until it receives regulatory approval for its Granite Bridge project. NU's plans are not contingent on any complimentary project and would likely be able to offer service to customers much sooner than LU. That said, the timing of service is of low priority to the Town of Epping.

Although not a stated consideration, it is assumed that the Town is concerned with customer satisfaction and safety. We have reviewed submissions of each company, as well as public documents, that indicate that customer satisfaction for each company is satisfactory. There is not an abundance of complaints that would lead to a conclusion that either company would provide a less than favorable customer experience.

For any gas distribution company, safety must be a priority. The NHPUC logs gas pipeline safety incidents and notes any resulting property damage, bodily injury, and fatalities. Since Liberty acquired the NH distribution system in 2012 there have been no incidents reported. Since Unitil acquired the NH Northern Utilities system in 2008, there have been two reported incidents. In 2008, twenty-four days after acquisition, a snow plow or excessive snow damaged a meter and caused a fire on Church St. in Gonic, resulting in \$200,000 in property damage, no bodily injury, and no fatalities. In 2015, snow buildup on a meter set on Locke St. in Hampton resulted in property damage totaling \$158,000, no bodily injury, and no fatalities. The 29 Year Historical Gas Pipeline Safety Incidents in New Hampshire table, issued by the NHPUC, is being provided as Appendix F for your information.

Since 1990, the NHPUC has worked with gas companies through its accelerated bare steel replacement program. In 1990, the NHPUC recognized that leak prone pipes within the streets of NH required a systematic replacement and began working with gas companies to initiate an accelerated bare steel replacement program that continues today. Both LU and NU have participated in this program. In 2017 NU replaced the final segments of the 26 miles of bare steel and cast iron mains identified for replacement. As of 2017, LU had replaced 111 miles (59%) and 14 miles (64%) of its cast iron and bare steel mains, respectively, leaving 78 miles of cast iron and 7 miles of bare steel mains to be replaced. Both LU and NU are safety conscious and there does not appear to be a discernable difference in their commitment to providing safe and reliable natural gas to its customers.

Based on LU's commitment to serve more of Epping's population – both commercial and residential, coupled with its lower customer rates, we recommend that the Town support Liberty Utility in its efforts to secure the franchise to provide natural gas to the Epping community.

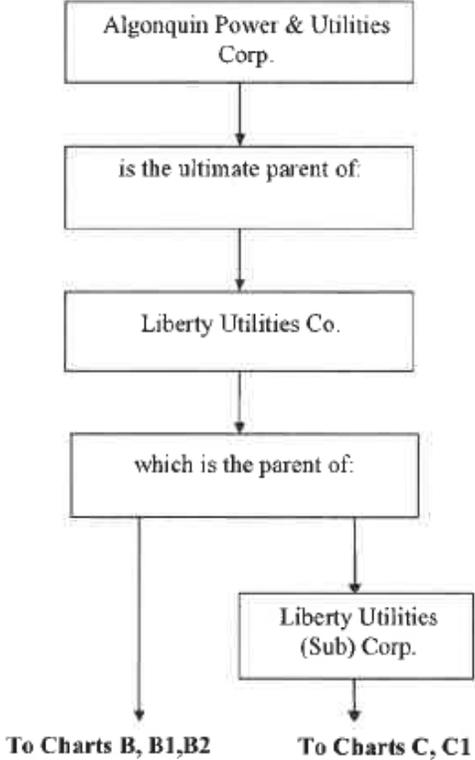
Appendix A

Organization Charts

George E. Sansoucy, P.E., LLC
October 31, 2018

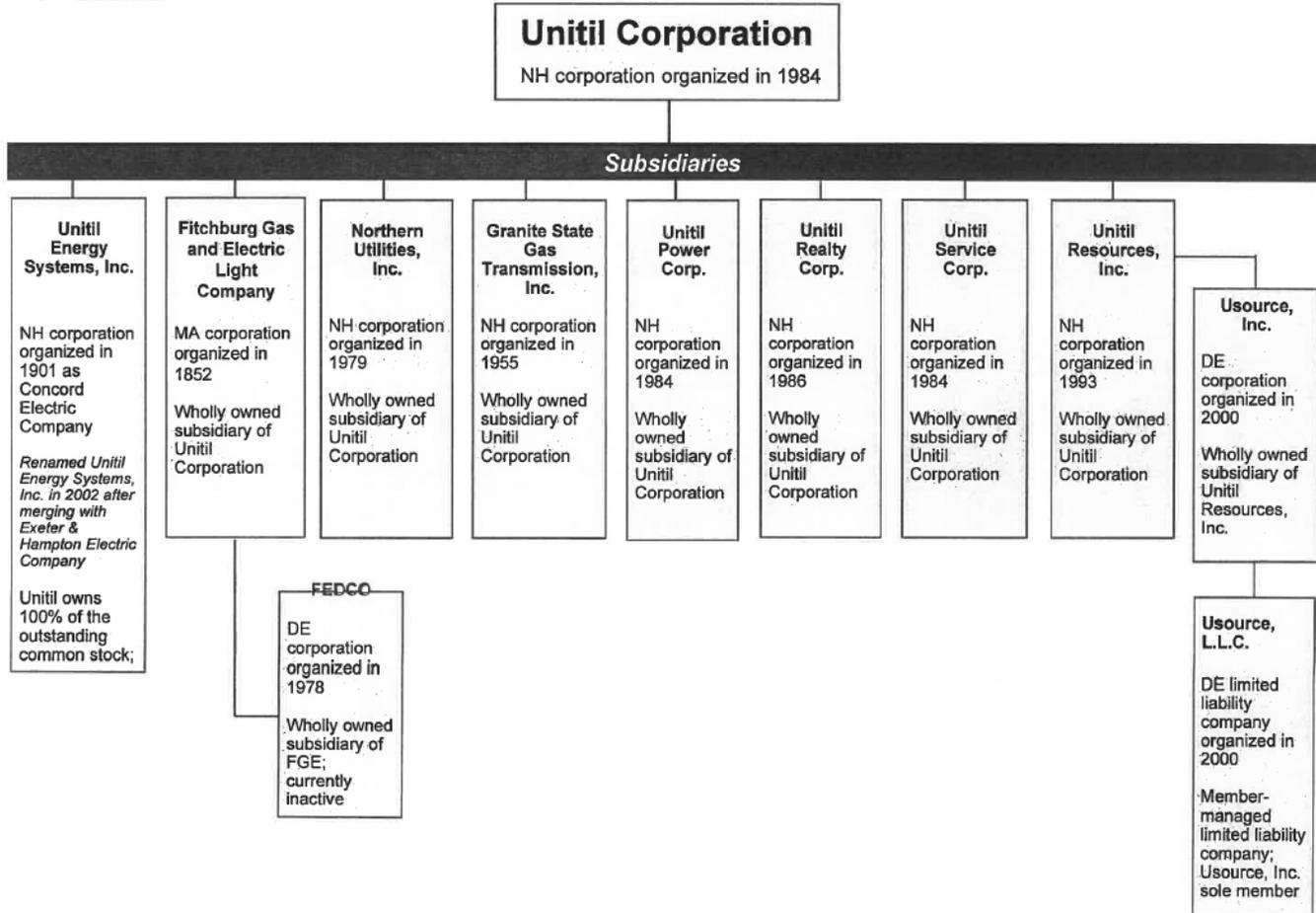
Organization Chart

Liberty Utilities





Organization Chart



Appendix B

Large Format Maps (11 X 17)

George E. Sansoucy, P.E., LLC
October 31, 2018

Figure 4
Liberty Utilities Phase 1

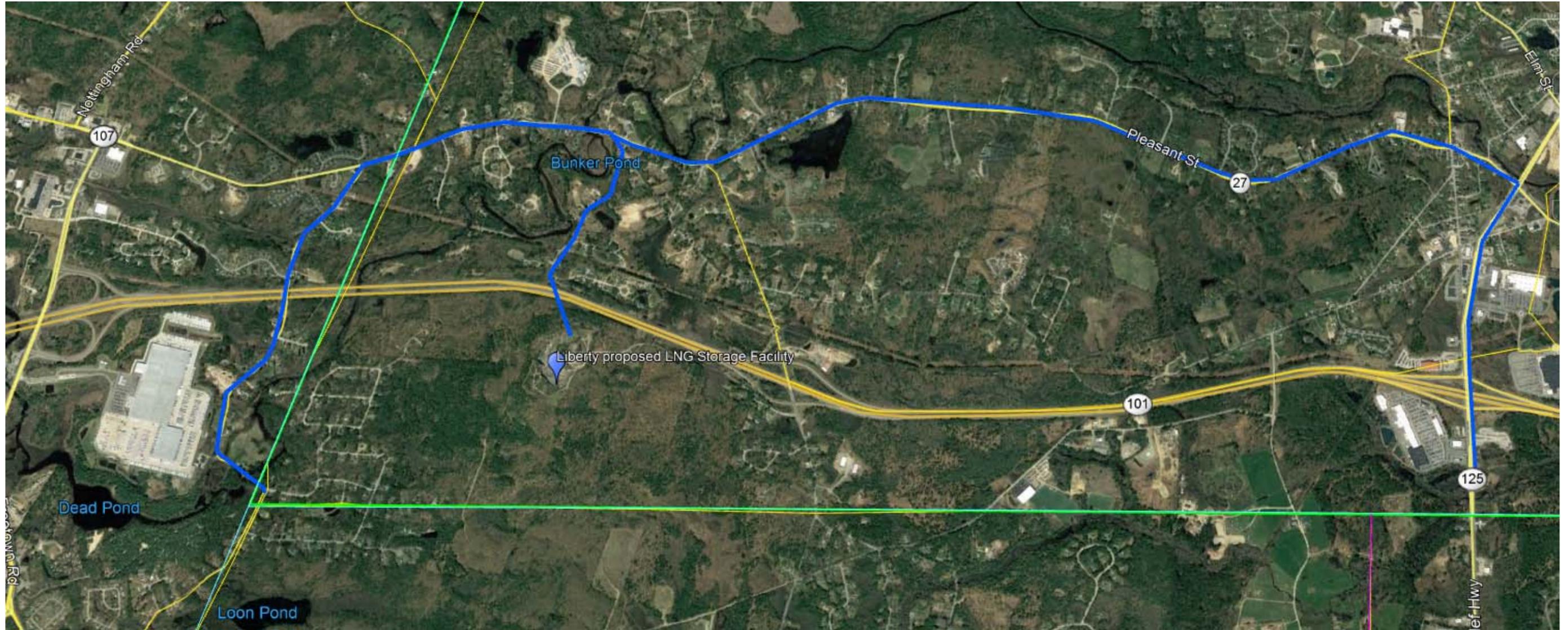


Figure 5
Liberty
Utilities Phase 2

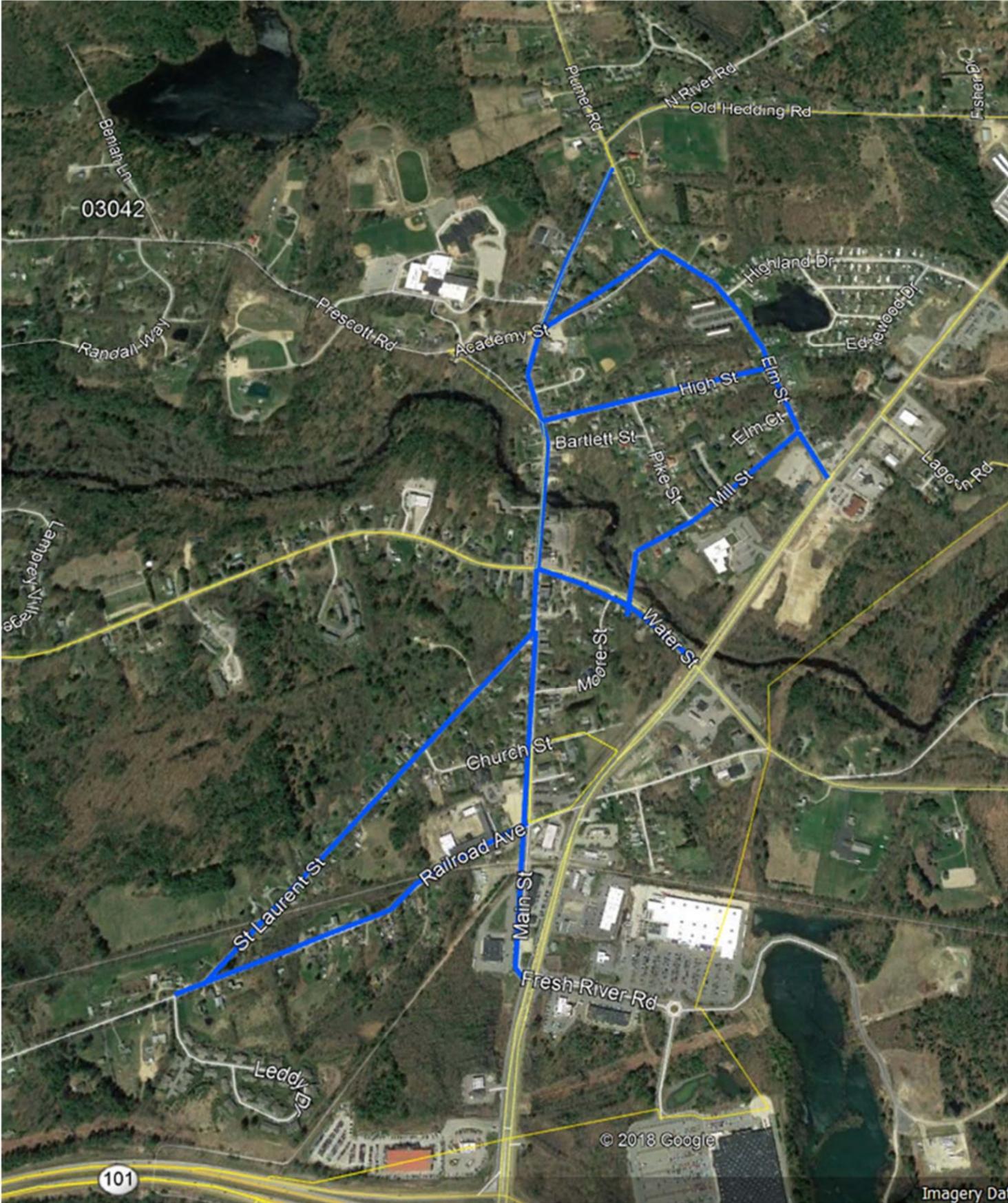


Figure 6
Liberty Utilities
Phase 3

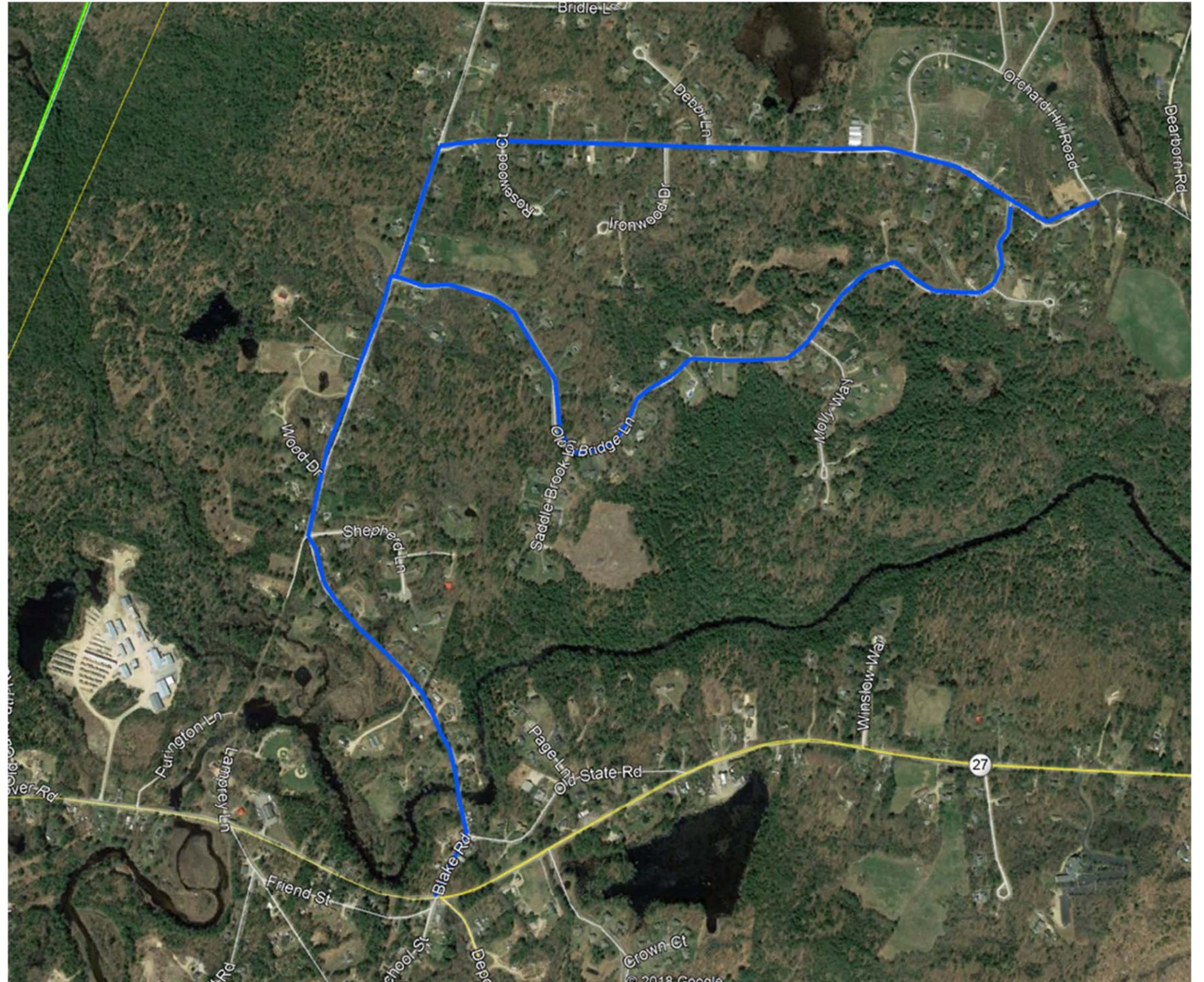


Figure 7

Liberty Utilities Phase 1, 2 & 3

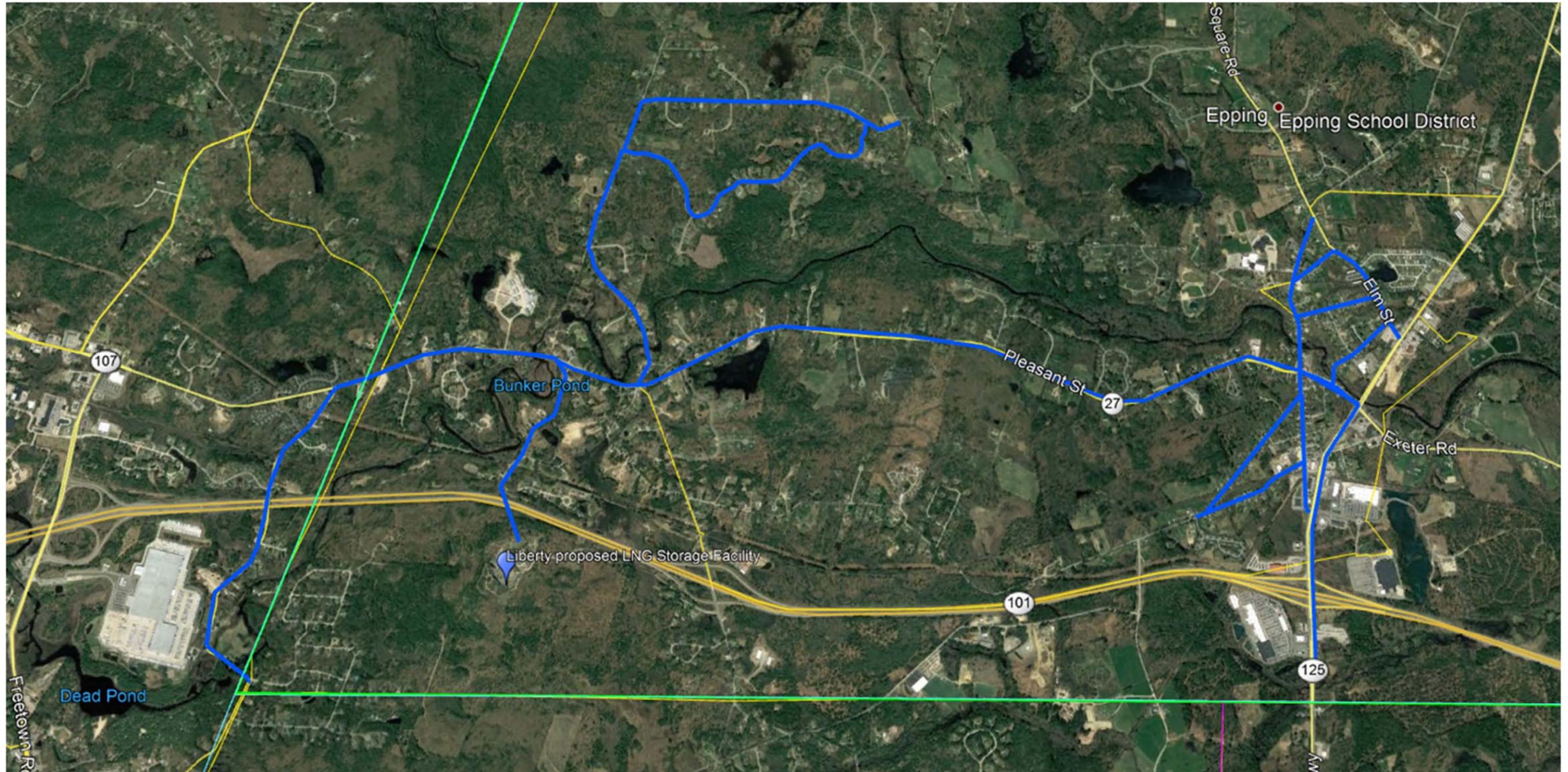


Figure 8
Liberty Utilities Proposed Phase 1, 2 & 3 With Potential Gas Access Routes

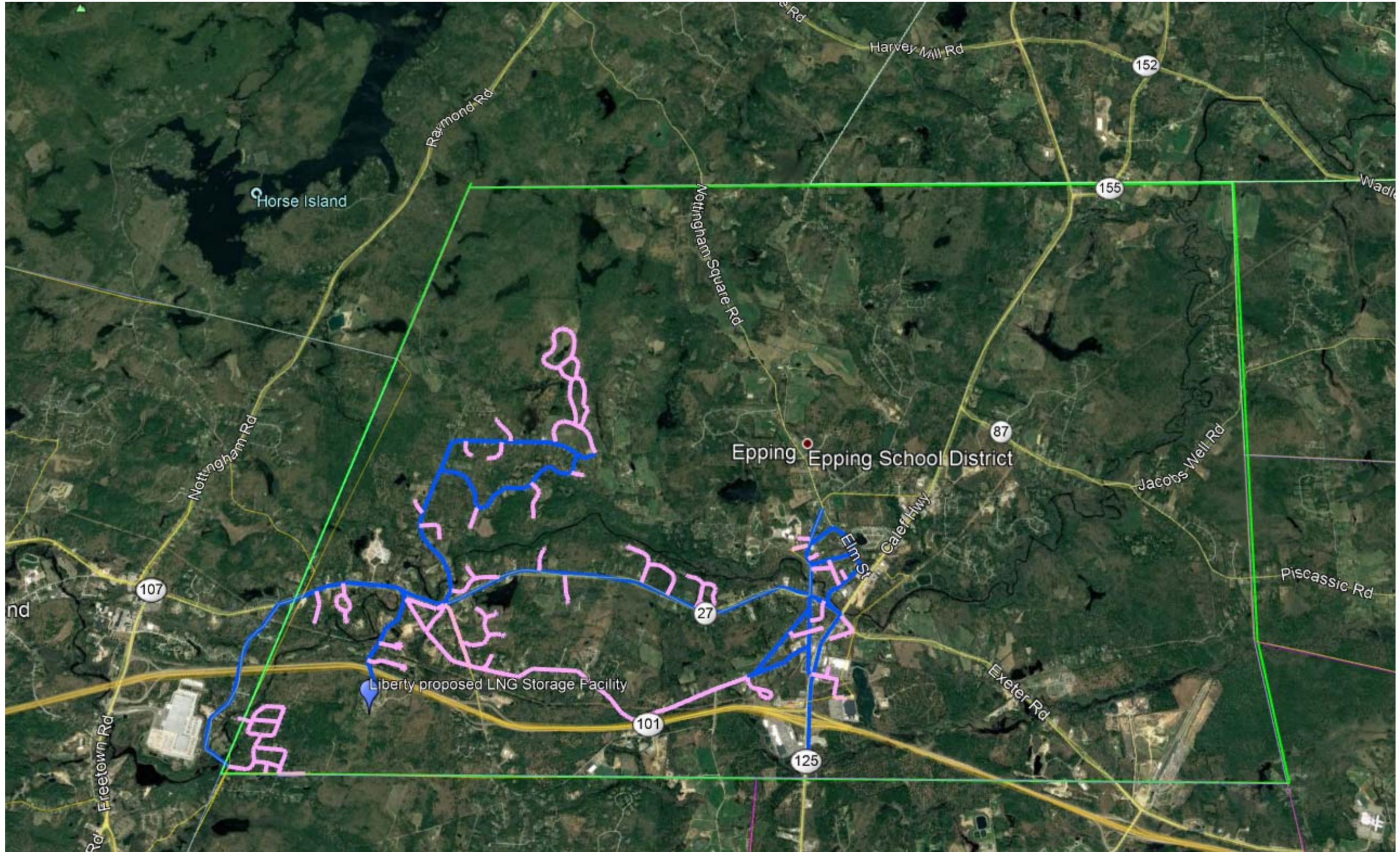


Figure 9
Northern Utilities Zone 1

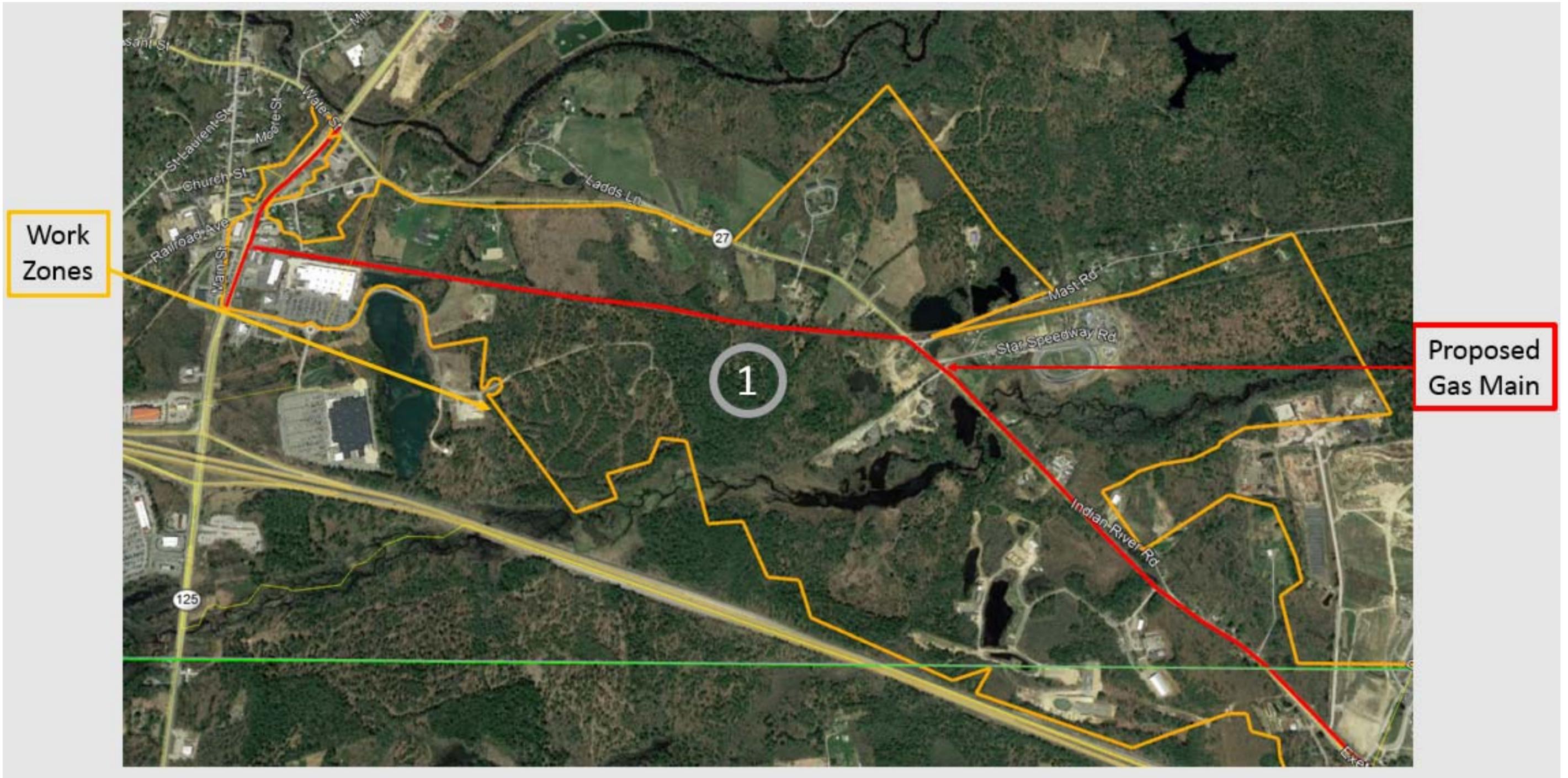


Figure 10
Northern
Utilities
Zone 2

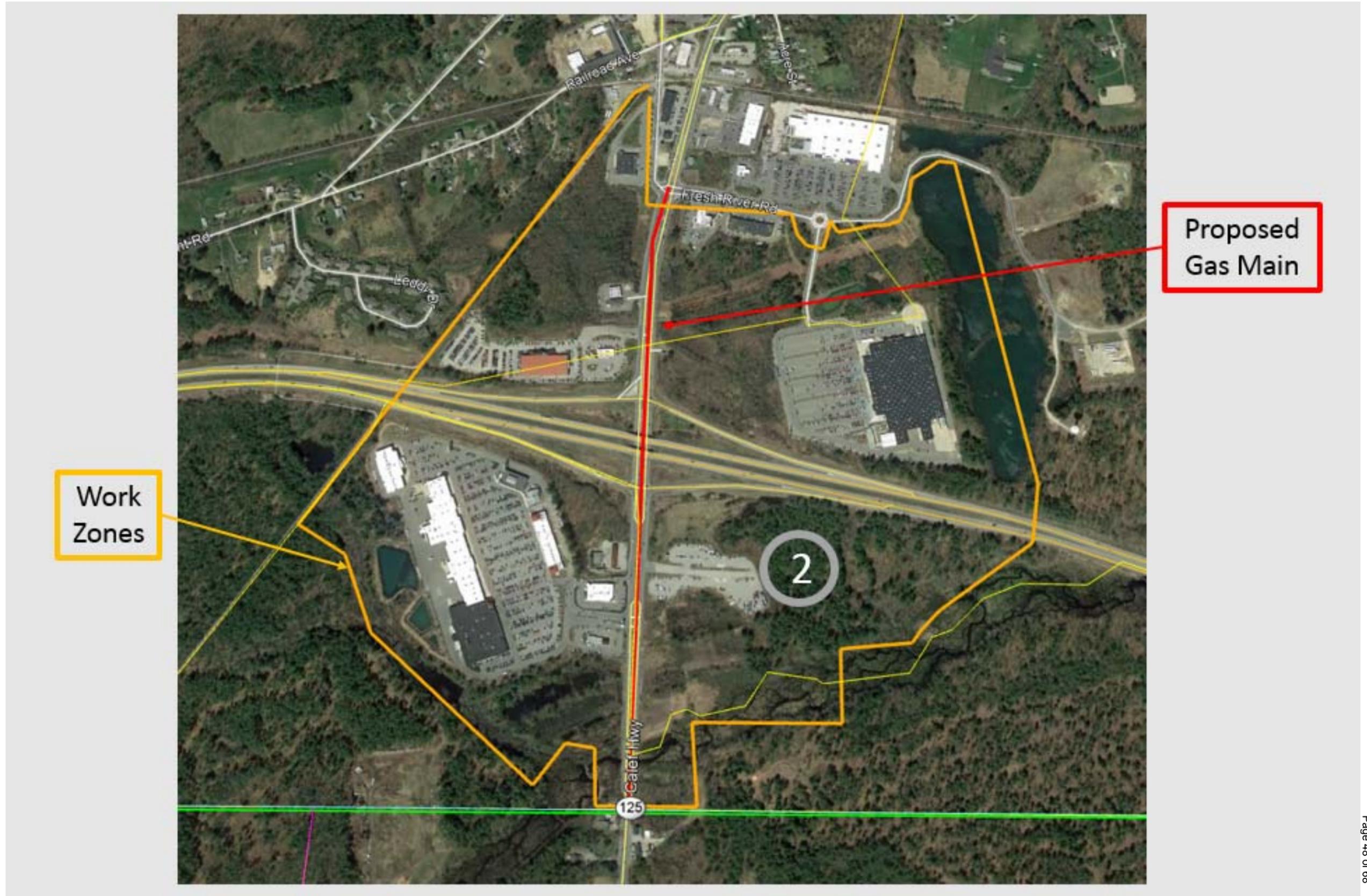


Figure 11
Northern Utilities Zones 1 & 2



Figure 12
Utility Proposed Gas Main Routes

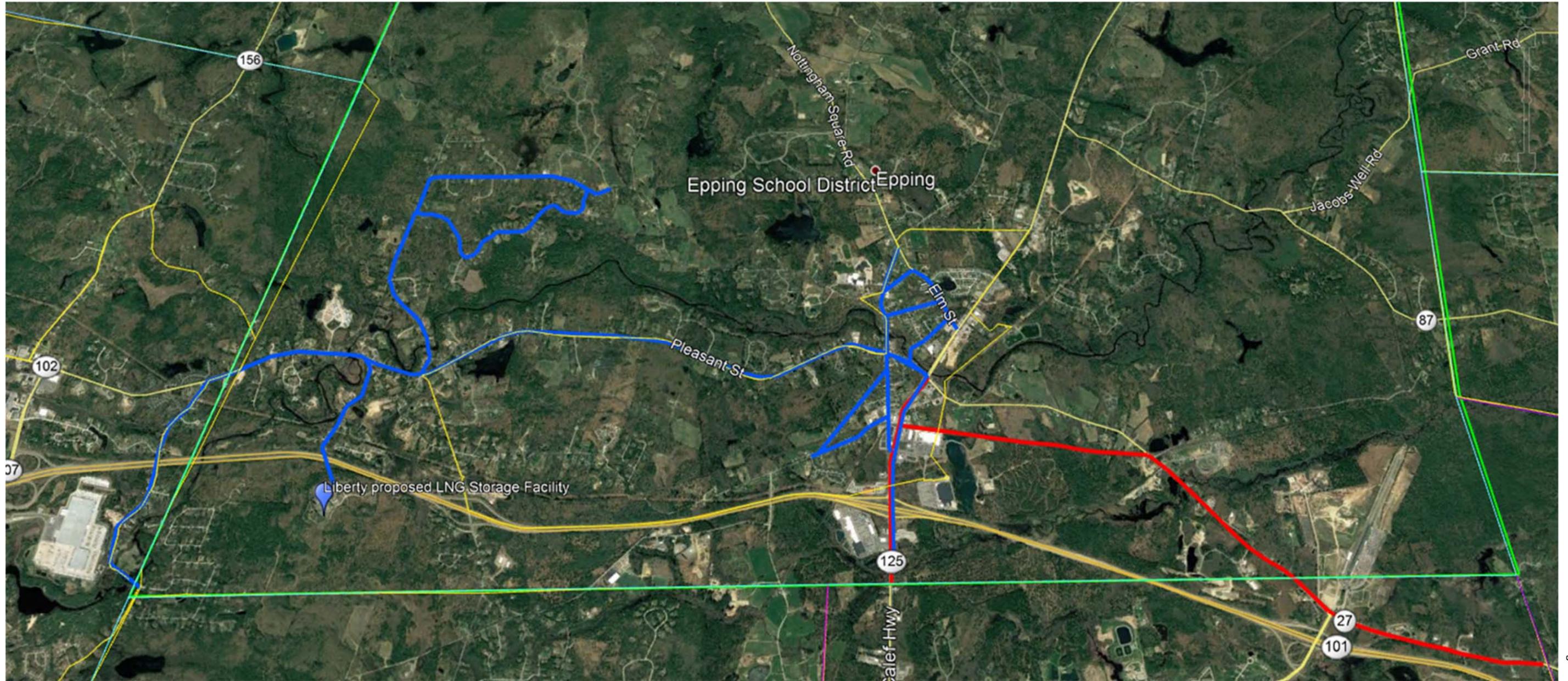
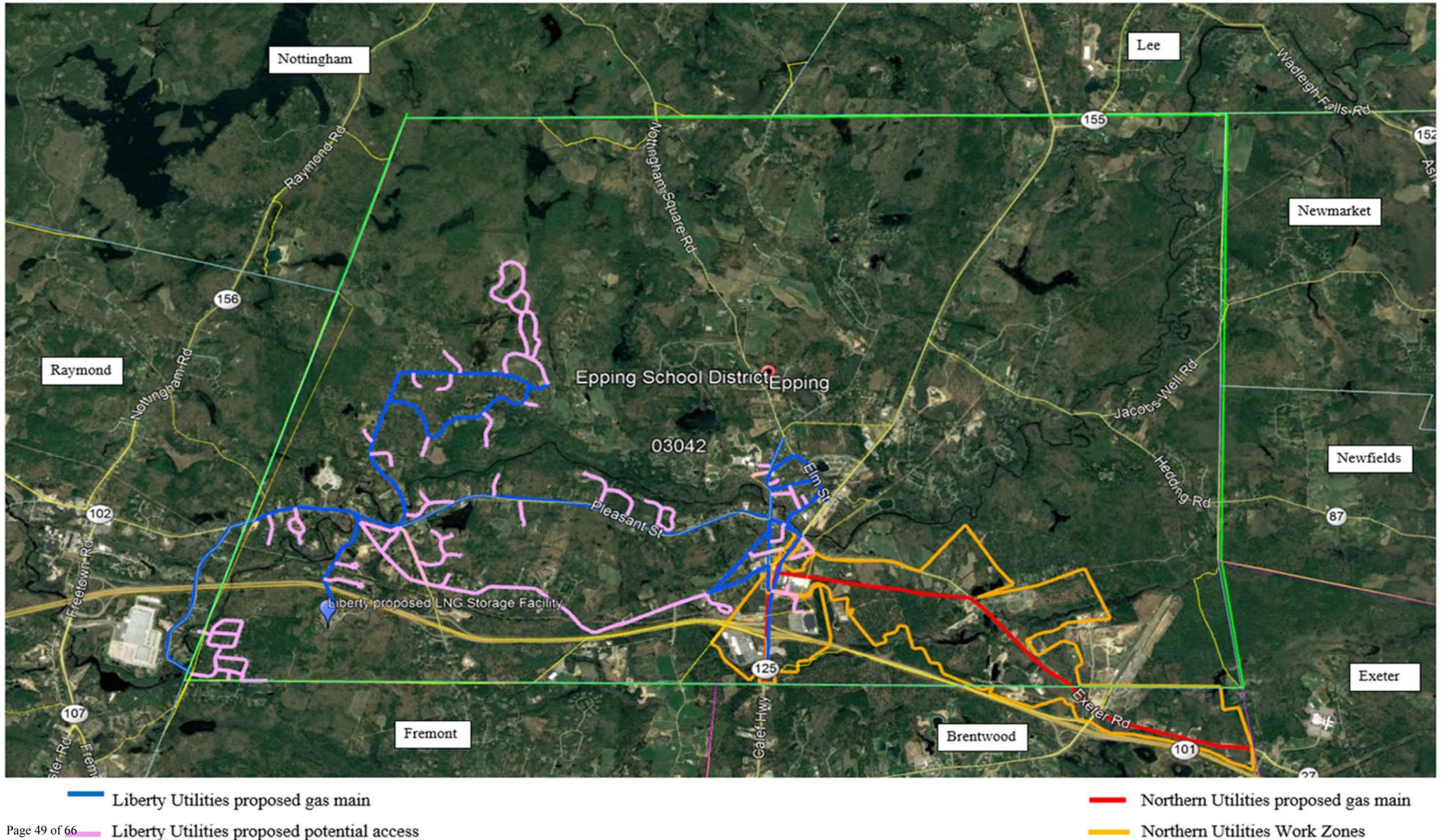


Figure 13

Utility Proposed Gas Main Routes and Liberty Access Areas Opened Up



Appendix C
Liberty Utilities
Select Operating Data
YE 2013 – YE 2017

George E. Sansoucy, P.E., LLC
October 31, 2018

Liberty Utilities - Select Operating Data 2013 - 2017

			2013	2014 [1]	2015	2016	2017
1							
2	Customer Count		85,959	87,825	89,014	93,936	92,044
3	Population		536,912	535,395	540,100	542,905	546,005
4							
5	Utility Plant						
6	Plant in Service	NHPUC Annual Report, p. 17, ln. 3	\$ 361,053,443	\$ 379,701,715	\$ 426,304,434	\$ 453,568,528	\$ 485,723,431
7	Completed Construction not Classified	NHPUC Annual Report, p. 17, ln. 6	-	15,907,115	7,509,616	28,098,321	42,277,446
8	TOTAL Utility Plant	Sum of Lines 6 - 7	361,053,443	395,608,830	433,814,050	481,666,849	528,000,877
9	Held for Future Use	NHPUC Annual Report, p. 17, ln. 10	-	-	459,308	459,308	433,920
10	Construction Work in Progress	NHPUC Annual Report, p. 17, ln. 11	20,160,773	23,605,783	17,676,263	12,384,979	11,231,685
11	Acquisition Adjustments	NHPUC Annual Report, p. 17, ln. 12	-	-	-	-	-
12	TOTAL Utility Plant	Sum of Lines 8 - 11	381,214,216	419,214,613	451,949,621	494,511,136	539,666,482
13	Accumulated Provisions for Depreciation, Amortization & Depletion	NHPUC Annual Report, p. 17, ln. 22	(100,266,104)	(104,930,733)	(114,774,571)	(125,436,149)	(130,926,210)
14	Amortization of Plant Acquisition Adjustment	NHPUC Annual Report, p. 17, ln. 32	-	-	-	-	-
15	NET Utility Plant	Sum of Lines 12 thru 14	\$ 280,948,112	\$ 314,283,880	\$ 337,175,050	\$ 369,074,987	\$ 408,740,272
16							
17	Utility Operating Income						
18	Base Operating Revenues						
19	Residential Sales	NHPUC Annual Report, p. 28, col. d, ln. 2	\$ 31,391,348	\$ 29,612,708	\$ 36,258,785	\$ 37,593,071	\$ 41,671,966
20	Commercial & Industrial Sales	NHPUC Annual Report, p. 28, col. d, ln. 4 & 5	15,179,300	15,188,741	17,305,762	17,886,201	17,956,841
21	Unbilled Revenues	NHPUC Annual Report, p. 28, col. d, ln. 7	-	-	-	-	-
22	Total Base Revenues	Sum of Lines 19 thru 21	\$ 46,570,648	\$ 44,801,449	\$ 53,564,547	\$ 55,479,272	\$ 59,628,807
23	Gas Operating Revenues (Cost of Gas)						
24	Residential Sales	NHPUC Annual Report, p. 28, col. f, ln. 2	42,768,811	60,820,727	54,655,902	30,353,122	33,885,520
25	Commercial & Industrial Sales	NHPUC Annual Report, p. 28, col. f, ln. 4 & 5	27,157,375	39,589,086	38,932,518	14,359,353	20,605,001
26	Unbilled Revenues	NHPUC Annual Report, p. 28, col. f, ln. 7	-	-	-	-	-
27	Total Gas Operating Revenues	Sum of Lines 24 thru 26	\$ 69,926,186	\$ 100,409,813	\$ 93,588,420	\$ 44,712,475	\$ 54,490,521
28	Other Sales to Public Authorities	NHPUC Annual Report, p. 28, col. b, ln. 6	-	-	-	3,200	8,800
29	Sales for Resale	NHPUC Annual Report, p. 28, col. b, ln. 9	8,258,715	4,928,628	2,785,170	2,729,123	2,179,448
30	Forefeited Discounts	NHPUC Annual Report, p. 28, col. b, ln. 15	-	-	-	-	-
31	Misc. Service Revenues	NHPUC Annual Report, p. 28, col. b, ln. 16	262,340	865,588	1,408,915	847,735	901,290
32	Revenues from Trans of Gas of Others through Distribution Facilities	NHPUC Annual Report, p. 28, col. b, ln. 19	11,649,804	11,248,309	13,150,654	13,494,254	16,173,667
33	Rent from Gas Property	NHPUC Annual Report, p. 28, col. b, ln. 24	-	-	-	-	-
34	Other Gas Revenues	NHPUC Annual Report, p. 28, col. b, ln. 26	949,317	1,782,001	(7,563,880)	2,787,590	3,301,434
35	Total Gas Revenues	Line 22 + Line 27 + (Sum of Lines 28 thru 34)	\$ 137,617,010	\$ 164,035,788	\$ 156,933,826	\$ 120,053,649	\$ 136,683,967
36							
37	Avg. No. of Customers per Mo. - Residential	NHPUC Annual Report, p. 28, col. j, ln. 2	75,515	75,824	78,626	79,129	79,810
38	Avg. No. of Customers per Mo. - Commercial / Industrial	NHPUC Annual Report, p. 28, col. j, ln. 3	9,063	9,046	9,376	9,201	9,173
39	Avg. No. of Customers per Mo. - Trans of Gas of Others through Distribution Facilities	NHPUC Annual Report, p. 28, col. j, ln. 19	2,119	2,151	2,332	2,620	2,632
40	Total Avg. No. of Customers per Mo.	Sum of Lines 37 thru 39	86,697	87,021	90,334	90,950	91,615
41							
42	Dekatherm of Natural Gas Sold - Residential	NHPUC Annual Report, p. 28, col. h, ln. 2	5,733,766	6,158,851	6,235,033	3,958,260	5,794,076
43	Dekatherm of Natural Gas Sold - Commercial / Industrial	NHPUC Annual Report, p. 28, col. h, ln. 3	3,688,914	3,987,775	3,776,761	2,456,636	3,526,669
44	Dekatherm of Natural Gas Sold - Unbilled Revenues	NHPUC Annual Report, p. 28, col. h, ln. 7	-	-	-	-	-
45	Dekatherm of Natural Gas Sold - Sales for Resales	NHPUC Annual Report, p. 28, col. h, ln. 9	-	-	-	-	-
46	Dekatherm of Natural Gas Sold - Trans of Gas of Others through Distribution Facilities	NHPUC Annual Report, p. 28, col. h, ln. 19	6,369,477	6,589,770	6,587,602	4,785,029	6,859,311
47	Total Dekatherm of Natural Gas Sold	Sum of Lines 42 thru 46	15,792,157	16,736,396	16,599,396	11,199,925	16,180,056
48							

Liberty Utilities - Select Operating Data 2013 - 2017

			2013	2014 [1]	2015	2016	2017
49	Operating Revenues	NHPUC Annual Report, p. 11, ln. 2	\$ 137,617,008	\$ 164,035,787	\$ 156,933,825	\$ 120,053,649	\$ 136,683,967
50	Cost of Gas Sold	NHPUC Annual Report, p. 35, ln. 97	82,817,882	104,812,245	82,886,454	46,795,944	56,127,721
51	Gross Margin	Line 49 - Line 50	\$ 54,799,126	\$ 59,223,542	\$ 74,047,371	\$ 73,257,705	\$ 80,556,246
52							
53	Operation Expenses excl. Cost of Gas	NHPUC Annual Report, p. 11, ln. 4 & p. 35, ln 97	\$ 23,543,532	\$ 24,113,786	\$ 25,170,898	\$ 23,178,232	\$ 22,071,011
54	Maintenance Expenses	NHPUC Annual Report, p. 11, ln. 5	1,200,734	4,318,850	4,083,313	2,889,738	2,926,039
55	Depreciation Expenses	NHPUC Annual Report, p. 11, ln. 6	9,989,845	7,978,764	10,773,200	11,610,051	12,786,243
56	Amort. & Depl. Of Utility Plant	NHPUC Annual Report, p. 11, ln. 7	16,410	608,603	2,082,422	2,123,142	2,173,446
57	Amort. Of Utility Plant Acq. Adj.	NHPUC Annual Report, p. 11, ln. 8	-	-	-	-	-
58	Regulatory Debits	NHPUC Annual Report, p. 11, ln. 11	382,902	103,194	409,200	409,200	409,203
59	(Less) Regulatory Credits	NHPUC Annual Report, p. 11, ln. 12	-	387,090	1,110,772	2,217,552	2,537,193
60	Taxes Other Than Income Taxes	NHPUC Annual Report, p. 11, ln. 13	(21,146)	9,879,197	9,488,586	10,060,520	10,963,572
61	Income Taxes - Federal	NHPUC Annual Report, p. 11, ln. 14	-	-	20,121	-	-
62	Income Taxes - Other	NHPUC Annual Report, p. 11, ln. 15	-	164,500	(164,500)	231,000	220,214
63	Provision for Deferred Income Taxes	NHPUC Annual Report, p. 11, ln. 16	3,361,364	3,630,343	6,507,899	6,128,035	6,628,169
64	Investment Tax Credit Adj. - Net	NHPUC Annual Report, p. 11, ln. 18	-	-	-	-	-
65	Total Utility Operating Expenses	Sum of Lines 53 thru 64	38,473,641	51,184,327	59,481,911	58,847,470	60,715,090
66	NET Utility Operating Income	Line 51 - Line 65	\$ 16,325,485	\$ 8,039,215	\$ 14,565,460	\$ 14,410,235	\$ 19,841,156
67							
68	EBITDA Calculation						
69	Operating Revenues	Line 49	\$ 137,617,008	\$ 164,035,787	\$ 156,933,825	\$ 120,053,649	\$ 136,683,967
70	Less: Cost of Gas Sold	Line 50	82,817,882	104,812,245	82,886,454	46,795,944	56,127,721
71	Less: Operations Expenses	Line 53	23,543,532	24,113,786	25,170,898	23,178,232	22,071,011
72	Less: Maintenance Expenses	Line 54	1,200,734	4,318,850	4,083,313	2,889,738	2,926,039
73	Less: Taxes Other Than Income Taxes	Line 60	(21,146)	9,879,197	9,488,586	10,060,520	10,963,572
74	EBITDA	Line 69 - (Sum of Lines 70 thru 73)	\$ 30,076,006	\$ 20,911,709	\$ 35,304,574	\$ 37,129,215	\$ 44,595,624

Liberty Utilities - Select Operating Data 2013 - 2017

			2013	2014 [1]	2015	2016	2017
75	Rate Class Analysis						
76	Residential Sales						
77	Res Base Op Revs as a % of Total Base Revs	Line 19 ÷ Line 22	67%	66%	68%	68%	70%
78	Res Gas Op Revs as a % of Total Gas Op Revs	Line 24 ÷ Line 27	61%	61%	58%	68%	62%
79	Avg Number of Res Cust as a % of Total Avg Number of Cust	Line 37 ÷ Line 40	87%	87%	87%	87%	87%
80	Dth of Nat Gas Sold to Res. Cust as a % of Total Dth	Line 42 ÷ Line 47	36%	37%	38%	35%	36%
81	Res Base Op Revs / Res Dth Sold	Line 19 ÷ Line 42	\$5.47	\$4.81	\$5.82	\$9.50	\$7.19
82	Res Gas Op Revs / Res Dth Sold	Line 24 ÷ Line 42	\$7.46	\$9.88	\$8.77	\$7.67	\$5.85
83	Total Res Op Revs / Res Dth Sold	(Lines 19 + 24) ÷ Line 42	\$12.93	\$14.68	\$14.58	\$17.17	\$13.04
84	Total Res Op Revs / Total Op Revs	(Lines 19 + 24) ÷ Line 35	54%	55%	58%	57%	55%
85							
86	Commercial / Industrial Sales						
87	Comm/Ind Base Revs as a % of Total Base Revs	Line 20 ÷ Line 22	33%	34%	32%	32%	30%
88	Comm/Ind Gas Op Revs as a % of Total Gas Op Revs	Line 25 ÷ Line 27	39%	39%	42%	32%	38%
89	Avg Number of Comm/Ind Cust as a % of Total Avg Number of Cust	Line 38 ÷ Line 40	10%	10%	10%	10%	10%
90	Dth of Nat Gas Sold to Comm/Ind Cust as a % of Total Dth	Line 43 ÷ Line 47	23%	24%	23%	22%	22%
91	Comm/Ind Base Op Revs / Comm/Ind Dth Sold	Line 20 ÷ Line 43	\$4.11	\$3.81	\$4.58	\$7.28	\$5.09
92	Comm/Ind Gas Op Revs / Comm/Ind Dth Sold	Line 25 ÷ Line 43	\$7.36	\$9.93	\$10.31	\$5.85	\$5.84
93	Total Comm/Ind Op Revs / Comm/Ind Dth Sold	(Lines 20 + 25) ÷ Line 43	\$11.48	\$13.74	\$14.89	\$13.13	\$10.93
94	Total Comm/Ind Op Revs / Total Op Revs	(Lines 20 + 25) ÷ Line 35	31%	33%	36%	27%	28%
95							
96	Transmission of Gas for Others Sales						
97	Revs from the Trans of Nat Gas to Others as a % of Total Revenues	Line 32 ÷ Line 35	8%	7%	8%	11%	12%
98	Avg Number of Trans Cust as a % of Total Avg Number of Cust	Line 39 ÷ Line 40	2%	2%	3%	3%	3%
99	Dth of Nat Gas Trans to Others as a % of Total Dth	Line 46 ÷ Line 47	40%	39%	40%	43%	42%
100	Revs from Trans of Nat Gas to Others / Dth of Nat Gas Trans.	Line 32 ÷ Line 46	\$1.83	\$1.71	\$2.00	\$2.82	\$2.36
101	Total Revs from the Trans to Others / Total Op Revs	Line 32 ÷ Line 35	8%	7%	8%	11%	12%
102							
103	Cost of Gas Sold / Dth of NG Sold	Line 50 ÷ Line 47	\$8.79	\$10.33	\$8.28	\$7.29	\$6.02
104	Company Reported Rev (excl. Unbilled Revs) per Therm Units Sold						
105							
106	Total Utility Plant	Line 12	\$ 381,214,216	\$ 419,214,613	\$ 451,949,621	\$ 494,511,136	\$ 539,666,482
107	Net Utility Plant	Line 15	\$ 280,948,112	\$ 314,283,880	\$ 337,175,050	\$ 369,074,987	\$ 408,740,272
108	Net Utility Plant as a % of Total Utility Plant	Line 15 ÷ Line 12	74%	75%	75%	75%	76%

Appendix D
Northern Utilities
Select Operating Data
YE 2013 – YE 2017

George E. Sansoucy, P.E., LLC
October 31, 2018

Northern Utilities - Select Operating Data 2013 - 2017

			2013	2014	2015	2016	2017
1							
2	Customer Count		30,221	31,150	31,713	32,282	33,037
3	Population		216,347	216,844	217,815	223,261	224,275
4							
5	Utility Plant						
6	Plant in Service	MEPUC Annual Report, p. 21, col. c, ln. 3	\$ 155,585,083	\$ 171,626,606	\$ 186,483,678	\$ 205,055,527	\$ 221,266,863
7	Completed Construction not Classified	MEPUC Annual Report, p. 21, col. c, ln. 6	6,382,600	7,142,994	7,950,054	4,810,560	13,996,649
8	TOTAL Utility Plant	Sum of Lines 6 - 7	161,967,683	178,769,600	194,433,732	209,866,087	235,263,512
9	Held for Future Use	MEPUC Annual Report, p. 21, col. c, ln. 10	-	-	-	-	-
10	Construction Work in Progress	MEPUC Annual Report, p. 21, col. c, ln. 11	2,271,252	2,695,792	3,783,126	5,832,344	3,875,298
11	Acquisition Adjustments	MEPUC Annual Report, p. 21, col. c, ln. 12	(9,408,175)	(9,408,175)	(9,408,175)	(9,408,175)	(9,408,175)
12	TOTAL Utility Plant	Sum of Lines 8 - 11	154,830,760	172,057,217	188,808,683	206,290,256	229,730,635
13	Accumulated Provisions for Depreciation, Amortization & Depletion	MEPUC Annual Report, p. 21, col. c, ln. 22	(55,502,996)	(57,556,699)	(61,477,716)	(65,869,111)	(71,130,467)
14	Amortization of Plant Acquisition Adjustment	MEPUC Annual Report, p. 21, col. c, ln. 32	4,782,489	5,723,307	6,664,124	7,604,942	8,545,759
15	NET Utility Plant	Sum of Lines 12 thru 14	\$ 104,110,253	\$ 120,223,825	\$ 133,995,091	\$ 148,026,087	\$ 167,145,927
16							
17	Utility Operating Income						
18	Base Operating Revenues						
19	Residential Sales	NHPUC Annual Report, p. 28, col. d, ln. 2	10,667,999	13,512,795	15,524,274	15,215,731	16,179,241
20	Commercial & Industrial Sales	NHPUC Annual Report, p. 28, col. d, ln. 4 & 5	6,366,198	8,893,629	9,402,596	8,947,067	9,205,243
21	Unbilled Revenues	NHPUC Annual Report, p. 28, col. d, ln. 7	565,931	(291,801)	(44,568)	(151,597)	279,215
22	Total Base Revenues	Sum of Lines 19 thru 21	\$ 17,600,128	\$ 22,114,623	\$ 24,882,302	\$ 24,011,201	\$ 25,663,699
23	Gas Operating Revenues (Cost of Gas)						
24	Residential Sales	NHPUC Annual Report, p. 28, col. f, ln. 2	14,010,333	17,771,971	16,126,270	10,868,908	12,889,623
25	Commercial & Industrial Sales	NHPUC Annual Report, p. 28, col. f, ln. 4 & 5	14,250,063	20,034,034	19,117,799	12,113,407	14,131,800
26	Unbilled Revenues	NHPUC Annual Report, p. 28, col. f, ln. 7	641,614	303,725	(1,622,889)	716,949	186,467
27	Total Gas Revenues	Sum of Lines 24 thru 26	\$ 28,902,010	\$ 38,109,730	\$ 33,621,180	\$ 23,699,264	\$ 27,207,890
28	Other Sales to Public Authorities	NHPUC Annual Report, p. 28, col. b, ln. 6	-	-	-	-	-
29	Sales for Resale	NHPUC Annual Report, p. 28, col. b, ln. 9	9,447,430	7,684,179	5,958,987	3,382,422	4,891,768
30	Forfeited Discounts	NHPUC Annual Report, p. 28, col. b, ln. 15	115,134	138,774	158,330	104,863	97,464
31	Misc. Service Revenues	NHPUC Annual Report, p. 28, col. b, ln. 16	786,903	782,097	751,110	721,444	675,919
32	Revenues from Trans of Gas of Others through Distribution Facilities	NHPUC Annual Report, p. 28, col. b, ln. 19	7,860,386	8,465,447	8,178,231	8,411,697	8,862,509
33	Rent from Gas Property	NHPUC Annual Report, p. 28, col. b, ln. 24	107,100	261,326	66,029	152,772	140,676
34	Other Gas Revenues	NHPUC Annual Report, p. 28, col. b, ln. 26	(662,876)	(1,665,305)	2,525,749	4,463,678	1,518,998
35	Total Gas Revenues	Line 22 + Line 27 + (Sum of Lines 28 thru 34)	\$64,156,215	\$75,890,871	\$76,141,918	\$64,947,341	\$69,058,923
36							
37	Avg. No. of Customers per Mo. - Residential	NHPUC Annual Report, p. 28, col. j, ln. 2	23,230	23,854	24,532	25,045	25,534
38	Avg. No. of Customers per Mo. - Commercial / Industrial	NHPUC Annual Report, p. 28, col. j, ln. 3	5,675	5,585	5,743	5,794	5,811
39	Avg. No. of Customers per Mo. - Trans of Gas of Others through Distribution Facilities	NHPUC Annual Report, p. 28, col. j, ln. 19	857	1,043	969	980	975
40	Total Avg. No. of Customers per Mo.	Sum of Lines 37 thru 39	29,762	30,482	31,244	31,819	32,320
41							
42	Dekatherm of Natural Gas Sold - Residential	NHPUC Annual Report, p. 28, col. h, ln. 2	1,689,143	1,868,314	1,855,124	1,648,396	1,765,904
43	Dekatherm of Natural Gas Sold - Commercial / Industrial	NHPUC Annual Report, p. 28, col. h, ln. 3	1,787,865	2,161,108	2,306,715	1,890,296	2,012,060
44	Dekatherm of Natural Gas Sold - Unbilled Revenues	NHPUC Annual Report, p. 28, col. h, ln. 7	57,754	(98,125)	(34,579)	(23,211)	98,886
45	Dekatherm of Natural Gas Sold - Sales for Resales	NHPUC Annual Report, p. 28, col. h, ln. 9	96,093	67,189	63,918	50,954	74,013
46	Dekatherm of Natural Gas Sold - Trans of Gas of Others through Distribution Facilities	NHPUC Annual Report, p. 28, col. h, ln. 19	4,033,630	4,127,729	4,168,800	4,318,933	4,292,479
47	Total Dekatherm of Natural Gas Sold	Sum of Lines 42 thru 46	7,664,485	8,126,215	8,359,978	7,885,368	8,243,342
48							

Northern Utilities - Select Operating Data 2013 - 2017

			2013	2014	2015	2016	2017
49	Operating Revenues	NHPUC Annual Report, p. 11, ln. 2	\$ 64,156,215	\$ 75,890,871	\$ 76,141,918	\$ 64,947,341	\$ 69,058,923
50	Cost of Gas Sold	NHPUC Annual Report, p. 35, ln. 97	35,366,077	41,732,969	40,209,523	29,536,385	31,783,469
51	Gross Margin	Line 49 - Line 50	\$ 28,790,138	\$ 34,157,902	\$ 35,932,395	\$ 35,410,956	\$ 37,275,454
52							
53	Operation Expenses excl. Cost of Gas	NHPUC Annual Report, p. 11, ln. 4 & p. 35, ln 97	\$ 10,371,274	\$ 11,133,313	\$ 12,722,621	\$ 12,248,509	\$ 12,074,168
54	Maintenance Expenses	NHPUC Annual Report, p. 11, ln. 5	844,221	732,611	885,902	706,070	625,072
55	Depreciation Expenses	NHPUC Annual Report, p. 11, ln. 6	4,575,226	5,003,869	5,565,273	6,118,814	6,553,188
56	Amort. & Depl. Of Utility Plant	NHPUC Annual Report, p. 11, ln. 7	446,796	496,816	491,842	426,964	40,485
57	Amort. Of Utility Plant Acq. Adj.	NHPUC Annual Report, p. 11, ln. 8	(940,818)	(940,818)	(940,818)	(940,817)	(940,817)
58	Regulatory Debits	NHPUC Annual Report, p. 11, ln. 11	915,949	768,576	769,921	588,349	588,349
59	(Less) Regulatory Credits	NHPUC Annual Report, p. 11, ln. 12	-	-	-	-	-
60	Taxes Other Than Income Taxes	NHPUC Annual Report, p. 11, ln. 13	2,450,290	3,354,140	3,240,165	3,763,930	4,109,614
61	Income Taxes - Federal	NHPUC Annual Report, p. 11, ln. 14	19,238	177,105	(226,650)	3,227,137	447,244
62	Income Taxes - Other	NHPUC Annual Report, p. 11, ln. 15	(37,776)	(981,197)	962,594	(269,172)	(419,898)
63	Provision for Deferred Income Taxes	NHPUC Annual Report, p. 11, ln. 16	2,539,808	4,638,434	2,660,085	4,699	3,758,341
64	Investment Tax Credit Adj. - Net	NHPUC Annual Report, p. 11, ln. 18	(12,840)	(3,203)	-	-	-
65	Total Utility Operating Expenses	Sum of Lines 53 thru 64	21,171,368	24,379,646	26,130,935	25,874,483	26,835,746
66	NET Utility Operating Income	Line 51 - Line 65	\$ 7,618,770	\$ 9,778,256	\$ 9,801,460	\$ 9,536,473	\$ 10,439,708
67							
68	EBITDA Calculation						
69	Operating Revenues	Line 49	\$64,156,215	\$75,890,871	\$76,141,918	\$64,947,341	\$69,058,923
70	Less: Cost of Gas Sold	Line 50	\$35,366,077	\$41,732,969	\$40,209,523	\$29,536,385	\$31,783,469
71	Less: Operations Expenses	Line 53	\$10,371,274	\$11,133,313	\$12,722,621	\$12,248,509	\$12,074,168
72	Less: Maintenance Expenses	Line 54	\$844,221	\$732,611	\$885,902	\$706,070	\$625,072
73	Less: Taxes Other Than Income Taxes	Line 60	\$2,450,290	\$3,354,140	\$3,240,165	\$3,763,930	\$4,109,614
74	EBITDA	Line 69 - (Sum of Lines 70 thru 73)	\$15,124,353	\$18,937,838	\$19,083,707	\$18,692,447	\$20,466,600

Northern Utilities - Select Operating Data 2013 - 2017

			2013	2014	2015	2016	2017
75	Rate Class Analysis						
76	Residential Sales						
77	Res Base Op Revs as a % of Total Base Revs	Line 19 ÷ Line 22	61%	61%	62%	63%	63%
78	Res Gas Op Revs as a % of Total Gas Op Revs	Line 24 ÷ Line 27	48%	47%	48%	46%	47%
79	Avg Number of Res Cust as a % of Total Avg Number of Cust	Line 37 ÷ Line 40	78%	78%	79%	79%	79%
80	Dth of Nat Gas Sold to Res. Cust as a % of Total Dth	Line 42 ÷ Line 47	22%	23%	22%	21%	21%
81	Res Base Op Revs / Res Dth Sold	Line 19 ÷ Line 42	\$6.32	\$7.23	\$8.37	\$9.23	\$9.16
82	Res Gas Op Revs / Res Dth Sold	Line 24 ÷ Line 42	\$8.29	\$9.51	\$8.69	\$6.59	\$7.30
83	Total Res Revs / Res Dth Sold	(Lines 19 + 24) ÷ Line 42	\$14.61	\$16.74	\$17.06	\$15.82	\$16.46
84	Total Res Revs / Total Op Revs	(Lines 19 + 24) ÷ Line 35	38%	41%	42%	40%	42%
85							
86	Commercial / Industrial Sales						
87	Comm/Ind Base Revs as a % of Total Base Revs	Line 20 ÷ Line 22	36%	40%	38%	37%	36%
88	Comm/Ind Gas Op Revs as a % of Total Gas Op Revs	Line 25 ÷ Line 27	49%	53%	57%	51%	52%
89	Avg Number of Comm/Ind Cust as a % of Total Avg Number of Cust	Line 38 ÷ Line 40	19%	18%	18%	18%	18%
90	Dth of Nat Gas Sold to Comm/Ind Cust as a % of Total Dth	Line 43 ÷ Line 47	23%	27%	28%	24%	24%
91	Comm/Ind Base Op Revs / Comm/Ind Dth Sold	Line 20 ÷ Line 43	\$3.56	\$4.12	\$4.08	\$4.73	\$4.58
92	Comm/Ind Gas Op Revs / Comm/Ind Dth Sold	Line 25 ÷ Line 43	\$7.97	\$9.27	\$8.29	\$6.41	\$7.02
93	Total Comm/Ind Op Revs / Comm/Ind Dth Sold	(Lines 20 + 25) ÷ Line 43	\$11.53	\$13.39	\$12.36	\$11.14	\$11.60
94	Total Comm/Ind Op Revs / Total Op Revs	(Lines 20 + 25) ÷ Line 35	32%	38%	37%	32%	34%
95							
96	Transmission of Gas for Others Sales						
97	Revs from the Trans of Nat Gas to Others as a % of Total Revenues	Line 32 ÷ Line 35	12%	11%	11%	13%	13%
98	Avg Number of Trans Cust as a % of Total Avg Number of Cust	Line 39 ÷ Line 40	3%	3%	3%	3%	3%
99	Dth of Nat Gas Trans to Others as a % of Total Dth	Line 46 ÷ Line 47	53%	51%	50%	55%	52%
100	Revs from Trans of Nat Gas to Others / Dth of Nat Gas Trans.	Line 32 ÷ Line 46	\$1.95	\$2.05	\$1.96	\$1.95	\$2.06
101	Total Revs from the Trans to Others / Total Op Revs	Line 32 ÷ Line 35	12%	11%	11%	13%	13%
102							
103	Cost of Gas Sold / Dth of NG Sold	Line 50 ÷ Line 47	\$9.74	\$10.44	\$9.59	\$8.28	\$8.04
104	Company Reported Rev (excl. Unbilled Revs) per Therm Units Sold						
105							
106	Total Utility Plant	Line 12	\$ 154,830,760	\$ 172,057,217	\$ 188,808,683	\$ 206,290,256	\$ 229,730,635
107	Net Utility Plant	Line 15	\$ 104,110,253	\$ 120,223,825	\$ 133,995,091	\$ 148,026,087	\$ 167,145,927
108	Net Utility Plant as a % of Total Utility Plant	Line 15 ÷ Line 12	67%	70%	71%	72%	73%

Appendix E
Liberty Utilities & Northern Utilities
Select Operating Data
YE 2017 Comparison

George E. Sansoucy, P.E., LLC
October 31, 2018

Liberty Utilities & Northern Utilities Select Operating Data - YE 2017 Comparison

		2017		Notes
		Liberty Utilities	Northern Utilities	
1				
2	Customer Count	92,044	33,037	
3	Population	546,005	224,275	
4				
5	Utility Plant			
6	Plant in Service	\$ 485,723,431	\$ 221,266,863	
7	Completed Construction not Classified	42,277,446	13,996,649	
8	TOTAL Utility Plant	528,000,877	235,263,512	
9	Held for Future Use	433,920	-	
10	Construction Work in Progress	11,231,685	3,875,298	
11	Acquisition Adjustments	-	(9,408,175)	
12	TOTAL Utility Plant	539,666,482	229,730,635	
13	Accumulated Provisions for Depreciation, Amortization & Depletion	(130,926,210)	(71,130,467)	
14	Amortization of Plant Acquisition Adjustment	-	8,545,759	
15	NET Utility Plant	\$ 408,740,272	\$ 167,145,927	
16				
17	Utility Operating Income			
18	Base Operating Revenues			
19	Residential Sales	41,671,966	16,179,241	
20	Commercial & Industrial Sales	17,956,841	9,205,243	
21	Unbilled Revenues	-	279,215	
22	Total Base Revenues	\$ 59,628,807	\$ 25,663,699	
23	Gas Operating Revenues (Cost of Gas)			
24	Residential Sales	33,885,520	12,889,623	
25	Commercial & Industrial Sales	20,605,001	14,131,800	
26	Unbilled Revenues	-	186,467	
27	Total Gas Revenues	\$ 54,490,521	\$ 27,207,890	
28	Other Sales to Public Authorities	8,800	-	
29	Sales for Resale	2,179,448	4,891,768	
30	Forfeited Discounts	-	97,464	
31	Misc. Service Revenues	901,290	675,919	
32	Revenues from Trans of Gas of Others through Distribution Facilities	16,173,667	8,862,509	
33	Rent from Gas Property	-	140,676	
34	Other Gas Revenues	3,301,434	1,518,998	
35	Total Gas Revenues	\$136,683,967	\$69,058,923	
36				
37	Avg. No. of Customers per Mo. - Residential	79,810	25,534	
38	Avg. No. of Customers per Mo. - Commercial / Industrial	9,173	5,811	
39	Avg. No. of Customers per Mo. - Trans of Gas of Others through Distribution Facilities	2,632	975	
40	Total Avg. No. of Customers per Mo.	91,615	32,320	
41				
42	Dekatherm of Natural Gas Sold - Residential	5,794,076	1,765,904	
43	Dekatherm of Natural Gas Sold - Commercial / Industrial	3,526,669	2,012,060	
44	Dekatherm of Natural Gas Sold - Unbilled Revenues	-	98,886	
45	Dekatherm of Natural Gas Sold - Sales for Resales	-	74,013	
46	Dekatherm of Natural Gas Sold - Trans of Gas of Others through Distribution Facilities	6,859,311	4,292,479	
47	Total Dekatherm of Natural Gas Sold	16,180,056	8,243,342	
48				

Liberty Utilities & Northern Utilities Select Operating Data - YE 2017 Comparison

		2017		Notes
		Liberty Utilities	Northern Utilities	
1				
49	Operating Revenues	\$ 136,683,967	\$ 69,058,923	
50	Cost of Gas Sold	56,127,721	31,783,469	
51	Gross Margin	\$ 80,556,246	\$ 37,275,454	
52				
53	Operation Expenses excl. Cost of Gas	\$ 22,071,011	\$ 12,074,168	
54	Maintenance Expenses	2,926,039	625,072	
55	Depreciation Expenses	12,786,243	6,553,188	
56	Amort. & Depl. Of Utility Plant	2,173,446	40,485	
57	Amort. Of Utility Plant Acq. Adj.	-	(940,817)	
58	Regulatory Debits	409,203	588,349	
59	(Less) Regulatory Credits	2,537,193	-	
60	Taxes Other Than Income Taxes	10,963,572	4,109,614	
61	Income Taxes - Federal	-	447,244	
62	Income Taxes - Other	220,214	(419,898)	
63	Provision for Deferred Income Taxes	6,628,169	3,758,341	
64	Investment Tax Credit Adj. - Net	-	-	
65	Total Utility Operating Expenses	60,715,090	26,835,746	
66	NET Utility Operating Income	\$ 19,841,156	\$ 10,439,708	
67				
68	EBITDA Calculation			
69	Operating Revenues	\$136,683,967	\$69,058,923	
70	Less: Cost of Gas Sold	\$56,127,721	\$31,783,469	
71	Less: Operations Expenses	\$22,071,011	\$12,074,168	
72	Less: Maintenance Expenses	\$2,926,039	\$625,072	
73	Less: Taxes Other Than Income Taxes	\$10,963,572	\$4,109,614	
74	EBITDA	\$44,595,624	\$20,466,600	

Liberty Utilities & Northern Utilities Select Operating Data - YE 2017 Comparison

		2017		Notes
		Liberty Utilities	Northern Utilities	
1				
75		Rate Class Analysis		
76	Residential Sales Metrics			
77	Residential Base Revs as a % of Total Base Revenues	70%	63%	
78	Residential Gas Op Revs as a % of Total Gas Op Revenues	62%	47%	
79	Avg Number of Residential Cust as a % of Total Avg Number of Cust	87%	79%	
80	Avg Dekatherms of Nat Gas Sold to Residential Cust as a % of Total Dekatherms	36%	21%	Approximately 36% of the gas sold by LU was sold to residential customers, compared to 21% of NU's gas sold to residential customers.
81	Base Operating Revenues / Dekatherms Sold	\$7.19	\$9.16	NU's Base Revs / Dth is 27% higher than LU's Base Revs / Dth.
82	Gas Operating Revenues / Dekatherms Sold	\$5.85	\$7.30	NU's Gas Revs / Dth is 25% higher than LU's Gas Revs / Dth.
83	Total Operating Revenues / Dekatherms Sold	\$13.04	\$16.46	NU's Total Revs / Dth is 26% higher than LU's Total Revs / Dth.
84	Total Residential Revenues / Total Operating Revenues	55%	42%	
85				
86	Commercial / Industrial Sales Metrics			
87	Comm/Ind Base Revs as a % of Total Base Revenues	30%	36%	
88	Comm/Ind Gas Op Revs as a % of Total Gas Op Revenues	38%	52%	
89	Avg Number of Comm/Ind Cust as a % of Total Avg Number of Cust	10%	18%	
90	Avg Dekatherms of Nat Gas Sold to Comm/Ind Cust as a % of Total Dekatherms	22%	24%	
91	Base Operating Revenues / Dekatherms Sold	\$5.09	\$4.58	NU's Base Revs / Dth is 10% lower than LU's Base Revs / Dth.
92	Gas Operating Revenues / Dekatherms Sold	\$5.84	\$7.02	NU's Gas Revs / Dth is 20% higher than LU's Gas Revs / Dth.
93	Total Operating Revenues / Dekatherms Sold	\$10.93	\$11.60	NU's Total Revs / Dth is 6% higher than LU's Total Revs / Dth.
94	Total Comm/Ind Operating Revenues / Total Operating Revenues	28%	34%	
95				
96	Transmission of Gas for Others Sales Metrics			
97	Revenues from Transmission to Others as a % of Total Revenues	12%	13%	
98	Average Number of Transmission Customers as a % of Total Avg Number of Cust	3%	3%	
99	Avg Dekatherms of Nat Gas Trans to Others as a % of Total Dekatherms	42%	52%	
100	Revenues from Trans of Gas of Others / Dekatherms of Natural Gas Trans.	\$2.36	\$2.06	
101	Total Trans Revenues / Total Operating Revenues	12%	13%	
102				
103	Cost of Gas Sold / Total Dekatherms of NG Sold (Excludes Dth of Gas Transmitted for Others)	\$6.02	\$8.04	NU's Cost of Gas is approximately 34% more than LU's Cost of Gas.
104	Company Reported Revenue (excl. Unbilled Revs) per Therm Units Sold			
105				
106	Total Utility Plant	\$ 539,666,482	\$ 229,730,635	
107	Net Utility Plant	\$ 408,740,272	\$ 167,145,927	
108	Net Utility Plant as a % of Total Utility Plant	76%	73%	

Appendix F

Rate Analysis

George E. Sansoucy, P.E., LLC
October 31, 2018

Liberty Utilities
Residential Heat - Winter Rates
Estimated Average Customer Billing

	A	B	C	D	E	F	G	H	I	J	K	L
Line No.	2018	Base Monthly Charge	Delivery Rate First 100 Therms \$/therm	Delivery Rate - Excess 100 Therms \$/therm	Cost of Gas Rate - \$/therm	Monthly Dispersion of Dth Customer Sales	Annual Dispersion of Avg Annual Customer Therms	Base Monthly Charge	Delivery Charge First 100 Therms @ \$/therm	Delivery Charge - Excess 100 Therms @ \$/therm	Cost of Gas @ \$/therm	Total Bill
1	January	24.43	0.4719	0.4053	0.8056	16.54%	121.32	\$24.43	\$47.19	\$8.64	\$97.73	\$177.99
2	February	24.43	0.4719	0.4053	0.8056	15.53%	113.92	\$24.43	\$47.19	\$5.64	\$91.78	\$169.04
3	March	24.43	0.4719	0.4053	0.8056	15.02%	110.15	\$24.43	\$47.19	\$4.11	\$88.73	\$164.46
4	April	24.43	0.4719	0.4053	0.8056	12.62%	92.60	\$24.43	\$43.70	\$0.00	\$74.60	\$142.73
5	May	14.88	0.6525	0.6525	0.3133	6.22%	45.62	\$14.88	\$29.77	\$0.00	\$14.29	\$58.94
6	June	14.88	0.6525	0.6525	0.3133	3.96%	29.04	\$14.88	\$18.95	\$0.00	\$9.10	\$42.92
7	July	14.88	0.6525	0.6525	0.3133	2.61%	19.12	\$14.88	\$12.48	\$0.00	\$5.99	\$33.35
8	August	14.88	0.6525	0.6525	0.3133	2.44%	17.90	\$14.88	\$11.68	\$0.00	\$5.61	\$32.17
9	September	14.88	0.6525	0.6525	0.3133	2.50%	18.37	\$14.88	\$11.98	\$0.00	\$5.75	\$32.62
10	October	14.88	0.6525	0.6525	0.3133	2.91%	21.37	\$14.88	\$13.95	\$0.00	\$6.70	\$35.52
11	November	15.02	0.6261	0.6261	0.7411	5.83%	42.75	\$15.02	\$26.77	\$0.00	\$31.68	\$73.47
12	December	15.02	0.6261	0.6261	0.7411	13.82%	101.34	\$15.02	\$62.61	\$0.84	\$75.10	\$153.57
13						Total	733.5	\$217.04	\$373.45	\$19.23	\$507.07	\$1,116.79

Northern Utilities
Residential Heat - Winter Rates
Estimated Average Customer Billing

	A	B	C	D	E	F	G	H	I	J	K	L
Line No.		Base Monthly Charge	Delivery Rate First 50 Therms \$/therm	Delivery Rate - Excess 50 Therms \$/therm	Cost of Gas Rate - \$/therm	Monthly Dispersion of Dth Customer Sales	Annual Dispersion of Avg Annual Customer Therms	Base Monthly Charge	Delivery Charge First 50 Therms @ \$/therm	Delivery Charge - Excess 50 Therms @ \$/therm	Cost of Gas @ \$/therm	Total Bill
14	January	21.36	0.7028	0.5892	0.8646	16.54%	121.32	\$21.36	\$35.14	\$42.02	\$104.89	\$203.41
15	February	21.36	0.7028	0.5892	0.8646	15.53%	113.92	\$21.36	\$35.14	\$37.66	\$98.50	\$192.66
16	March	21.36	0.7028	0.5892	0.8646	15.02%	110.15	\$21.36	\$35.14	\$35.44	\$95.23	\$187.17
17	April	21.36	0.7028	0.5892	0.8646	12.62%	92.60	\$21.36	\$35.14	\$25.10	\$80.06	\$161.66
18	May	21.36	0.6238	0.6238	0.3975	6.22%	45.62	\$21.36	\$28.46	\$0.00	\$18.13	\$67.95
19	June	21.36	0.6238	0.6238	0.3975	3.96%	29.04	\$21.36	\$18.11	\$0.00	\$11.54	\$51.02
20	July	21.36	0.6238	0.6238	0.3975	2.61%	19.12	\$21.36	\$11.93	\$0.00	\$7.60	\$40.89
21	August	21.36	0.6238	0.6238	0.3975	2.44%	17.90	\$21.36	\$11.17	\$0.00	\$7.12	\$39.64
22	September	21.36	0.6238	0.6238	0.3975	2.50%	18.37	\$21.36	\$11.46	\$0.00	\$7.30	\$40.12
23	October	21.36	0.6238	0.6238	0.3975	2.91%	21.37	\$21.36	\$13.33	\$0.00	\$8.50	\$43.19
24	November	21.36	0.7351	0.7351	0.8271	5.83%	42.75	\$21.36	\$31.43	\$0.00	\$35.36	\$88.15
25	December	21.36	0.7351	0.7351	0.8271	13.82%	101.34	\$21.36	\$36.76	\$37.74	\$83.82	\$179.68
26						Total	733.5	\$256.32	\$303.20	\$177.96	\$558.05	\$1,295.53

Appendix G
NHPUC
29 Year Historical Gas Pipeline
Safety Incidents in New Hampshire

George E. Sansoucy, P.E., LLC
October 31, 2018

29 YEAR HISTORICAL GAS PIPELINE SAFETY INCIDENTS IN NEW HAMPSHIRE *															
	LIBERTY UTILITIES		UNITIL		NH GAS		UNH		GORHAM PAPER & TISSUE		ANDROSCOGGIN VALLEY REG REF DISTRICT		LPG (ALL)		INTERSTATE 4 PIPELINES ^A
	Federal Incident	State Incident	Federal Incident	State Incident	Federal Incident	State Incident	Federal Incident	State Incident	Federal Incident	State Incident	Federal Incident	State Incident	Federal Incident	State Incident	Federal Incident
2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	0	1 ^H	1 ^H	1 ^I	0	0	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0	0	0
2009	0 ^B	0 ^B	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0	0	0
2008	0	0	1 ^C	1 ^C	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0	0	0
2007	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0	0	0
2006	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0	0	0
2005	0	0	1 ^D	1 ^D	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0	0	0
2004	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0	0	0
2003	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0
2002	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0
2001	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0
2000	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0
1999	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0
1998	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0
1997	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0
1996	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0
1995	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0
1994	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0
1993	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0
1992	1 ^F	1 ^F	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0
1991	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0
1990	1 ^G	1 ^G	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0
1989	0	0	0	0	0	0	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	N/A ^E	0
TOTAL	2	2	3	3	1	1	0	0	0	0	0	0	0	0	0

Notes:
A. refers to Tennessee Gas Pipeline, Granite State Gas Transmission, Portland Natural Gas Transmission, and Maritimes and Northeast Pipeline combined
B. Determined non-jurisdictional (downstream of gas meter) customer gas piping gas leak, resulted in 1 fatality and estimated property damage of \$149,700 , Manchester 2/24/2009
C. Estimated property damage \$200,000.00 no fatalities, no bodily injury, Church St, Gonic; 12/24/2008, snow plow or excessive snow damaged meter and caused fire
D. Estimated property damage \$522,400.00 no fatalities, no bodily injury, Ashford Ave, Hampton; 1/7/2005, 3rd party excavation damage
E. N/A years in which NH PUC Safety Division was not inspecting under PHMSA certification or pipeline facility was not in existence
F. Estimated property damage \$75,000.00 no fatalities, no bodily injury 1/28/1992, Concord St, Nashua; 3rd party excavation damage
G. Estimated property damage \$85,000.00 no fatalities, no bodily injury 3/8/1990, Messer St, Laconia; 3rd party excavation damage
H. Estimated property damage \$158,000.00 no fatalities, no bodily injury 2/20/2015, Locke St, Hampton; Snow Buildup on Meter Set
I. Estimated property damage \$0.00 no fatalities, no bodily injury 12/19/2015, Keene Propane/Air Plant, Keene Abnormal BTU Mixture deemed significant by operator did not trigger state "accident"
* All Incident Data does not include underground damage prevention events less than \$5,000.00 unless bodily injury or fatality occurred
* State Incident has lower property damage reporting requirements of \$5,000.00 per PUC 508.03(b)(4) and 504.05(a)(1)