



**STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION**

DG 16-447

In the Matter of:

**Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty Utilities
Petition for Tariff to Include Managed Expansion Program Rates**

Direct Testimony

of

**Stephen P. Frink
Assistant Director – Gas & Water Division**

July 11, 2016

1 **New Hampshire Public Utilities Commission**

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

3 **Petition for Tariff to Include Managed Expansion Rates**

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5 **Testimony of**
6 **Stephen P. Frink**

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9 **Q. Please state your name, occupation and business address.**

10 **A.** My name is Stephen P. Frink and I am employed by the New Hampshire Public Utilities
11 Commission (Commission) as Assistant Director of the Gas & Water Division. My business
12 address is 21 S. Fruit Street, Suite 10, Concord, New Hampshire 03301.

13 **Q. Please summarize your educational and professional experience.**

14 **A.** I joined the Commission in 1990 as a member of the Audit Team and worked as a Utility
15 Analyst and Sr. Utility Analyst before becoming the Assistant Finance Director in 1998. In
16 2001 Commission operations were restructured and I became the Assistant Director of the
17 Gas & Water Division and have primary responsibility for the administration of the financial
18 aspects of the regulation of the gas utilities and Concord Steam Corporation.

19 Prior to joining the Commission I worked as a Budget/Financial Analyst for the cities
20 of Austin and Dallas, Texas. I have a Bachelor of Arts and a Master's in Business

1 Administration from the University of New Hampshire.

2 **Q. What is the purpose of your testimony in this proceeding?**

3 **A.** The purpose of my testimony is to provide Staff's recommendations on whether Liberty
4 Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities' (Liberty or Company)
5 proposed Management Expansion Program (MEP) should be approved and under what
6 conditions. My testimony also recommends changes to Liberty's Line Extension Policy and
7 the rationale behind the proposed changes.

8 **Q. Please summarize Staff's findings and recommendations on these issues.**

9 **A.** The Commission should approve a modified MEP, with a reduced MEP rate premium of 30
10 percent rather than 35 percent, as a three year pilot program and establish reporting
11 requirements that can be used to evaluate the success or failure of the program.

12 Liberty's Line Extension Policy should be revised to require firm customer
13 commitments of at least 25 percent of total estimated revenue before commencing
14 construction of a line extension and use a Discounted Cash Flow (DCF) analysis when
15 evaluating line extension requests with estimated direct capital costs of \$1,000,000 or greater.

16 **Q. Briefly describe the current filing.**

17 **A.** On April 15, 2016, Liberty filed a petition with the Commission to amend its tariff to add
18 MEP rates. In instances where a proposed line extension would require a customer
19 contribution in aid of construction (CIAC), at the Company's discretion line extensions MEP
20 rates would be available to recover most or all of the line extension cost from new customers

1 along the proposed extension. The MEP rate would be a 35 percent premium on the regular
2 distribution rates and applied to the premises along the extension for a 10 year period.

3 **Q. What is the purpose of the Managed Expansion Program?**

4 **A.** The purpose is to expand gas service to ‘off the main’ customers, customers that are not
5 located on or near existing mains and where it is most often not economic or affordable to
6 those customers to take gas service since the responsibility for the incremental investment is
7 to be borne by the new customers and often requires a substantial CIAC. The MEP is
8 intended to reach unserved areas in a manner that is economic for prospective customers, the
9 Company and existing customers.

10 **Q. Please define economic growth.**

11 **A.** Economic growth is growth that benefits both customers and shareholders. Expanding
12 customer growth with limited investment leads to economies and efficiencies that reduce rates
13 to all customers over the long term compared to what they would otherwise have been. Such
14 growth also helps to mitigate the expense and earnings attrition the Company experiences
15 between base rate proceedings, thereby lengthening the period between the filing of general
16 rate cases and allowing for longer stay out periods. Non-heating customers becoming heating
17 customers and customer within 100 feet of an existing main that take service are two
18 examples of economic growth. Adding customers beyond the existing distribution system
19 often entails a significant investment and the investment criteria detailed in Liberty’s Line
20 Extension Policy is intended to ensure economic growth in those situations as well, whereby

1 new customers pay for the incremental system investment to extend distribution service to
2 their locations through a CIAC. The CIAC from new customers prevents subsidization of the
3 incremental investment by existing customers.

4 **Q. How does the proposed MEP promote economic growth?**

5 **A.** As explained above, for line extensions where expected revenues from new customers do not
6 satisfy the investment criteria a CIAC is required before construction can commence.

7 Potential customers are generally willing to make an investment that can be justified by
8 offsetting the cost of the customer contribution and conversion costs with the savings they
9 expect to receive over a relatively short pay-back period, but the greater the CIAC

10 requirement the less likely a customer will convert to natural gas. The MEP is intended to
11 eliminate or reduce the required customer contribution along a new main extension by

12 charging a premium on delivery rates for new customers sufficient to recover the incremental
13 cost of the extension while still producing energy savings for the new customers.

14 **Q. Will the proposed MEP produce economic growth into new areas?**

15 **A.** Potentially. The success of the program will be largely dependent on natural gas conversions
16 in the targeted expansion areas and a primary driver will be how competitive Liberty's MEP
17 rates are with the fuel(s) currently in use and customer conversion costs. At current prices the
18 proposed MEP rates offer substantial savings for propane customers but little or no savings
19 for oil customers. *See Attachment SPF-1.*

20 Liberty has recently improved its ability to analyze potential growth opportunities, as

1 described in the testimony of Mr. Clark and Simek (Bates p. 9-10), and will target those areas
2 that are expected to produce economic growth. Extensions will be subject to Liberty's
3 investment criteria and in instances where a large CIAC is required Liberty may offer MEP
4 rates in lieu of a customer contribution or in conjunction with a modest customer contribution.
5 The MEP will afford Liberty the opportunity to offer natural gas service in areas where the
6 market analysis indicates there is a high demand for natural gas that will lead to significant
7 and timely customer growth, growth that would be economically prohibitive for customers if
8 required to pay a large CIAC prior to receiving service but economically attractive at MEP
9 rates.

10 Liberty will determine if, and if so, when and where it will offer MEP rates. It is
11 expected Liberty will only offer MEP rates where there is a strong likelihood of success based
12 on its market analysis that takes into consideration pertinent cost and pricing information and
13 supported by a sales and marketing plan specific to each targeted expansion.

14 **Q. How are existing customers protected against uneconomic growth?**

15 **A.** A utility must seek Commission approval to recover on its capital investments and the
16 Commission could deny recovery on an investment if found to have been imprudent.

17 In addition, customer requests for a line extension must pass a revenue test designed to
18 ensure the direct capital cost of the project is recovered within 6 to 8 years.

19 **Q. Are there other measures that would protect customers against uneconomic growth?**

20 **A.** Yes, there are several measures that could and should be implemented.

1 First, a threshold level of customer commitments along the proposed extension should
2 be required before construction can commence.

3 Second, a DCF analysis should be used to evaluate line extensions that entail a
4 significant cost.

5 Third, the proposed MEP could be implemented on a trial basis and the results closely
6 tracked to determine if the program is resulting in economic growth.

7 **Q. How would a threshold customer commitment protect customers?**

8 **A.** The revenue test used to evaluate customer line extension compares the estimated direct
9 capital cost of the project with projected revenues. Projected revenues are estimated using
10 100 percent of the expected revenue from customers committing to take service and 60
11 percent of the expected revenue from the other premises along the main. The capital cost of
12 the main extension and revenue from customers committing to take service in advance of
13 construction can be reasonably established but projected revenues for premises along the main
14 are far more speculative. While 60 percent of those premises can be reasonably expected to
15 convert to natural gas, when those conversion take place and what the associated revenue will
16 be is far less certain. Establishing a threshold will increase the probably that actual revenues
17 meet or exceed the revenue forecast.

18 It is also worth noting that the MEP proposal does not require any customer
19 commitments in advance of construction, whereas a line extension request ensures at least
20 some level of customer commitment before the investment is made.

1 **Q. What would be a reasonable threshold for customer commitments?**

2 **A.** Customer commitments in advance of construction should meet or exceed 25 percent of the
3 projected revenue along the line extension. That level of commitment indicates that the
4 natural gas prices being offered to homes and business along the extension are competitive
5 with alternative fuel sources and are low enough that customers that commit to taking natural
6 gas service in advance of construction can expect that service will be provided within a
7 reasonable time frame.

8 **Q. How should the threshold requirement be implemented?**

9 **A.** The requirement should be written into the Liberty's Line Extension Policy and the tariff
10 pages pertaining to its Line Extension Policy revised accordingly.

11 **Q. How would use of the DCF analysis to evaluate line extensions that entail a significant
12 cost protect customers?**

13 **A.** While small projects do not impose a material risk to customers if the projects should prove to
14 be uneconomic, large projects that prove to be uneconomic could have a material impact on
15 rates. Therefore, while use of the revenue test is reasonable in determining whether to extend
16 service to customers in close proximity to the existing distribution system, greater scrutiny
17 should be given to line extension that entail a significant investment. Applying a DCF
18 analysis will serve that purpose.

19 The DCF methodology is a far better framework than a revenue test for evaluating the
20 efficacy (and hence prudence) of a major capital project for the following reasons: 1) the

1 DCF analysis uses a much longer time horizon (the life of the project); 2) the DCF analysis
2 uses a more inclusive set of revenue and cost variables, encompassing revenue and cost
3 savings, capital costs not covered by customer contributions, and incremental operating costs;
4 and, 3) the DCF analysis allows for an apples-to-apples comparison of costs and benefits that
5 occur at different times by discounting the revenue and cost streams at the company's
6 weighted cost of capital rate to determine the 'present value' of each and the 'net present
7 value' of the project.

8 **Q. What level of investment should require a DCF analysis?**

9 **A.** Line extensions with estimated direct capital costs of \$1,000,000 or more should be evaluated
10 using a DCF analysis.

11 **Q. How should the requirement that a DCF analysis be used to evaluate large projects be
12 implemented?**

13 **A.** The requirement should be written into the Liberty's Line Extension Policy and the tariff
14 pages pertaining to its Line Extension Policy revised accordingly. The tariff revisions could
15 be patterned on Northern Utilities, Inc.'s Tariff page 16 that describes the DCF analysis to be
16 used to evaluate main and service extensions in its service area. *See Attachment SPF-2.*

17 **Q. How does approving the MEP as a pilot program protect customers?**

18 **A.** Establishing the MEP as a pilot program will allow the Company to collect data to measure
19 the effectiveness of the program, which can be used by the Company and Commission to
20 determine whether the program should be discontinued or what, if any, modifications should

1 be made to improve the program.

2 **Q. What data should Liberty use to measure the effectiveness of the MEP?**

3 **A.** Data should include a comparison of actual MEP costs and revenue with projected costs and
4 revenues used when selecting an MEP line extension. Liberty's decision to offer service
5 along an extension at MEP rates will be based on its financial analysis that produces a
6 positive return based on the cost and revenue projections. Accurate forecasting is essential in
7 achieving the expected results and tracking that information will demonstrate the Company's
8 forecasting ability.

9 Customer conversions should be tracked and include information as to the type of fuel
10 that a customer is converting from, the Company's cost to connect the customer, when the
11 conversion took place and the annual revenue. Not only will tracking customer conversions
12 demonstrate Liberty's forecasting ability, it will also assist in evaluating the effectiveness of
13 its sales and marketing efforts.

14 A comparison of MEP rates with oil and propane prices during the MEP period should
15 also be tracked. That information will provide empirical evidence as to the elasticity of
16 energy prices in Liberty's service territory, which can be useful in forecasting and tailoring
17 sales and marketing campaigns.

18 **Q. Please describe how an MEP pilot program would work?**

19 **A.** The MEP rates should be a 30 percent premium on distribution rates in effect for 10 years
20 from the in-service date of the extension. Liberty should track the results of each expansion

1 and file annual reports with the Commission. The pilot program should be in place for four
2 years following completion of the first MEP expansion and following the third year Liberty
3 will need to petition the Commission for approval to continue MEP expansions beyond the
4 fourth year.

5 **Q. Liberty proposed a 35 percent premium on distribution rates for the MEP rate, why is**
6 **Staff recommending a 30 percent premium?**

7 **A.** As previously noted, at current market prices the proposed MEP rates offer a substantial
8 saving for propane customers but little or no savings for oil customers that convert. Lowering
9 the MEP premium will make conversion to natural gas more attractive to oil customers and
10 additional conversions should help offset the lost revenue due to the lower premium. The
11 Company's response to Staff Data Request 2-5 shows that even without a change in the sales
12 forecast, the anticipated revenue at the lower premium will eliminate the CIAC requirement
13 on two of the four projects being considered for MEP rates. *See Attachment SPF-3.* In
14 addition, Liberty intends to file for a distribution rate increase in 2017 and an increase in the
15 distribution rates will offset the decrease in the MEP discount rate and increase MEP revenue
16 projections.

17 Lowering the MEP premium may also limit MEP expansions during the pilot
18 program, as it will be more difficult for prospective MEP expansions to satisfy the investment
19 criteria, which would serve two purposes. First, limited expansion will reduce the amount of
20 cross subsidies if MEP expansions prove to be uneconomical. And second, will help to lessen

1 the competition between the resources needed for growth projects, mandated main
2 replacement projects and the Cast Iron/Bare Steel main replacement program.

3 **Q. Do you have any other recommendations regarding changes to Liberty's proposed MEP**
4 **and Line Extension Policy?**

5 **A.** Yes. The Line Extension Policy currently provides for a free service line to residential
6 heating customers within 100 feet of an existing main, as those extensions have historically
7 satisfied the revenue test. The Line Extension Policy should be modified to allow for a free
8 line service line to non-heat residential customers within 100 feet of either a proposed main or
9 a scheduled main replacement. There is a substantial cost savings when installing a main
10 during construction and a new customer that is willing to take gas service at that time for uses
11 other than heating are very likely to switch to heating service sometime in the future.

12 **Q. Would implementing Staff's recommended changes be costly or be unduly burdensome**
13 **for Liberty?**

14 **A.** No. Liberty can and does conduct a DCF analysis in evaluating certain projects and has
15 access to the information that Staff has recommended be tracked and reported. Most of the
16 information being requested is already being collected and reviewed internally by Liberty and
17 Staff is willing to work with the Company on the specifics of the DCF analysis and the
18 reporting format to ease the administrative burden.

19 **Q. If the MEP is approved as a pilot program, can the program be discontinued or**
20 **modified during the four year trail period?**

1 **A.** Liberty could unilaterally discontinue or choose not to implement the program, which could
2 happen if market conditions were to change and the financial analysis indicates economic
3 growth is not be feasible through MEP expansions.

4 Liberty, Staff or some other party could petition the Commission to end or modify the
5 MEP at any time during the trial period, which might occur if market conditions were to
6 change drastically or results of the initial expansions fall well short of expectations.

7 **Q. Do you have any additional comments you'd like to make regarding the Company's**
8 **MEP proposal?**

9 **A.** Yes. Staff appreciates the Company's efforts to extend natural gas to unserved areas and
10 promote economic growth and supports implementing a modified MEP program on a trial
11 basis in conjunction with the Staff proposed changes to Liberty's Line Extension Policy.

12 **Q. Does that conclude your testimony?**

13 **A.** Yes.