STATE OF NEW HAMPSHIRE

PUBLIC UTILITIES COMMISSION

DG 15-289

In the Matter of:
Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty Utilities
Petition for Franchise Authority in Lebanon and Hanover

Direct Testimony

of

Stephen P. Frink
Assistant Director – Gas & Water Division

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New Hampshire Public Utilities Commission

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

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

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

Q. Please summarize your educational and professional experience.

A. See ***Attachment SPF-1***.

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

A. The purpose of my testimony is to provide Staff's recommendations on whether Liberty should be granted the franchise to provide natural gas utility service in Lebanon and Hanover. My testimony examines the methodology and underlying assumptions used by Liberty to financially evaluate the merits of providing natural gas utility to serve Lebanon and Hanover.

Q. Please summarize Staff's findings on these issues.

A. Staff recommends that the Commission deny Liberty's request at this time and suspend the proceeding until Liberty has submitted a comprehensive and detailed business plan, performed a Discounted Cash Flow (DCF) analysis to determine the economic costs and benefits and obtained customer commitments as evidenced by written agreements.

Liberty has demonstrated its managerial and engineering expertise in safely and reliably operating and maintaining LNG facilities and a natural gas distribution system. That said, as a condition of the settlement agreement approved in Liberty's last rate case, Order No. 25,797 issued June 26, 2015 in Docket No. DG 14-180, an independent audit of Liberty's financial reporting/accounting and customer service areas is being conducted and an audit report expected within a few months. Staff recommends a copy of the audit report be filed in the immediate docket for the Commissioner's consideration regarding Liberty's expertise to operate the proposed system.

Q. Briefly describe the current filing.

A. On July 24, 2015, Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities (Liberty or Company) filed a petition with the New Hampshire Public Utilities Commission (Commission) for approval of a gas franchise in Lebanon and Hanover, New Hampshire. Liberty proposes to operate an "off pipeline" and self-contained natural gas distribution system to serve the franchise area and intends to finance, construct, install, manage, operate and own the facilities and infrastructure. The Company plans to construct an LNG storage and vaporization facility along with a CNG decompression facility in Lebanon to supply the natural gas to the distribution system and will procure both LNG and CNG through a competitive bidding process. The Company plans to install gas mains from the LNG/CNG facilities to prospective anchor customers, Dartmouth College, Dartmouth-Hitchcock Medical Center, Hypertherm and Kleen. Liberty also intends to provide vehicle refueling and remote customer service to customers not yet connected to distribution lines. Lebanon and Hanover customers would be subject to terms and conditions of Liberty's natural gas tariff, other than cost of gas (COG) rates, which will be separately calculated and a separate provision added to the tariff. Liberty expects to commence construction of the supply facilities and distribution system in 2016.

Methodology to Evaluate Financial Merits of Large System Expansion Projects

Q. Are there investment criteria that must be satisfied for a natural gas utility to expand its distribution system?

A. Yes, New Hampshire's two natural gas utilities have tariff terms and conditions that address line extension requests. The line extension policies compare expected revenues from new customers to determine if they are adequate to justify the investment. If the expected revenues are inadequate, customers are required to make a contribution-in-aid-of-construction (CIAC) if necessary to satisfy the investment criteria.

Q. What constitutes adequate justification for a proposed system expansion?

A. An expansion is justified if the incremental system investment required to extend distribution service are borne by the customers to be served and not subsidized by existing customers.

Q. Are the investment criteria the same for both utilities?

A. Both utilities have roughly the same investment criteria.

For many years both utilities used the same investment criteria when considering a line extension request, applying a 25 percent test to determine if a customer contribution in aid of construction was required. Under the 25 percent test, net annual revenue had to equal or exceed 25 percent of the cost of the extension. The current line extension policies differ but both are intended to recover capital costs from new residential customers within approximately 20 years and new commercial and industrial (C&I) within approximately 10 years.

Q. How do the line extension policies differ?

A. Northern Utilities, Inc.'s (Northern) line extension policy explicitly states that the DCF methodology will be used to determine the CIAC requirement, if any, to satisfy a 10 payback for C&I customers and a 20 year payback for residential customers.

Liberty's line extension policy uses a revenue test to determine if the customer contribution is required, and if so, the amount. The revenue test for residential customer is estimated annual margin equal or exceed one-eighth of the estimated construction cost, and for a C&I customer estimated annual margin equal or exceed one-sixth of the estimated construction cost. Liberty's line extension policy was approved by Order No. 25,624 issued January 24, 2014 in Docket No. DG 13-198. Although the Liberty line extension policy does not cite a payback period, the implicit payback is similar to Northern's as explained at hearing (DG 13-198 transcript p. 37, lines 9-18, Staff witness Frink): "I would note that the – looking at the residential customers, using the discounted cash flow analysis that Northern currently uses, if they were going to go to a similar test as what we're proposing for Liberty, it would be a seven-year revenue test, as opposed to an eight-year test. So, it's in the ballpark. The expectation is that, under this proposed line extension policy, that the payback will be similar for both Liberty and Northern, that they will be 10 years for C&I and 20 years for residential."

Q. Does the Commission have a preferred methodology for evaluating the financial viability of major capital projects?

A. Yes, the Commission found that the DCF methodology is the appropriate framework in which to evaluate the financial viability of large system expansion projects.[1]

Q. Did Liberty undertake a DCF analysis to evaluate the financial merits of serving Lebanon and Hanover?

A. No. In response to Staff Data Request 3-8 asking Liberty to perform a DCF analysis the Company refused to do so on the grounds that its tariff does not provide for a different analysis for main and service extensions that are not physically connected to the existing distribution system, or that exceed a particular total cost, and that Liberty must adhere to the provisions of its tariff to ensure that customers and potential customers are informed as to the analysis that will be performed when considering taking service from the Company. See ***Attachment SPF-2***.

Q. What financial analysis did Liberty use to justify the Lebanon and Hanover project?

A. Liberty used the revenue test from its line extension policy, which assumes that 60 percent of potential customers along the main will convert to natural gas.

Q. Does Liberty's tariff preclude it from performing a DCF analysis?

A. No. As previously stated, the Commission has found that the DCF methodology is the appropriate methodology to employ when considering major expansions. It is worth noting that even though both natural gas utilities had a line extension policy requiring application of the 25 percent test for line extension requests during their last major expansions, both used the DCF methodology to justify the expansions when petitioning the Commission for approval.

The cost to serve Lebanon and Hanover is large enough to warrant a detailed business

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1. Order No. 22,297 (August 28, 1996) Approving Northern Utilities, Inc. expansion into the towns for Durham and Madbury, New Hampshire. Order No. 22,667 (July 22, 1997) approving EnergyNorth Natural Gas, Inc. expansion into Milford, New Hampshire.

plan and discounted cash flow analysis in determining if Liberty should proceed with the proposed expansion.

Furthermore, since Lebanon and Hanover are outside of Liberty's franchise area the Liberty's tariff does not apply in this instance and Liberty is not required to adhere to the revenue test for its financial analysis of the Lebanon/Hanover expansion.

Q. Why is use the revenue test as prescribed by Liberty's tariff not appropriate when evaluating the financial merits of a major expansion?

A. A revenue test is appropriate for evaluating smaller projects that entail a limited investment and require a customer commitment with financial penalties if the customer(s) requesting service fail to take service within nine months. The revenue test is a simple and straight forward calculation that serves as a proxy for the DCF methodology, intended to roughly satisfy the payback the Commission desires. It is not appropriate for evaluating a large expansion that poses a significant financial risk.

Q. Why should the DCF methodology superior to the revenue test?

A. The DCF methodology is a far better framework than a revenue test for evaluating the efficacy (and hence prudence) of a major capital project for the following reasons: 1) the DCF analysis uses a much longer time horizon (the life of the project); 2) the DCF uses a more inclusive set of revenue and cost variables, encompassing revenue and cost savings, capital costs not covered by customer contributions, and incremental operating costs; and, 3) allows for an apples-to-apples comparison of costs and benefits that occur at different times by discounting the revenue and cost streams at the company's weighted cost of capital to determine the 'present value' of each and the 'net present value' of the project.

Q. Should Liberty be required to undertake a DCF analysis in this proceeding?

A. Yes. Not only is the DCF analysis superior to a simple revenue test, the revenue test may no longer be appropriate for smaller projects given the dramatic drop in oil and propane prices since the Commission approved Liberty's line extension policy (Order No. 25,624 issued January 24, 2014 in Docket No. DG 13-198).

Q. Why is it that the revenue test in Liberty's tariff may no longer be appropriate?

A. Whereas the prior revenue test only included annual margins from customers requesting service, the current revenue test includes anticipated margins from 60 percent of the potential customers along the line that have no commitment to take service but expected to convert to natural gas. The assumptions used in developing the current revenue test were explained at the December 4, 2013 hearing in DG 13-198. The 60 percent conversion rate was based on several factors: a study done in October 2012 (transcript p. 20, lines 14-24); average customer energy saving of 50 to 60 percent when converting from oil to natural gas; (transcript p. 26, lines 1-3); and, an estimated cost of $7 to $12,000 for a customer to convert from an oil heating to a gas heating system (transcript p. 23, lines 21-24).

At that time oil prices were almost double natural gas prices and even then Liberty acknowledged that it would have to actively market those potential customers to achieve the anticipated margins, '…the onus is on the Company to actively market and hook up customers to that gas service' (transcript p. 25, line 23 thru p. 26, line 1). At current prices the financial incentive to convert to natural gas is greatly reduced and even active marketing is unlikely to achieve the expected conversions along a new main.

Q. If the DCF analysis is undertaken and the results satisfy the Commission's investment

criteria, should the Liberty petition be approved?

A. Not necessarily. A clear understanding of the assumptions underlying the revenue and cost streams is vital in the evaluation of the specific application of the DCF methodology. The assumptions underlying the analysis need to be reasonable and should be based on a comprehensive business plan that includes an in-depth analysis and detailed plans for marketing, engineering, operations and finance.

Q. Did Liberty provide a comprehensive business plan in its petition?

A. No. Liberty's filing describes its marketing, engineering, supply and operating plans for serving Lebanon and Hanover but the information contained in the filing and provided in response to discovery does not qualify as a comprehensive business plan.

Comprehensive Business Plan

Q. Was the last major expansion approved by the Commission supported by a comprehensive business plan?

A. Yes. The last major expansion by a natural gas utility in New Hampshire was by EnergyNorth Natural Gas, Inc. (ENGI, a predecessor company of Liberty) into Milford New Hampshire (Docket No. DR 97-057). ENGI's filing included a comprehensive business plan (ENGI plan) that clearly explained the costs and benefits and demonstrated the financial merits of the expansion.

Q. Does Staff consider the ENGI plan to be a comprehensive business plan?

A. Yes. The ENGI plan contained a section for each key area and each section includes detailed analysis, exhibits and a narrative discussion.

Attached is a copy of my working copy of the ENGI plan from that docket, which includes my notes and what was confidential company and customer information at that time. Liberty was provided a copy and reviewed the company information and does not object to disclosing that information at this time. The confidential customer information has been blacked out, which is limited and not relevant to this proceeding, as the ENGI plan is being provided as an example of what constitutes a comprehensive business. See ***Attachment SPF-3***.

Q. Please provide a brief description of the ENGI plan?

A. Along with the Executive Summary and Appendices, the plan includes four major sections covering marketing, operations and engineering and financial plans. The ENGI plan also includes a section on public and community relations.

The marketing plan details the primary expansion 'anchor' customer that informed ENGI that it was going to change its fuel source and its preferred fuel choice was natural gas and an assessment of the other potential customers within the planned compact corridor during the first five years of the planning horizon. ENGI collected supporting demographic data and performed a comprehensive study to determine market potential. Data was collected from numerous sources and included such details as current fuel use of targeted customers and vintage of the housing units (pre-1940 considered prime targets for new heating systems). The marketing section also includes initial and long term marketing action plans.

The operating and engineering plan considered feasible routes and proposed routing to serve Milford, identified the pipeline reinforcements needed to support the expansion, supply requirements for both base load and peaking, and provided detailed cost estimates and timing of the costs.

The financial plan summarized financial goals, described and presented the financial analysis, which included both a base case and sensitivity analysis and covered financing alternatives.

The public and community relations plan describes initial community contacts and post-decision action plans, including meetings with key political and appointed officials at both the local and state levels, and the formation of a five member Milford communications team.

Q. Did the Milford expansion meet the goals set forth in the ENGI plan?

A. The project exceeded its financial target. The Commission required ENGI to track actual project costs and revenues until the project reached its breakeven point, which it did in 1999, three years earlier than the projected breakeven point of 2002 in the Base Case Scenario of the ENGI plan.

Q. Should Liberty prepare a business plan similar to the ENGI plan?

A. Yes. The ENGI plan should be used as a template by Liberty in developing and evaluating the benefits and cost of serving Lebanon and Hanover. A comprehensive business plan in the format of the ENGI plan would be extremely informative and greatly the aid the Commission in determining whether Liberty should be granted its franchise request.

<u>**Financial Viability of the Proposed Expansion**</u>

Q. Does Staff believe the Lebanon/Hanover project will breakeven within 10 years?

A. No. Staff believes actual sales will fall far short of Liberty's projected sales over both the short and intermediate term, resulting in less revenues than Liberty is anticipating and a breakeven point beyond 10 years.

Q. Is there sufficient demand to recoup the cost to serve?

A. That is very much in question. One potential customer, Dartmouth College, dwarfs all others and if a system is built to serve that load and Dartmouth College does not take service that could have an adverse impact on rate payers and/or shareholders. If the system is designed to serve only the potential non-Dartmouth College demand, fixed costs would be spread over lower sales and failure to sign anchor customers. In either instance, Liberty's existing customers may wind up subsidizing the Lebanon/Hanover operations.

Recent developments in the energy market are further exacerbating that risk, as there has been a precipitous drop in oil and propane prices. Potential anchor customers may have entered multi-year contracts to lock in lower prices and potential energy savings from converting to natural gas may not justify the up-front costs of conversion.

Q. How do current oil and natural prices compare?

A. I heat my Manchester home with No. 2 fuel oil and received a delivery on December 28, 2015 priced at $1.92 per gallon. The equivalent delivered natural gas price is $1.53 per therm. The average residential heating customer per them rate for New Hampshire's two natural gas utilities are $1.46 and $1.40 based on rates in effect on November 1, 2015. See ***Attachment SPF-4***.

Q. How do current propane and natural prices compare?

A. A Staff employee recently received a propane delivery priced at $1.99 per gallon. The equivalent delivered natural gas price is $2.41 per therm. The average residential heating customer per them rate for New Hampshire's two natural gas utilities are $1.46 and $1.40 based on rates in effect on November 1, 2015. See ***Attachment SPF-4***.

Q. What are your expectations as to how Liberty's Lebanon/Hanover all-in-rate will compare to current oil and gas prices?

A. Liberty's all-in-rate for Lebanon and Hanover, which includes a Lebanon/Hanover specific COG rate, will almost certainly be higher than those cited above and the oil and propane prices C&I customers are currently paying are most likely lower than cited above. C&I customers converting to natural gas utility service at this time can expect limited, if any, immediate energy savings.

As noted above, New Hampshire's natural gas utilities rates are only slightly above what residential oil customers are currently paying and Liberty's Lebanon/Hanover COG rate is almost certain to be higher than that of Liberty's other natural gas customers. The supply portfolios of New Hampshire's natural gas utilities include natural gas delivered by pipeline to meet base load requirements and LNG to meet peaking requirements. Liberty's supply portfolio is designed to meet total demand requirements at least cost. Lebanon and Hanover do not have access to an interstate natural gas pipeline and Liberty will have to that demand with trucked LNG and/or CNG, possibly supplemented with landfill gas.

The oil and propane prices used in the above price comparison are those being offered residential heating customers in the Manchester and Concord area. C&I customers with significant usage should be able to negotiate much better prices and Lebanon and Hanover are only an hour north by truck.

Q. What other factors besides 'burner tip' price might potential customers take into

account when considering natural gas utility service?

A. Other factors could include: lower emissions that could reduce air permitting fees; reduction in wear and tear on equipment from using a cleaner fuel, which could reduce maintenance costs and extend equipment life; pipeline delivery, thereby eliminating truck deliveries and on-site storage requirements; reliability, both as a base load supply and to back up renewables; and, reduced greenhouse gas emissions compared to other fossil fuels.

It is worth noting that the Dartmouth College energy working group's draft findings include getting off #6 fuel oil by 2016 as part of its efforts to reduce greenhouse gas emissions. See ***Attachment SPF-5***.

Q. Is there a 'demonstrated need' requirement for approval a major expansion?

A. Not per se. Unlike the Federal Energy Regulatory Commission, where approval of a new pipeline is highly contingent upon demonstrated market need as evidenced by long-term contracted customer commitments, there is no such requirement for New Hampshire utilities regarding a major expansion.

The line extension policies for New Hampshire's natural utilities are predicated on having sufficient demand and customer commitment(s) to take service that ensures the investment is recovered over reasonable time period. For major expansions a reasonable timer period is one where the breakeven is achieved within 10 years as determined using a DCF analysis and where an anchor customer has committed to take service.

Q. What would be the consequences if annual demand in Lebanon and Hanover turns out to be significantly below Liberty's sales projections?

A. Liberty's existing customers may wind up subsidizing the Lebanon/Hanover operations and/or the Commission could find that the certain of the certain of the assets are not used and useful and deny recover of the costs associated with those assets when Liberty seeks recovery.

Q. What analysis has been undertaken to determine if Liberty's rates would be fair and reasonable?

A. Liberty calculated a revenue requirement for the first and fifth years of operations using a revenue requirement template provide by Staff based on several scenarios. The scenarios and revenue calculations were provided in the Company's confidential response to Staff Data Requests 3-9. The revenue requirement is based on expected rate base, revenue, expense and rate of return. The data response also includes the number of customers, billed sales and average per therm rate by customer class. Because the information is confidential and Staff's recommendations are not dependent on that information, the Company's data response is not attached to my testimony. Staff will request the response be entered as a confidential exhibit at hearing.

Q. Are the assumptions used in the Liberty's rate analysis reasonable?

A. Projected demand does not appear to be reasonable based on current energy prices. Converting customers to natural gas at this time will be challenging, especially large C&I customers that may have multiyear contracts with current suppliers and for which the projected energy savings from converting may not satisfy the return on investment that would incent large C&I customers to convert.

Q. Can a customer contract for utility service with Liberty prior to franchise approval?

A. Yes, there is nothing to prevent Liberty from entering an agreement with potential customers, agreements would be subject to Commission approval of the franchise request, tariffs and, if the terms of service differed from the approved tariff, approval of the special contract.

Q. What are the financial risks if the Commission were to approve the Liberty petition at this time?

A. Capital and operating costs are largely dependent on serving a specific load, without a reasonable assurance targeted customers will take service the supply facilities and distribution system may be over or under built which could impact rates, for both the Lebanon/Hanover and existing customers. To some extent customers are protected through the rate process, as cost recovery will be addressed in a future proceeding and Liberty will carry the burden of proof in its rate filing that the investments were prudent and used and useful. Even with that protection, existing ratepayers could be harmed if Liberty were denied recovery of a substantial portion of its investment from utility customers that resulted in a higher cost of capital.

There is also the risk that a rates and services to be provided by Liberty may be less favorable that what Lebanon and Hanover ratepayers might see if the franchise were granted to another entity.

Q. Do you see any other risks in approving the petition?

A. Liberty would hold exclusive rights to the franchise territory and could delay the provision of utility service indefinitely, denying potential customers the possibility of obtaining utility service at an earlier date, or at all, from a competing entity.

Q. Are there advantages in approving Liberty's petition at this time?

A. Yes. Liberty will have the legal authority to provide utility service which could make it easier to attain customer commitments and residences and business in Lebanon and Hanover desiring utility gas service will have no other option.

Q. What kind of contract would demonstrate customer commitment?

A. A signed contract between Liberty and a customer that requires a financial commitment from the customer, such as a deposit, CIAC or a special contract with must take provisions. If it is a special contract, Liberty would have to demonstrate that the terms of the contract cover Liberty's marginal and embedded costs to serve the customer.

Q. What level of customer commitments does Staff recommend for Commission approval?

A. Expected margins from customer commitments should be sufficient to demonstrate the project is economically feasible. Given the limited price advantage, if any, of natural gas utility service with current oil and propane prices, customer commitments will need to be significant to demonstrate economic feasibility. How significant depends on the strength of the supporting business plan, a strong business plan that provides a reasonable assurance that the sales targets will be met reduces the level of customer commitments needed to demonstrate economic feasibility. In this instance, Staff recommends estimated margins from customer commitments meet or exceed fifty percent of the required margins necessary to achieve a ten year payback.

Conclusion and Recommendation

Q. Are Liberty's assumptions used in its financial analysis reasonable?

A. No, projected sales appear to be far too optimistic given the limited energy savings, if any, that customers might realize from converting to natural gas at this time. The assumptions Liberty used in developing its sales projections lack sufficient supporting data, as Liberty did not provide a comprehensive business plan targeting a narrow corridor and taking into account such things as the fuel type currently in use and age of the heating systems.

Q. Are Liberty's design, construction and financing plans reasonable?

A. Absent a reliable sales forecast, Staff is not in a position to render an opinion as to whether the design, construction and financing plans are reasonable.

Q. Is Liberty's financial analysis adequate?

A. No, in addition to the questionable sale projections, Liberty applied a simple revenue test to determine that the project satisfies the Commission's financial criteria for expansion. Due to the significant investment needed to serve the proposed franchise area, the DCF methodology is the appropriate financial tool to be used in evaluating the costs and benefits of this project.

Q. What is Staff recommendation regarding Liberty's petition?

A. The Commission should deny the petition at this time and suspend the proceeding to allow Liberty to conduct and file a comprehensive business plan, a discounted cash flow analysis using updated sales and cost data from the business plan, and attain customer commitments as evidenced by written agreements that satisfy at least 50 percent of the projected revenue requirement.

Q. Does that conclude your testimony?

A. Yes.