REDACTED

STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

Docket No. DG 14-___

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

Petition for Approval of Firm Transportation Agreement

STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

Docket No. DG 14-__

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

Approval of Tennessee Gas Pipeline Company, LLC Precedent Agreement

PREFILED TESTIMONY

OF

FRANCISCO C. DAFONTE

December 31, 2014

I. INTRODUCTION

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

A. My name is Francisco C. DaFonte. My business address is 15 Buttrick Road, Londonderry, New Hampshire 03053. I am employed by Liberty Energy Utilities (New Hampshire) Corp. as Vice President, Energy Procurement, and in that capacity, providing energy procurement services to Liberty Utilities (EnergyNorth Natural Gas) Corp. ("EnergyNorth" or the "Company").

Q. Please summarize your educational background, and your business and professional experience.

A. I attended the University of Massachusetts at Amherst where I majored in Mathematics with a concentration in Computer Science. In the summer of 1985 I was hired by Commonwealth Gas Company (now NSTAR Gas Company), where I was employed primarily as a supervisor in gas dispatch and gas supply planning for nine years. In 1994, I joined Bay State Gas Company (now Columbia Gas of Massachusetts) where I held various positions including Director of Gas Control and Director of Energy Supply Services. At the end of October 2011, I was hired as the Director of Energy Procurement by Liberty Energy Utilities (New Hampshire) Corp. and promoted to Sr. Director in July 2013 and Vice President in July 2014. In this capacity, I provide gas procurement services to EnergyNorth.

Q. Are you a member of any professional organizations?

A. Yes. I am a member of the Northeast Energy & Commerce Association, the American Gas Association, the National Energy Services Association and the New England Canada Business Council.

Q. Have you previously testified in regulatory proceedings?

A. Yes, I have testified in a number of proceedings before the New Hampshire Public Utilities Commission ("Commission"), the Massachusetts Department of Public Utilities, the Maine Public Utilities Commission, the Indiana Utility Regulatory Commission, the Missouri Public Service Commission, the Georgia Public Service Commission and the Federal Energy Regulatory Commission.

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

A. EnergyNorth recently entered into a Precedent Agreement ("PA") with Tennessee Gas Pipeline Company, LLC ("TGP" or "Tennessee"), which provides EnergyNorth with firm transportation capacity on Tennessee's proposed Northeast Energy Direct ("NED") Market Path project. This capacity will enable EnergyNorth to reliably and economically satisfy existing and future customer load requirements.

The purpose of my testimony is to present to the Commission factual evidence that supports EnergyNorth's contracting decision and facilitates the Commission's review of this decision. As such, I will review the circumstances that led to EnergyNorth's need to acquire the firm transportation capacity, the decision-making process that resulted in the selection of this resource and the benefits to EnergyNorth's customers.

Accordingly, in this proceeding, EnergyNorth seeks Commission approval of its resource decision and acquisition reflected in the PA.

Q. Please summarize the principal facts that support the Company's entry into the PA.

A. The principal facts are as follows:

(1) **EnergyNorth needs this long-term firm transportation capacity resource to reliably satisfy existing and future customer load requirements in its service area.**

EnergyNorth determined in its most recent Least Cost Integrated Resource Plan ("IRP"), presented to the Commission in Docket No. DG 13-313, that it would require long term incremental and replacement resources to satisfy growing customer demand. Since the filing of the IRP, EnergyNorth has updated its long-term demand forecast which continues to show a significant resource deficiency over the 24-year forecast period. The Company has determined that the NED project provides the most reliable and least cost means of satisfying its firm customer demand over that time horizon. The additional capacity from the NED project replaces the Company's existing market area capacity at Dracut while also satisfying its long-term growth needs.

(2) **EnergyNorth conducted a comprehensive analysis of all capacity options available before entering into the PA.**

EnergyNorth applied its Commission-approved resource planning process including cost and non-cost factors to determine the "best cost" capacity option for EnergyNorth's customers.

(3) **EnergyNorth's acquisition of the TGP capacity provides increased reliability of service to its customers and creates opportunities for the possible expansion of the Company's distribution system.**

With the exception of its Berlin service territory, EnergyNorth has always been served exclusively by Tennessee's Concord Lateral. The NED project will provide a secondary feed from the west into EnergyNorth's distribution system which will enhance reliability in the event of a restriction on the Concord Lateral. In addition, the proposed route of the NED project will traverse an existing electric transmission corridor running through communities that have no access to natural gas today which provides opportunities for potential natural gas expansion where none existed previously.

Q. How is the remainder of your testimony organized?

A. My testimony is organized into four additional sections following this Introduction. In Section II, I describe the conditions that led to EnergyNorth's need for capacity to reliably satisfy the requirements of its customers. In Section III, I describe the terms of the PA for which EnergyNorth is requesting Commission approval. In Section IV, I summarize EnergyNorth's resource planning process and portfolio objectives. Lastly, in Section V, I explain the decision-making process used by EnergyNorth to select the best alternatives available in today's marketplace and the associated results of this process that led to the Company's decision.

II. DESCRIPTION OF THE NEED FOR THE TGP CAPACITY

Q. Please describe the demand forecast process used to determine the firm gas requirements for EnergyNorth's customers.

A. Consistent with the forecast methodology presented in its most recent IRP in Docket No. DG 13-313, the Company developed its customer requirements forecast from econometric models of its customer billing data. This data is available by month and by rate class. One of the goals of the Company's modeling exercise is to translate the Company's monthly forecast of billed sales data (which are lagged in time due to the Company's monthly billing cycle schedule) into a forecast of unlagged daily resource requirements at the Company's city gate interconnects with the upstream pipeline where it receives natural gas deliveries.. This translation involves accounting for Company use and unbilled volumes each calendar month, quantifying unaccounted-for gas, and allocating these monthly volumes to daily volumes. The Company models its resources and requirements on a daily basis with its SENDOUT® linear programming software modeling package, and hence it needs as input a forecast of daily customer requirements. In addition to these daily customer requirements, the Company must calculate the design day customer requirements as all incremental capacity resource decisions are driven by the Company's design day needs. This design day planning standard is based on a Monte Carlo statistical analysis. Consistent with its most recent IRP filing, the Company defined a design day at 71 heating degree days.

In this instance, the Company developed a 24-year demand forecast in order to determine any supply shortfall on both a short-term and long-term basis. The short-term encompasses the 4-year period commencing with the 2014-2015 winter period and runs through the 2017-2018 winter period. The long-term period encompasses the 20-year period commencing with the 2018-2019 winter period, when the NED project is scheduled to go into service, and runs through the 2037-2038 winter period. The 20-year forecast beginning in 2018 is necessary in order to compare the range of alternatives on an equal footing as the length of the TGP contract extends for twenty years.

Q. What factors, if any, have impacted the demand forecast since the Company's IRP filing in Docket No. DG 13-313?

A. The Company's demand forecast used in DG 13-313 was conducted in early 2013. Since the IRP filing in DG 13-313, the Company has finalized and received Commission approval for a special contract in DG 14-091with iNATGAS for a new CNG facility to be constructed in Concord. Under the special contract, which has a 15 year term, the iNATGAS facility will take natural gas directly off of EnergyNorth's distribution system and the gas will then be compressed for delivery by trailer to remote customers who currently do not have access to natural gas. The facility is expected to ramp up production and use as much as 8,800 Dth per day of natural gas by 2020 and continue at that level throughout the forecast period. This would make iNATGAS EnergyNorth's second largest customer surpassed only by the Granite Ridge power plant in Londonderry. The facility is on target to commence operations on or about March 31, 2015.

Another factor affecting the Company's design day need is the trend of "grandfathered' or "capacity-exempt" customers returning to EnergyNorth's sales service in order to become eligible for a slice of EnergyNorth's resource portfolio. This reverse migration trend has been spurred by the lack of sufficient pipeline capacity into the New England region and the corresponding high market area gas prices that customers are now facing. By returning to utility sales service and becoming eligible for a slice of the utility resource portfolio, these customers would now have sufficient capacity to meet their design day needs and also benefit from a diversified supply portfolio that has access to reliable and low cost Marcellus, Gulf Coast and Canadian supplies. The Company has already experienced an approximate 13% return (1,758 Dth per day) of its nearly 14,000 Dth per day Capacity-Exempt customer load to sales service over the last twelve months. It is very difficult to project with any certainty what the returning Capacity-Exempt load will be over the forecast period given the many factors influencing a customer's decision to return including market prices, weather and the nature of their contracts with competitive suppliers. For that reason, the Company is conservatively projecting that the return of Capacity-Exempt customer load will be relatively flat over the forecast period, growing by less than 1,000 Dth per day on design day. Should the trend of returning Capacity-Exempt customers continue as it has over the previous twelve months, the Company will update its forecast to reflect the need to plan for these returning customers.

Q. Please describe the results of the Company's updated demand forecast.

A. As discussed previously, the Company must determine the design day needs of its customers based on a 71 heating degree day, and then must ensure that it has the resources to reliably meet those needs. The Company has determined the design day for the 24-year period beginning in 2015 which is set forth below in Table I. (It is assumed for modeling purposes that the design day will occur on January 19 of each year.) Table I compares the design day forecast in DG 13-313 (referred to as "Design Day IRP" below) to the updated forecast presented in this filing ("Design Day Updated"), which is then further adjusted to reflect the iNATGAS requirements and the projected returning capacity-exempt customers, resulting in the Total Updated Design Day.

Table I

Year	Design Day IRP	Design Day Updated	Capacity Exempt	iNATGAS	Total Updated Design Day
2014/15	146,630	145,184	1,784	0	146,968
2015/16	149,433	147,379	1,811	3,965	153,155
2016/17	153,799	149,581	1,839	5,619	157,039
2017/18	157,380	152,205	1,871	6,611	160,686
2018/19	160,740	154,823	1,903	7,800	164,526
2019/20	163,085	158,030	1,942	7,800	167,773
2020/21	165,466	160,457	1,972	8,800	171,229
2021/22	167,881	163,280	2,007	8,800	174,088
2022/23	170,331	166,010	2,040	8,800	176,851
2023/24	172,817	168,913	2,076	8,800	179,790
2024/25	175,339	171,513	2,108	8,800	182,421
2025/26	177,898	173,831	2,137	8,800	184,768
2026/27	180,494	176,327	2,167	8,800	187,295
2027/28	183,129	178,945	2,199	8,800	189,944
2028/29	185,802	181,312	2,229	8,800	192,341
2029/30	188,513	183,792	2,259	8,800	194,851
2030/31	191,265	186,790	2,296	8,800	197,886
2031/32	194,056	189,480	2,329	8,800	200,609
2032/33	196,889	192,203	2,362	8,800	203,366
2033/34	199,762	195,040	2,397	8,800	206,238
2034/35	202,678	197,957	2,433	8,800	209,190
2034/36	205,636	200,832	2,468	8,800	212,101
2036/37	208,638	203,489	2,501	8,800	214,790
2037/38	211,683	206,184	2,534	8,800	217,519

As shown in Table I, the Design Day IRP forecast is slightly higher than the Design Day Updated forecast before the adjustments for iNATGAS and returning capacity-exempt customers. This reflects the most recent econometric data and results in a slightly lower overall growth rate when taking into account the continued decline in use per customer attributable to implementation of current energy efficiency targets. In addition, the Company has not made any adjustments for an increased growth rate that may be attributable to future distribution system expansion opportunities including the expansion of natural gas service to Keene and surrounding communities. The Capacity-Exempt volumes represent the design day volume attributable to those customers that have returned to sales service as of December 1, 2014 and reflect only a slight annual increase in returning volumes. The Capacity-Exempt volume in 2014-2015 represents approximately 13% of all Capacity-Exempt load on design day. The iNATGAS volume is shown ramping up to its maximum capacity in 2020/21 and remaining constant thereafter.

Q. Please describe the current resource portfolio.

A. The Company currently holds firm transportation contracts on Tennessee Gas Pipeline (106,833 Dth/day) and Portland Natural Gas Transmission (1,000 Dth/day) to provide a daily deliverability of 107,833 Dth/day to its city gate stations. These contracts provide delivery of natural gas from three sources.

First, the Company holds firm transportation contracts to allow for delivery of up to 8,122 Dth/day of Canadian supply. These consist of the following:

- The Company can receive up to 4,000 Dth/day of firm Canadian supply from Dawn, Ontario. This supply is delivered to the Company on

Company-held firm transportation contracts on Union Gas Limited, TransCanada PipeLines Limited, Iroquois Gas Transmission System, and Tennessee.

- The Company can receive up to 3,122 Dth/day of firm Canadian supply from the Canadian/New York border at Niagara Falls, NY. This supply is delivered to the Company on Company-held firm transportation contracts on Tennessee.
- The Company can receive up to 1,000 Dth/day of firm Canadian supply from a Company-held firm transportation contract on Portland Natural Gas Transmission System for delivery to its Berlin service territory.

Second, the Company holds the following firm transportation contracts to allow for delivery of up to 71,596 Dth/day of domestic supply from the producing and market areas within the United States.

- The Company can receive up to 21,596 Dth/day of firm domestic supplies from Texas and Louisiana production areas. These supplies are delivered to the Company on firm transportation contracts on Tennessee.
- The Company can receive up to 50,000 Dth/day of firm supply from Tennessee's Dracut receipt point located in Dracut, Massachusetts. This supply is delivered to the Company on two firm transportation contracts on Tennessee.

Third, the Company holds the following firm transportation contracts to allow for delivery of up to 28,115 Dth/day of domestic supply from underground storage fields in the New York/Pennsylvania area or the purchase of flowing supply in or downstream of Tennessee Zones 4 and 5.

- The Company can receive up to 19,076 Dth/day of firm domestic supplies from its Tennessee FS-MA storage contract. This contract allows for a storage inventory capacity of 1,560,391 Dth. These supplies are delivered to the Company on firm transportation contracts on Tennessee.
- The Company can receive up to 9,039 Dth/day of firm domestic supplies from its storage contracts with National Fuel Gas Supply Corporation, Honeoye Storage Corporation and Dominion Transmission, Inc. In aggregate, these contracts allow for a storage inventory capacity of 1,019,740 Dth. These supplies are delivered to the Company on a firm transportation contract on Tennessee.

In addition to the pipeline capacity described above, the Company owns three LNG vaporization facilities in Concord, Manchester and Tilton that have a combined design vaporization rate of approximately 22,800 Dth/day but are limited operationally to a combined workable storage capacity of approximately 12,600 Dth.

Additionally, the Company owns four propane facilities in Amherst, Manchester, Nashua and Tilton that have a combined design vaporization rate of approximately 34,600 Dth/day and a combined workable storage capacity of approximately 128,516 Dth.

Q. How does the demand forecast compare with the Company's current resources?

A. Table II below provides a design day comparison of the Company's current resource portfolio and the updated design day demand forecast provided previously in Table I.

Table II

Year	Design Day Resources	Design Day Demand	Reserve/(Deficiency)
2014/15	155,033	146,968	8,065
2015/16	155,033	153,155	1,878
2016/17	155,033	157,039	-2,006
2017/18	155,033	160,686	-5,653
2018/19	155,033	164,526	-9,493
2019/20	155,033	167,773	-12,740
2020/21	155,033	171,229	-16,196
2021/22	155,033	174,088	-19,055
2022/23	155,033	176,851	-21,818
2023/24	155,033	179,790	-24,757
2024/25	155,033	182,421	-27,388
2025/26	155,033	184,768	-29,735
2026/27	155,033	187,295	-32,262
2027/28	155,033	189,944	-34,911
2028/29	155,033	192,341	-37,308
2029/30	155,033	194,851	-39,818
2030/31	155,033	197,886	-42,853

Year	Design Day Resources	Design Day Demand	Reserve/(Deficiency)
2031/32	155,033	200,609	-45,576
2032/33	155,033	203,366	-48,333
2033/34	155,033	206,238	-51,205
2034/35	155,033	209,190	-54,157
2034/36	155,033	212,101	-57,068
2036/37	155,033	214,790	-59,757
2037/38	155,033	217,519	-62,486

As shown in Table II above, EnergyNorth reaches a deficiency in resources as compared to its design day firm customer needs as early as the winter of 2016/17.

Q. How will the addition of the Tennessee capacity impact the resource imbalance?

A. The TGP PA will provide EnergyNorth with 115,000 Dth per day of capacity on the NED project; 50,000 Dth per day of which will replace EnergyNorth's existing capacity from Dracut to its city gates on the Concord Lateral. The remaining 65,000 Dth per day will increase EnergyNorth's design day resources to 220,669 Dth in 2018/19 and fully offset the resource deficiency as shown in Table III below.

Table III

Year	Design Day Resources w/NED	Design Day Demand	Reserve/(Deficiency)
2014/15	155,033	146,968	8,065
2015/16	155,033	153,155	1,878
2016/17	155,033	157,039	-2,006
2017/18	155,033	160,686	-5,653
2018/19	155,033	164,526	55,507
2019/20	220,033	167,773	52,260
2020/21	220,033	171,229	48,804
2021/22	220,033	174,088	45,945
2022/23	220,033	176,851	43,182
2023/24	220,033	179,790	40,243
2024/25	220,033	182,421	37,612
2025/26	220,033	184,768	35,265
2026/27	220,033	187,295	32,738
2027/28	220,033	189,944	30,089
2028/29	220,033	192,341	27,692
2029/30	220,033	194,851	25,182
2030/31	220,033	197,886	22,147
2031/32	220,033	200,609	19,424
2032/33	220,033	203,366	16,667
2033/34	220,033	206,238	13,795
2034/35	220,033	209,190	10,843
2034/36	220,033	212,101	7,932
2036/37	220,033	214,790	5,243
2037/38	220,033	217,519	2,514

Q. Please describe how the Company will manage any shortfall or reserve capacity as shown in Table III.

A. Prior to the anticipated late 2018 in-service date of the NED project, the Company is projected to have a capacity deficiency in 2016/17 and 2017/18. In the summer of 2016, if there is still a capacity deficiency forecasted for the upcoming winter, the Company will obtain a short-term peaking service at its city gate or via LNG delivery to satisfy the then-anticipated supply shortfall. With regard to the reserve capacity that is inherent with any new long-term capacity commitment, the Company will continue its efforts to mitigate the cost of underutilized capacity as it does today through various resource optimization strategies including asset management agreements, capacity releases and off-system sales. In addition, the Company intends to review the feasibility of maintaining its propane facilities in lieu of other market alternatives that may exist at the time the NED project goes into service. Currently, EnergyNorth has three propane facilities that vaporize propane directly into its distributions system in Manchester, Nashua and Tilton. These facilities provide 21,600 Dth, 11,000 Dth and 2,000 Dth of design day vaporization capacity, respectively. Without the 34,600 Dth of vaporization capacity from these facilities, EnergyNorth would reach a design day deficiency within nine years of the in-service date of the NED project. While EnergyNorth's propane facilities are more than fifty years old and must be carefully maintained, they do allow for some flexibility in managing any reserve or deficiency that may arise as a result of any deviations from the Company's projected design day demand forecast. In addition, these facilities would provide the Company with negotiating leverage in future capacity and supply projects and to manage changing market conditions. Depending on the condition of the facilities and the market dynamics at the time, a combination of the facilities could be "mothballed" in order to reduce any reserve capacity at some point in the future.

III. DESCRIPTION OF THE TGP PA

Q. Please describe the process undertaken by the Company in negotiating the various terms and conditions within the PA?

A. The terms and conditions of the PA were negotiated within the context of a broad consortium of New England Local Distribution Companies (LDCs). The LDCs included those operating in each New England state other than Vermont and together made up the anchor shippers on the NED project. This consortium approach allowed the LDCs to leverage their aggregate capacity commitment in the NED project to negotiate a deeply discounted anchor shipper rate as well as other key terms and conditions discussed later in my testimony. Because of this approach, the terms and conditions for each individual PA are nearly identical for each utility with some minor exceptions such as the delivery points, which are unique to each company, and individual company administrative information.

Q. Please describe the service that EnergyNorth will receive from the TGP PA as well as the key terms of the PA.

A. The TGP PA will provide EnergyNorth with up to 115,000 Dth per day of capacity with a primary receipt point at Wright, NY and primary delivery points off of the Concord Lateral at the Nashua, Manchester and Laconia city gates and a primary delivery point at a new interconnect off of the NED mainline at or near West Nashua commencing on or about November 1, 2018 and continuing for a primary term of twenty years

The new city gate off of the NED mainline [redacted] with EnergyNorth installing approximately 6,000 feet of 12 inch pipe at a cost of approximately $2.3 million to tie in to the new interconnect. Currently, the entire EnergyNorth system in southern New Hampshire is served exclusively off of the Concord Lateral. This new interconnect will provide a secondary feed on the west side of the distribution system which will enhance reliability and allow for more economic future system expansion. A map depicting the proposed route of the NED is included as Attachment FCD-1. The map shows the initially proposed route in green along with the initially proposed West Nashua lateral in yellow. The new power line alternative is shown in purple and would no longer include the West Nashua lateral since the NED mainline would now provide EnergyNorth with a secondary feed from the west. The power line alternative route has been filed with the FERC as Tennessee’s preferred route in its Resource Report 1 filing.

If the TGP PA is approved by the Commission, EnergyNorth will enter into a Market Path Firm Agreement. The form of that agreement is included in

CONFIDENTIAL Attachment FCD-2. Under the Market Path Firm Agreement, the Company would be required to pay a negotiated monthly reservation rate of [redacted] for this capacity. This rate [redacted] basis). The transportation commodity charge associated with supply deliveries on this capacity contract will be [redacted] In addition, EnergyNorth [redacted] Schedule.

The complete terms of the TGP PA are set forth in CONFIDENTIAL Attachment FCD-2. A redacted version is included as Attachment FCD-3.

Q. Are EnergyNorth customers protected in the event that the Commission does not approve EnergyNorth's proposal in this proceeding?

A. Yes. The TGP PA provides for a "regulatory out" if the Commission does not issue a final approval of the PA by July 1, 2015. The conditions precedent to the PA's effectiveness require that EnergyNorth use commercially reasonable efforts to obtain Commission approval on or before July 1, 2015. Should the Company not receive Commission approval it must provide notice to TGP by July 15, 2015 and may terminate the agreement by providing notice to TGP by July 31, 2015.

Q. Are there any additional terms in the PA that mitigate cost risks typically associated with new pipeline projects?

A. Yes. If the Commission approves the PA [redacted] In addition, the Company and its customers are protected [redacted] described in Appendix A to the Negotiated Rate Agreement [redacted]

[redacted] the Negotiated Rate Agreement. [redacted] during the twenty year term of the firm transportation agreement with Tennessee.

Q. Please describe the Conditions Precedent for Tennessee.

A. Tennessee must receive its Board of Directors approval, if required, by January 21, 2015 with notice to the Shippers by February 4, 2015 and the right to terminate the PA by February 11, 2015 if Board of Directors approval is not received. Should Tennessee provide a notice of termination, the Company will evaluate other alternative capacity and/or supply options available in the market at that time.

Additionally, if total approved Shipper volumes are below a volume deemed necessary by Tennessee to move forward with the project, Tennessee can terminate the PA with notice to the Shippers by August 15, 2015.

Also, if Tennessee does not receive all acceptable federal, state and local authorizations, it may terminate the PA within thirty days of the event giving rise to the termination right. Further, Tennessee can terminate the PA for economic reasons prior to receiving all authorizations but no later than their acceptance of the FERC certificate of public convenience and necessity

Q. Please highlight any additional important terms of the PA.

A. As a condition specific to EnergyNorth and its customers, Tennessee will [redacted] assuming EnergyNorth's purchase under the PA is approved by the Commission and the project is built. [redacted] contract number 72694 for 30,000 Dth per day at a rate of $0.40 per Dth and contract number 42076 for 20,000 Dth per day at a rate of $0.16 per Dth. These capacity contracts currently have termination dates on November 1, 2029 and November 1, 2020, respectively. Further, these contracts only access supplies at Dracut, which has proven to be one of the highest priced purchase points in the country over the past few years due to a lack of supply at that point.

As an additional condition of the PA, EnergyNorth and all other Anchor Shippers can [redacted]

[redacted] and ultimately to EnergyNorth's customers through the NED project, and thus is a critical path for this PA to be successful. The Constitution project has received all of its FERC permits and is expected to be in-service by November 1, 2017. Further, Tennessee is proposing a new Supply Path project and Constitution is planning an expansion of its FERC approved project that would bring even more Marcellus supplies to Wright, NY. The Company is in the process of evaluating the Tennessee and Constitution expansion projects as a way to directly access Marcellus supplies in the production area where it would have access to many more producers.

As an Anchor Shipper, [redacted] Additionally, [redacted]

Q. Please identify key milestones for the NED project.

A. The key milestones for this project are provided below.

Action	Timing
TGP Outreach Meetings	Ongoing
TGP Route Selection and Permit Preparation	Ongoing
TGP Agency Consultations	Ongoing
TGP Submitted FERC Pre-Filing Letter	Sept. 15, 2014
TGP Filed Amended Resource Report 1	Dec. 8, 2014
TGP Board of Directors Approval	Jan. 21, 2015
EnergyNorth Termination if Commission Does Not Approve PA	Jul. 1, 2015
TGP Termination if Shipper Volumes Not Sufficient	Aug. 15, 2015
TGP FERC Filing	4th Quarter 2015
TGP Anticipated FERC Approval	4th Quarter 2016
TGP Proposed Start of Construction Activity	Jan. 2017
[redacted]	[redacted]

Q. How will EnergyNorth meet the projected increase in demand if the Tennessee project is not completed?

A. Should the NED project not get built, the Company will consider other available capacity alternatives in the marketplace at the time a decision to not construct the

NED project is finalized. Those capacity alternatives would include the C2C and Atlantic Bridge projects should they still be viable at that time.

IV. ENERGYNORTH'S RESOURCE PLANNING PROCESS AND OBJECTIVES

Q. Please describe EnergyNorth's overall resource portfolio goals and objectives.

A. The primary goal of EnergyNorth's planning process is to acquire and manage viable resources in a manner that achieves a best-cost resource portfolio for its customers. A best-cost portfolio appropriately balances lower costs with other important non-cost criteria such as reliability and flexibility. Pursuit of a best-cost portfolio allows EnergyNorth to provide its customers with reliable service at a reasonable cost.

The Company's overall portfolio goal is supported by a number of specific resource planning objectives, which are summarized as follows:

(1) Reduce portfolio costs;

(2) Maintain portfolio reliability (which includes enhancing diversity across pipelines and supply basins);

(3) Provide flexibility; and

(4) Acquire viable resources.

EnergyNorth's resource planning process builds on these objectives, by employing industry-accepted analytical tools, assessing methods to perform long-range planning and evaluating the individual resource decisions it must make. These tools and methods ensure that the planning process is thorough, and that it remains objective in its pursuit of a best-cost portfolio.

Q. What are the specific elements of EnergyNorth's resource planning process?

A. EnergyNorth's planning process begins with an assessment of customer requirements based on up-to-date load forecasts. The primary criteria that drive EnergyNorth's load requirements are weather-related. Resource adequacy is then measured against EnergyNorth's load requirements under design conditions.

The second element of EnergyNorth's planning process is resource evaluation. EnergyNorth's resource evaluation encompasses a number of techniques that comprise a thorough evaluation process. Resource evaluation begins with a determination of resource need. Determination of need is accomplished by comparing design day demand with design day resources and by simulating the dispatch of EnergyNorth's portfolio utilizing the SENDOUT® optimization model against forecast load requirements. If there is a resource need, EnergyNorth identifies potential resources to meet its load requirements, including the renewal or restructuring of existing resources as well as potential new pipeline, storage, citygate and on-system resources. In selecting the best resource EnergyNorth assesses both the cost and non-cost characteristics of potential resources.

Regarding cost evaluation, when multiple viable alternatives exist, a sophisticated cost analysis is performed utilizing SENDOUT®. SENDOUT® evaluates the cost impact of changes to EnergyNorth's portfolio by simulating the daily dispatch of available resources under specified conditions. SENDOUT® also possesses the capability to determine a least-cost incremental resource or package of resources based on the total cost impact upon the existing portfolio. Potential alternatives are ranked according to SENDOUT® results.

Regarding the non-cost evaluation of alternative resources, when multiple viable alternatives exist, EnergyNorth analyzes each alternative's reliability, flexibility and viability, which take on varying degrees of importance depending on the type of resource decision being made and anticipated market conditions.

All portfolio alternatives are scored using a consistent grading approach on a scale of 100 total points. The price of each resource is evaluated using the SENDOUT® model and with a maximum score equal to 30 points. Supply security is scored according to two separate components related to reliability and portfolio diversity set at a maximum of 30 and 5 points, respectively. Contract flexibility is scored according to the alternative's nomination flexibility, any minimum take requirements, ability to access storage, etc., and is typically assigned a maximum of 20 points. Lastly, supplier viability is scored according to the financial integrity of the entity and is usually awarded a maximum of 15 points.

V. ENERGYNORTH'S DECISION MAKING PROCESS AND RESULTS

Q. Please describe the array of resource options that were available to meet EnergyNorth's need for incremental capacity.

A. In addition to the NED project, EnergyNorth identified two other pipeline projects that could satisfy all or a portion of its design day capacity needs: Spectra's Atlantic Bridge project and TransCanada/PNGTS's C2C project.

The Atlantic Bridge project involves the expansion of the existing Algonquin Gas Transmission system such that gas would flow from west to east via the Hudson Valley in NY, through southern CT and southern MA and then north into Spectra's Hubline system onto Spectra's Maritimes and Northeast Pipeline ("M&NE") system and ultimately to Dracut, MA where their facilities interconnect with Tennessee's existing pipeline system. Pricing was [redacted] per Dth per day and delivery was solely to the Dracut, MA interconnect with Tennessee. EnergyNorth could transport 50,000 Dth per day of an equivalent 115,000 Dth per day of supply from Dracut using its existing Dracut capacity with a blended cost of approximately $0.30 per Dth per day. However, in order to effectuate incremental deliveries of the remaining 65,000 Dth on the Concord Lateral, [redacted]

The C2C project is a joint undertaking of PNGTS and its parent TransCanada. PNGTS offered a proposal utilizing much of their existing capacity which runs from the Canadian/NH border south and east to Portland, ME where it is jointly shares a pipeline with M&NE to the Dracut interconnect with Tennessee. PNGTS's proposal would include an expansion of TransCanada facilities north of the border and bring supply from Wright, NY north to Canada via Iroquois Gas Transmission and the across to the PNGTS border interconnect on TransCanada. [redacted]

Wright, NY delivered to Dracut, MA, but suffered from the same limitations in that all the supply lands in Dracut and [redacted]

In addition to the higher demand costs of the Atlantic Bridge and C2C projects, neither project provides the added reliability of the NED project which will provide a new interconnect feeding the west end of EnergyNorth's distributions system. This new feed will provide EnergyNorth and its customers with a secondary supply option that has not existed previously as all of its current supplies must flow through the existing Tennessee mainline and up the Concord lateral. Additionally, the NED pipeline project's latest proposed route will traverse existing electric transmission right of ways cutting through southern NH where homes and businesses have never had access to natural gas service. EnergyNorth sees this as an opportunity to possibly expand economic and clean natural gas service to more NH residents.

Q. What analyses were performed by EnergyNorth prior to selecting the NED project as the desired alternative?

A. Consistent with its resource planning process, EnergyNorth performed a combination of cost and non-cost evaluations of the three pipeline project alternatives. EnergyNorth utilized SENDOUT® to model the cost impact of each alternative to identify the optimum resource or resources to meet projected requirements. In addition, EnergyNorth evaluated the reliability, flexibility and viability characteristics of each option.

Q. Please describe the results of the SENDOUT® analyses.

A. EnergyNorth performed detailed cost simulations using SENDOUT® over a twenty-four year period beginning November 1, 2014 for each alternative. A twenty-four year period was utilized because the pipeline projects would be in-service between 2017 and 2018 and the contracts would extend for up to twenty years from the in-service date. Due to the assumed in-service date of November 1, 2018, SENDOUT® was used to calculate the total portfolio cost over the twenty-year period from November 1, 2018 through October 31, 2038 for each project. That is, the SENDOUT® model was run under three scenarios: the first with the NED project as the incremental resource; the second with Atlantic Bridge plus an expansion of the Concord lateral; and the third with C2C plus an expansion of the Concord lateral. In this way, all three projects could be compared on an equal footing over the twenty-year period.

The SENDOUT® analyses demonstrate that the NED project is the most cost-effective resource and contributes to a least-cost portfolio. Specifically, Table IV below shows the total portfolio costs of each resource over the twenty-year period beginning November 1, 2018.

Table IV

Year	**NED ($000's)**	**Atlantic Bridge ($000's)**	**C2C ($000's)**
2018/19	$159,192	$194,176	$186,086
2019/20	$165,270	$200,087	$192,141
2020/21	$168,867	$203,596	$195,730
2021/22	$172,973	$207,608	$199,824
2022/23	$176,818	$211,353	$203,659
2023/24	$181,162	$215,565	$207,994
2024/25	$183,182	$217,525	$210,013
2025/26	$185,688	$219,948	$212,518
2026/27	$188,250	$222,424	$215,080
2027/28	$191,753	$225,812	$218,579
2028/29	$193,607	$227,602	$220,436
2029/30	$196,309	$230,214	$223,139
2030/31	$199,175	$232,985	$226,008
2031/32	$203,003	$236,695	$229,837
2032/33	$205,067	$238,687	$231,905
2033/34	$208,168	$241,692	$235,016
2034/35	$211,374	$244,796	$238,229
2034/36	$215,589	$248,888	$242,450
2036/37	$217,731	$250,961	$244,599
2037/38	$220,865	$253,994	$247,724
TOTAL	**$3,844,043**	**$4,524,607**	**$4,380,965**

As shown in Table IV above, the SENDOUT® run with the NED capacity is approximately $537 million less over twenty years than the next best option which is the SENDOUT® run with the C2C capacity.

Attachment FCD-4 provides the total portfolio costs and dispatch details for each year of SENDOUT® scenario for the NED project. Attachment FCD-5 provides the total portfolio costs and dispatch details for each year of SENDOUT® scenario for the C2C project and Attachment FCD-6 provides the total portfolio costs and dispatch details for each year of SENDOUT® scenario for the Atlantic Bridge project. Each report provides a total portfolio cost which corresponds with the total portfolio costs shown for each year in Table IV above. This number can be found on the first page of each year's report as the "Total Gas Cost" and is shown in $000's. The 20-year cost summary is provided on the last three pages of each report.

Q. Please describe EnergyNorth's non-cost resource evaluation.

A. In the case of these pipeline projects, reliability includes such factors as project access to liquid supply points, delivery point capabilities and protections against curtailment situations. Flexibility includes such factors as nomination flexibility and access to storage. Viability includes such factors as financial integrity and pipeline reputation.

Q. What are the results of EnergyNorth's non-cost evaluation?

A. The reliability, flexibility and viability of each alternative is shown in Table V below.

Table V

Project	**Reliability (35 Points)**	**Flexibility (20 Points)**	**Viability (15 Points)**	**TOTAL**
NED	35	20	15	70
Atlantic Bridge	33	19	15	67
C2C	33	19	15	67

The non-cost scoring demonstrates that the projects all offer reliable and flexible service and are being developed by extremely viable entities. In fact, these entities are considered the most capable pipeline developers and operators in North America. For that reason all projects received the maximum score for viability. The NED alternative scored slightly higher in reliability because of its proposed route that will provide a new high pressure feed into the west side of EnergyNorth's distribution system. Neither of the other two options can provide this same reliability benefit. In terms of flexibility, once again the NED project scores slightly higher than the others due to the flexibility Tennessee offers in allowing for the roll in of the NED project into Tennessee's existing system for the purposes of nomination flexibility. That is, there are no additional nominations required on the NED portion of Tennessee's system should EnergyNorth desire to flow existing EnergyNorth transportation contracts on the new project as it is all considered a single integrated Tennessee system.

Q. What conclusions do you draw from EnergyNorth's cost and non-cost evaluations of available resources?

A. The NED project is clearly the superior alternative available to EnergyNorth at the present time. From a cost perspective, NED is far superior to the alternatives based on EnergyNorth's SENDOUT® analyses. From a non-cost perspective, NED offers greater reliability and flexibility. On a relative basis, NED achieves the highest possible score on both cost and non-cost metrics.

Q. Is the acquisition of the NED capacity consistent with EnergyNorth's portfolio objectives?

A. Yes. The NED capacity contributes to and is consistent with the Company's goal of developing a best-cost resource portfolio.

Q. Does the NED project compare favorably with other viable alternatives?

A. Yes. The TGP capacity offers cost savings and important reliability and flexibility benefits to EnergyNorth's customers that are superior to the other projects.

EnergyNorth's selection of the NED capacity represents the best alternative in the market place and therefore must be considered the best cost option for inclusion in EnergyNorth's portfolio.

Q. Please summarize your recommendations.

A. As explained throughout my testimony, EnergyNorth has entered into the PA with Tennessee in order to acquire both replacement and incremental capacity because it represents the best cost alternative for meeting the supply and capacity requirements of EnergyNorth's customers.

Q. Is the Company seeking approval of the PA by the Commission by a certain date?

A. Yes. The Company needs an order from the Commission that is final as of July 1, 2015.

Q. Does this conclude your testimony?

A. Yes, it does.

VI. Attachments

FCD-1 NED Project Map

FCD-2 EnergyNorth PA with TGP – Confidential and Redacted

FCD-3 NED SENDOUT® Run

FCD-4 C2C SENDOUT® Run

FCD-5 Atlantic Bridge SENDOUT® Run