

**STATE OF NEW HAMPSHIRE  
BEFORE THE  
PUBLIC UTILITIES COMMISSION**

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EnergyNorth Natural Gas, Inc. d/b/a KeySpan )  
Energy Delivery New England )

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DG 07-\_\_

**DIRECT TESTIMONY OF**

**Elizabeth D. Arangio**

**ON BEHALF OF**

**ENERGY NORTH NATURAL GAS, INC. d/b/a  
KEYSPAN ENERGY DELIVERY NEW ENGLAND**

September 14, 2007

1     **I.     INTRODUCTION**

2     **Q.     Please state your name and business address.**

3     A.     My name is Elizabeth D. Arangio. My business address is 52 Second Avenue,  
4            Waltham, MA 02451.

5     **Q.     What is your position with KeySpan Energy Delivery New England?**

6     A.     I am the Director of Gas Supply Planning with responsibility for the resource portfolio  
7            of the local gas distribution companies ("LDC's") that operate as KeySpan Energy  
8            Delivery New England, which are Boston Gas Company ("Boston Gas"), Colonial Gas  
9            Company ("Colonial"), Essex Gas Company ("Essex"), and EnergyNorth Natural Gas,  
10           Inc. ("EnergyNorth"). In addition to New England, I am responsible for gas supply  
11           planning for the resource portfolios of The Brooklyn Union Gas Company d/b/a  
12           KeySpan Energy Delivery New York and KeySpan Gas East Corporation d/b/a  
13           KeySpan Energy Delivery Long Island. I also oversee the Company's customer-choice  
14           programs in both New England and New York. For purposes of this testimony,  
15           references to "KeySpan" or the "Company" will relate solely to EnergyNorth.

16    **Q.     Please summarize your educational background and professional experience.**

17    A.     I graduated from the University of Massachusetts in 1991 with a Bachelor of  
18            Business Administration. In 1995, I graduated from Bentley College with a Master of  
19            Business Administration. From 1991 to 1994, I worked as a Gas Accounting Analyst  
20            in the Marketing Operations Department at Algonquin Gas Transmission Company.

1 In 1994, I joined Boston Gas Company as a Gas Supply Analyst. In 1997, I was  
2 promoted to Group Leader Transportation Services, with responsibility for managing  
3 all activities associated with the customer-choice program. In 1998, I was promoted  
4 to Director of Gas Acquisition and Transportation Services with responsibility for the  
5 administration of the Company's gas-resource portfolio and customer-choice program  
6 in Massachusetts and, as of 2000 the acquisition of EnergyNorth located in, New  
7 Hampshire. In February 2004, I assumed the additional responsibility of gas supply  
8 planning for the resource portfolios of The Brooklyn Union Gas Company d/b/a  
9 KeySpan Energy Delivery New York and KeySpan Gas East Corporation d/b/a  
10 KeySpan Energy Delivery Long Island. In 2005, I assumed responsibility for the  
11 customer-choice programs in Massachusetts, New Hampshire, New York and Long  
12 Island.

13 **Q. Are you a member of any professional organizations?**

14 A. Yes. I am a member of the Northeast Gas Association and the New England Canada  
15 Business Council.

16 **Q. Have you previously testified in regulatory proceedings?**

17 A. Yes. I have testified in support of a number of proposals and filings submitted by  
18 KeySpan in relation to the New Hampshire and Massachusetts resource portfolios.  
19 Most recently, these matters include KeySpan Energy Delivery New England, DG  
20 04-133 (2005) (New Hampshire Integrated Resource Plan filing); KeySpan Energy  
21 Delivery New England, DG 03-160 (2004) (winter cost of gas, including investigation

into gas dispatch); KeySpan Energy Delivery New England, D.T.E. 05-35 (2006) (request for approval of firm transportation contract with Tennessee Gas Pipeline Company); KeySpan Energy Delivery New England, D.T.E. 05-68 (long-range resource and requirements plan for the period 2005/06 through 2009/10); KeySpan Energy Delivery New England, D.T.E. 05-8 (2005) (request for approval of contract renewals with Distrigas of Massachusetts LLC). I also expect to testify on the Integrated Resource Plan currently pending before the New Hampshire Public Utilities Commission ("Commission") in Docket DG 06-105.

**Q. What is the Company proposing in this filing?**

A. In this filing, the Company is requesting approval of a 20-year firm transportation contract (the "Proposed Agreement") with Tennessee Gas Pipeline Company ("Tennessee" or "TGP"), which would provide the Company with up to 30,000 MMBtu/day of incremental pipeline capacity commencing November 1, 2009. If approved by the Commission, the Proposed Agreement would require TGP to complete a comprehensive upgrade of the Concord lateral pipeline serving the Company's distribution system in New Hampshire in order to make the incremental capacity available (the "Concord Lateral Upgrade").

In support of its request for approval of the Proposed Agreement, the Company is submitting herewith pre-filed testimony and other supporting documentation to demonstrate that the proposed arrangement: (1) is needed to meet the portfolio objectives established in the Company's most recent Integrated Resource Plan

1 (“IRP”), and (2) compares favorably to the range of alternatives reasonably available  
2 to the Company and its customers to meet that need.

3 **Q. How is the Company’s filing organized?**

4 A. In this filing, the Company is submitting the pre-filed testimony of four witnesses to  
5 demonstrate that the Commission’s approval of the Proposed Agreement is necessary  
6 to ensure the reliable delivery of gas supplies and is therefore in the public interest.

7 First, the Company is presenting my testimony, which is intended to accomplish three  
8 objectives: (1) to describe the proposed arrangement with Tennessee; (2) to provide  
9 an overview of the analysis undertaken by the Company to reach a determination that  
10 the Proposed Agreement is needed and is the least-cost alternative from an economic  
11 perspective, and (3) to provide an overview of the analysis undertaken by the  
12 Company to determine that the Proposed Agreement compares favorably to the range  
13 of alternatives reasonably available to the Company and its customers, based on price  
14 and non-price factors.

15 Second, the Company is presenting the testimony of Mr. Theodore E. Poe, Manager  
16 of Energy Planning, who demonstrates the need for the Proposed Agreement and  
17 presents an analysis to confirm that addition of the Proposed Contract to the portfolio  
18 is: (1) the least-cost alternative from an economic perspective under a range of  
19 pricing and demand scenarios, and (2) consistent with the portfolio objectives set  
20 forth in the Company’s IRP for the forecast period November 2006 through October

1 31, 2011. The Company's IRP is currently pending before the Commission in  
2 KeySpan Energy Delivery New England, DG 06-105.

3 Third, the Company is presenting the testimony of Mr. John Stavrakas, Director of  
4 Engineering, who has analyzed the on-system alternatives available to the Company  
5 to meet the identified need and has estimated the cost of those alternatives to enable a  
6 comparison with the Proposed Agreement.

7 Fourth, the Company is presenting the testimony of Mr. Paul M. DeRosa, Lead  
8 Pricing Analyst for KeySpan, who has calculated the annualized costs of the on-  
9 system alternatives to the Concord Lateral Upgrade in order to enable a comparison  
10 of the Proposed Agreement to the cost of reasonably available alternatives.

11 **II. OVERVIEW OF THE PROPOSED ARRANGEMENT**

12 **Q. From an overall perspective, what is motivating the Company's proposal to**  
13 **enter into this arrangement with Tennessee?**

14 **A.** KeySpan has an obligation to take the steps necessary to ensure safe and reliable  
15 delivery of gas services to New Hampshire customers. To that end, KeySpan is  
16 requesting approval of the Proposed Agreement with Tennessee because the Company  
17 has a need for incremental firm interstate pipeline capacity on a peak day and peak  
18 season basis in order to meet forecasted customer demand consistent with the  
19 Company's IRP. Specifically, the "Base Case Design Day Forecast" submitted by the  
20 Company in DG 06-105 shows a *minimum* need for incremental peak day delivery

1 capability totaling 5,310 MMBtus/day on the peak day beginning in 2009/10, increasing  
2 to 19,660 MMBtus/day by 2010/11. In addition, the analysis shows a *minimum* need for  
3 incremental peak-season supply totaling 53,300 MMBtu beginning in 2008/09,  
4 increasing to 128,000 MMBtus/day by 2010/11.

5 From a practical perspective, there are just two options available to provide this level of  
6 incremental capacity (and associated gas supply) to the Company's New Hampshire  
7 service territory, which are (1) the expansion of existing interstate pipeline facilities, or  
8 (2) the expansion of new on-system supplemental storage and vaporization facilities.  
9 No other options exist that could provide the level of resources required to meet  
10 customer demand over the next 10 years, nor that would interconnect directly with the  
11 Company's New Hampshire distribution system on a safe and reliable basis.

12 In terms of the first option, Tennessee's Concord Lateral is the sole interstate pipeline  
13 facility serving the Company's New Hampshire distribution system and is currently  
14 fully subscribed. Upgrading the Concord Lateral would create incremental capacity  
15 that could be used by KeySpan to transport gas supplies from Dracut, Massachusetts,  
16 where Tennessee interconnects with both the Maritimes & Northeast Pipeline and  
17 Portland Natural Gas Transmission System, to the Company's New Hampshire city  
18 gates. With incremental transportation capacity available at the receipt point in  
19 Dracut, MA, the Company would have the ability to purchase gas supply at that point  
20 from a number of sources including upstream suppliers or suppliers offering delivered

1 service at the Dracut receipt point. As a result, the Proposed Agreement would be  
2 beneficial in terms of increasing the reliability and diversity of supply within the  
3 Company's overall resource portfolio.

4 **Q. Would you please review the basic business terms of the proposed arrangement**  
5 **with Tennessee?**

6 A. Yes. Under the Proposed Agreement, Tennessee would provide firm transportation  
7 services to KeySpan from a primary receipt point in Dracut, MA, to a primary delivery  
8 point in Laconia, NH. The maximum daily transportation quantity ("MDTQ") of the  
9 Proposed Agreement would provide the Company with up to 30,000 MMBtu/day on a  
10 peak-day and peak-season basis for a term extending from November 1, 2009 through  
11 October 31, 2029. Service will be provided at a negotiated, fixed rate for the 20-year  
12 term of the Proposed Agreement.

13 To facilitate this arrangement, Tennessee would need to complete the Concord Lateral  
14 Upgrade, which will involve construction of a new mid-point compressor station and  
15 expansion of its existing meter station to accommodate the incremental volumes eligible  
16 for transport under the Proposed Agreement.

17 **Q. What are the annual demand charges associated with the Proposed Agreement?**

18 A. The annual demand charges are set forth in Exhibit EDA-1, along with the Precedent  
19 Agreement and a draft copy of the final firm transportation contract that the Company  
20 would proposed to enter into with Tennessee if the Commission's approval is  
21 forthcoming in this docket. It is important to note that the negotiated rate is a function of



1 the underlying cost of completing the Concord Lateral Upgrade. The capital cost of the  
2 Concord Lateral Upgrade will be incurred whether the Company procures a minimum  
3 amount of 19,000 MMBtus/day to meet the forecasted peak day need in 2010/11, or  
4 whether the Company procures an amount up to the contract threshold of 30,000  
5 MMBtus/day. As a result, the total contract cost is the same regardless of the number of  
6 units purchased by the Company between the minimum-needed quantity of 19,000 and  
7 the contract quantity of 30,000 MMBtus/day; the only difference is in the cost per unit to  
8 be paid by the Company in accordance with the contract. Accordingly, the Company  
9 entered into a contract for the maximum capacity available from Tennessee given its  
10 investment made to complete the Concord Lateral Upgrade (which was 30,000  
11 MMBtus/day). If the Company had contracted for additional capacity, Tennessee would  
12 have increased the total cost of the contract.

13 **Q. What is the purpose of the Precedent Agreement and when will the Company**  
14 **execute the final firm-transportation contract?**

15 A. KeySpan and Tennessee executed the Precedent Agreement set forth in Exhibit  
16 EDA-1, on August 29, 2007. The Precedent Agreement outlines the proposed  
17 arrangement between KeySpan and Tennessee and is intended to memorialize that  
18 arrangement until such time that the final, firm transportation agreement is executed.  
19 The Precedent Agreement will be replaced by a firm-transportation contract prior to  
20 the in-service date of November 1, 2009, and the principal terms of that contract will  
21 not differ in any material respect from the Precedent Agreement. The Precedent

Agreement is necessary because Tennessee must make certain commitments to obtain approval to construct the Concord Lateral Upgrade and it needed to formalize its arrangements with KeySpan while those efforts were pending.

### **III. OVERVIEW OF ANALYTICAL FRAMEWORK**

**Q. What is the analytical framework that the Company undertakes to identify a capacity need and then to address that need?**

A. Consistent with the Commission's precedent and directives and the Company's obligation to serve, the Company has put in place a comprehensive process to (1) forecast and analyze customer-load requirements, and (2) ensure that adequate resources are available to meet those load requirements on a reliable and least-cost basis. The Company's analysis of both forecasted load requirements and available resources is presented to and reviewed by the Commission in the IRP. On a periodic basis, the Company reexamines these results to confirm that the projections and conclusions set forth therein comport with actual experience so that reliable service to customers is maintained. Accordingly, the Company identifies the "need" for incremental transportation capacity or other resources through the IRP process.

Once the need to procure incremental capacity is identified, the Company commences a process to identify the universe of feasible alternatives for meeting that need. Once the universe of potential alternatives is identified, the Company analyzes the price and non-price factors associated with each resource to assess the relative merits or drawbacks of each alternative. The Company will procure the resources that best

1 meet the identified need and that represent a reliable, least-cost alternative for doing  
2 so.

3 **Q. Did the Company follow this process in reaching its determination that the**  
4 **Proposed Agreement was the best alternative for meeting the identified need?**

5 A. Yes. The Company followed the process set forth above to identify and evaluate  
6 alternatives for meeting the identified need, and as a result, determined that the  
7 Proposed Agreement is the most reliable, least-cost resource available. The specific  
8 analyses undertaken by the Company are as follows:

9 First, the IRP currently pending before the Commission in DG 06-105 demonstrates a  
10 *minimum* need for incremental peak day delivery capability totaling 5,310 MMBtus/day  
11 on the peak day beginning in 2009/10, increasing to 19,660 MMBtus/day by 2010/11.  
12 In addition, the analysis shows a *minimum* need for incremental peak-season supply  
13 totaling 53,300 MMBtu beginning in 2008/09, increasing to 128,000 MMBtus/day by  
14 2010/11. This analysis was prepared by Mr. Poe and is discussed in the testimony he  
15 is presenting in this proceeding.

16 Based on this need, the Company commenced a process to identify and assess its  
17 available resource alternatives. However, given the configuration of the interstate  
18 pipeline system serving New Hampshire, the Company's alternatives for meeting the  
19 identified need were restricted to: (1) the upgrade of existing interstate pipeline  
20 facilities so that incremental capacity would become available, or (2) the expansion of  
21 new on-system supplemental storage and vaporization facilities. No other options exist

1 that could provide the level of resources required to meet forecasted customer demand  
2 over the Company's long-term planning horizon, or that would interconnect directly  
3 with the Company's New Hampshire distribution system on a safe and reliable basis.  
4 Therefore, it was necessary for the Company to develop a framework for comparing the  
5 relative price and non-price attributes of a *pipeline project* that would expand the  
6 capacity available to serve KeySpan's New Hampshire service territory versus a  
7 *distribution project* that would add on-system storage and vaporization capabilities.

8 The Company approached this task by first developing an assessment of the type and  
9 size of on-system facilities that would be needed to meet the identified need. To that  
10 end, the Company determined that there were two potential on-system alternatives that  
11 would provide an additional 25,000 MMBtu/day of deliverability into the distribution  
12 system. These alternatives are: (1) constructing new LNG facilities at the Company's  
13 existing LNG facility in Concord, NH to add 0.3 Bcf (300,000 MMBtus) of storage  
14 capability (the "LNG Project Alternative"); and (2) constructing new and/or expanded  
15 propane facilities in both the Company's existing LNG site in Concord and a new site in  
16 Nashua, NH in order to add 0.15 Bcf of storage capability at each of those facilities (the  
17 "Propane Project Alternative"). Both the LNG and Propane Project Alternatives would  
18 be designed to ensure 25,000 MMBtus/day of incremental vaporization output  
19 capability.<sup>1</sup>

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<sup>1</sup> The exact volume of the Propane Project Alternative is 25,200 MMBtu/day.

1       The Company also evaluated the potential for demand-side management strategies to  
2       reduce forecasted load and eliminate the need for new or expanded facilities. This  
3       analysis is discussed in the testimony of Mr. Poe.

4       The Company then developed cost projections for each of these alternatives so that a  
5       comparison of these alternatives to the Concord Lateral Upgrade could be performed.  
6       The cost projections were prepared by KeySpan's engineering group, under the direction  
7       and supervision of Mr. Stavrakas and the results are discussed in his testimony in this  
8       proceeding.

9       Because the cost of the Concord Lateral Upgrade would be recovered through the  
10      annual demand charges associated with a new pipeline contract for the incremental  
11      capacity of 30,000 MMBtu/day, the Company next calculated the annualized costs of  
12      the on-system alternatives developed by Mr. Stavrakas so that those costs could be  
13      compared on an "apples-to-apples" basis with the annualized demand charges for a new  
14      pipeline contract. For the reasons discussed in the testimony of Mr. Stavrakas, the  
15      analysis was performed assuming in incremental output of 25,000 MMBtus per day,  
16      because this is the largest on-system capability that could be added without a costly  
17      distribution upgrade. Because the annual cost of the Proposed Agreement is the same at  
18      25,000 MMBtus/day and 30,000 MMBtus/day (as discussed above), this approach  
19      allowed the Company to perform a comparability study assuming 25,000 MMBtus/day

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1 of available incremental deliverability. The annualized cost estimates for the on-system  
2 alternatives were prepared by Mr. DeRosa *exclusive of supply costs*, as discussed in his  
3 testimony in this proceeding.

4 Lastly, the Company developed a linear programming model (the “LP Model”) designed  
5 to identify the most cost-effective resource addition, inclusive of commodity supply  
6 costs. This allowed the Company to determine whether the resource gap existing in the  
7 portfolio would be met most economically using the Concord Lateral Upgrade option or  
8 the on-system options over a range of demand and pricing scenarios. This modeling  
9 routine was developed by the Company to provide a transparent, straightforward  
10 evaluation of the economic dispatch of the portfolio to ensure that the least-cost  
11 alternative is identified on an objective basis. The results of the Company’s analysis  
12 using the LP Model demonstrates that the Concord Lateral Upgrade is a more cost-  
13 effective alternative for meeting the identified need for incremental capacity than the on-  
14 system project alternatives. This analysis and the results are discussed in the testimony  
15 of Mr. Poe in this proceeding.

16 In addition to analyzing the relative cost-effectiveness of the potential project  
17 alternatives using the LP Model, the Company evaluated the alternatives on non-price  
18 factors. This analysis is discussed in my testimony below.

#### 19 IV. COMPARISON OF RESOURCE ALTERNATIVES

1   **Q.    Would you describe the overall structure of the Company's existing resource**  
2   **portfolio?**

3   **A.    Yes. The Company meets design-year and design-day sendout requirements through**  
4       a combination of: (1) domestic transportation capacity and underground-storage  
5       contracts; (2) Canadian transportation capacity contracts; (3) supplemental resources  
6       such as on-system LNG and propane facilities; and (4) other market-area purchases  
7       and short-term procurements delivered to the Company's citygates over the peak  
8       season (referred to as "Other Purchased Resources").

9       In terms of transportation capacity, the Company holds entitlements to 77,833  
10      MMBtus/day of primary firm capacity from the producing and market areas within  
11      the United States and Canada, as well as the underground storage fields in  
12      Pennsylvania and New York.

13   **Q.    Would you describe the source of gas supplies delivered via these transportation**  
14   **contracts?**

15   **A.    The Company obtains its gas supplies from three primary production areas. The**  
16       Canadian capacity contracts are used to transport firm supplies from both western  
17       Canadian provinces (Alberta) and eastern Canadian provinces (Sable Island offshore  
18       of Nova Scotia). In addition, the Company's domestic capacity contracts are used to  
19       transport gas supplies purchased in the producing regions and market-area regions in  
20       the United States upstream of the Company's city gates to the Company's distribution  
21       system.

1   **Q.   Are there any additional sources of gas supply currently included in the**  
2   **Company's resource portfolio.**

3   **A.**   Yes, the Company relies on four additional sources of gas supply.  Currently, the  
4   Company has a contract with Semptra that provides firm supply of up to 8,000  
5   MMBtu/day and up to 1,208,000 MMBtu/year.  This supply is delivered to the  
6   Company's city gate stations as firm delivered service and is available year round.  
7   Second, the Company has a supply sharing agreement with Granite Ridge Energy,  
8   LLC (formerly owned by AES) to provide firm supply of up to 15,000 MMBtu/day  
9   and up to 450,000 MMBtu /year.  This contract is available to the Company during  
10  the peak period months of December, January, and February only and is not available  
11  in the off-peak period.  Third, the Company relies on the availability of supplemental  
12  resources such as liquefied natural gas ("LNG") and propane.  The Company  
13  maintains contracts with Distrigas of Massachusetts LLC ("Distrigas") to ensure the  
14  availability of LNG.  Through these contracts, the Company has access to LNG in  
15  liquid form.  LNG in its liquid form is delivered to the Company's LNG storage  
16  facilities by truck.  The Company owns and operates three LNG storage and  
17  vaporization facilities and four propane storage and vaporization facilities, which are  
18  strategically located throughout the Company's service territory.

19   Lastly, the Company meets its seasonal gas-supply needs with "Other Purchased  
20  Resources," which are short-term arrangements and market-area purchases that the  
21  Company enters into to achieve a higher utilization of existing portfolio resources and



1 to conserve storage and on-system supplemental resources during the winter period.  
2 The Company uses these resources to help meet peak season gas-supply needs when  
3 cost-effective, but it does not rely on these arrangements to meet peak day city gate  
4 deliverability requirements.

5 **Q. What were the project alternatives considered by the Company in meeting the**  
6 **identified need?**

7 A. The details of the alternatives analysis conducted by the Company are discussed in  
8 the testimony of Mr. Poe and Mr. Stavrakas. The alternatives identified therein result  
9 from the reality that there are restricted options to deliver additional gas supplies to  
10 the New Hampshire system. These options are limited to: (1) transport by interstate  
11 pipeline using the Concord Lateral that runs from the Tennessee pipeline system in  
12 Dracut Massachusetts to the Company's take station in Laconia; (2) transport of LNG  
13 by truck for vaporization at the Company's LNG facility in Concord, NH or  
14 (3) transport of propane by truck for vaporization at the Company's propane facilities.

15 To determine whether any other options could be possible, the Company met with  
16 both Portland Natural Gas Transmission System and Maritimes and Northeast  
17 Pipelines LLC to informally discuss the option of a direct connect to the Company's  
18 distribution system. Following these discussions, the Company concluded that there  
19 were no viable pipeline projects available other than an upgrade of the Concord  
20 Lateral. The Company then evaluated the capacity of its existing LNG and propane  
21 facilities and determined that the existing facilities, as currently configured, were not

capable of meeting the forecasted load requirements. Therefore, if those facilities were to be utilized to meet the incremental need, significant expansions would need to be completed. Lastly, the Company reviewed its existing energy efficiency programs to determine what if any impact customer conservation would have on its forecasted need.

As explained above, each of the resulting four options was evaluated based on price and non-price factors. The pricing analysis is set forth in the testimony of Mr. Stavrakas, Mr. DeRosa and Mr. Poe. Based on the considerations discussed therein, the Company concluded that the price terms associated with the Proposed Agreement weigh in the favor of the Concord Lateral Upgrade in terms of ensuring the deliverability and reliability of gas supplies to New Hampshire in a least-cost fashion over time.

**Q. What are the non-cost factors that the Company considered in evaluating each resource alternative?**

**A.** When considering new gas supply resources, the Company generally evaluates the reliability, flexibility and diversity that the resource would add (or subtract) from the overall resource portfolio. These qualitative factors are described as follows:

- (1) "Reliability" refers to the ability of the Company to obtain and dispatch a portfolio of resources sufficient to meet the needs of its customers when called upon, more specifically the anticipated availability of the resource, especially under peak-day and peak season conditions;
- (2) "Flexibility" refers to the Company's ability to manage resources in response to daily, monthly and seasonal fluctuations in demand and supply so that reliability is maintained and cost is minimized; and

1  
2 (3) "Diversity" refers to the extent to which the portfolio design minimizes risk  
3 by allocating the risk of non-delivery over numerous supply resources with  
4 diverse characteristics. In addition, diversity of supplies is important in  
5 providing a level of flexibility to the management of the portfolio.

6 The Company also assesses a prospective resource based on its knowledge of the  
7 industry, which is gained through direct and frequent contact with the interstate pipelines  
8 serving the Company's system (directly or indirectly), through active involvement in  
9 proceedings conducted by the FERC, through participation in various industry trade  
10 associations and training seminars, and through consultation with other local distribution  
11 companies in the Northeast.

12 Lastly, the Company considers the timing of contract expirations within the resource  
13 portfolio, which has a potential impact on the reliability of the portfolio as a whole. For  
14 example, to the extent that the terms of contracts are staggered, the Company can avoid  
15 the risks associated with the termination of a large proportion of its resource portfolio  
16 within a short period of time. The length of the contract period, the in-service date, and  
17 the year-round or seasonal nature of the resource are also significant, and the correlation  
18 of these factors to a particular capacity need is incorporated into the selection process.

19 **Q. What did the Company's analysis of alternatives in this case show with respect**  
20 **to non-cost factors?**

21 **A.** There are several non-cost factors that weighed heavily in favor of the Company's  
22 decision to enter into this arrangement with Tennessee. These factors are  
23 summarized as follows:

- 1       ▪ The Proposed Agreement provides for primary firm delivery of incremental  
2       capacity to the region, which will enhance the overall reliability of the regional  
3       infrastructure over the long term;
- 4       ▪ The Proposed Agreement provides the Company with the opportunity to  
5       participate in new supply projects coming to the region, including off-shore LNG,  
6       which would result from the ability to transport supplies from the Dracut receipt  
7       point;
- 8       ▪ The Proposed Agreement will reduce the amount of supplemental capacity the  
9       Company must maintain during the winter season to comply with the  
10      Commission's 7-day storage requirement;
- 11      ▪ The availability of incremental 365-day pipeline supply will allow the Company  
12      to offset higher priced LNG winter-refill purchases in the early years of the  
13      Proposed Agreement, thereby reducing the total cost of the portfolio to customers.

14  
15      In addition, there are several non-price factors that weighed against the expansion of on-  
16      system facilities to meet the identified need, which are:

- 17      ▪ The use of on-system facilities to meet the incremental need would require a  
18      steep increase in the amount of trucking necessary to transport LNG or propane  
19      to the Company's facilities in the winter heating period, which presents safety  
20      and reliability concerns not implicated in the Concord Lateral Upgrade option.
- 21      ▪ There is a greater likelihood for operational contingencies to occur with the use  
22      of on-system facilities to meet the identified need than there is with a pipeline  
23      facility. The use of propane air involves specific considerations relating to the  
24      need to mix those supplies with adequate pipeline supplies to preclude harm to  
25      customer appliances.
- 26      ▪ The expansion of on-system facilities raises significant siting and permitting  
27      issues, which would not be implicated with the Concord Lateral Upgrade.
- 28      ▪ The expansion of on-system facilities raises issues relating to safety and security  
29      that are not implicated with the Concord Lateral Upgrade.

30      Based on these considerations, the Company concluded that the non-price factors  
31      associated with the Proposed Agreement weigh in the favor of the Concord Lateral

1 Upgrade in terms of ensuring the deliverability and reliability of gas supplies to New  
2 Hampshire.

3 **Q. Does this conclude your direct prefiled testimony in this proceeding?**

4 A. Yes. For the reasons discussed above, and in the testimonies submitted in this  
5 proceeding, the Company has identified the Concord Lateral Upgrade as the most  
6 cost-effective, safe and reliable alternative for meeting the resource needs of New  
7 Hampshire customers.

### PRECEDENT AGREEMENT

This Precedent Agreement ("Agreement") is made and entered into effective as of the 29 day of August, 2007 by and between TENNESSEE GAS PIPELINE COMPANY, a Delaware corporation, herein called "Transporter," and Energy North Natural Gas, Inc. d/b/a KeySpan Energy Delivery New England, a New Hampshire corporation, herein called "Shipper."

**WHEREAS**, Transporter owns and operates an interstate natural gas transmission pipeline system that extends in a northeasterly direction from the gas supply area in Texas, Louisiana, and the offshore Gulf of Mexico; through the States of Texas, Louisiana, Arkansas, Mississippi, Alabama, Tennessee, Kentucky, West Virginia, Ohio, Pennsylvania, New York, New Jersey, Massachusetts, New Hampshire, Rhode Island, and Connecticut ("Transporter's System"); and

**WHEREAS**, on February 15, 2007, Transporter initiated an open season for additional firm transportation service from the interconnection of Tennessee's system with the Maritimes and Northeast Pipeline system at Dracut, Massachusetts ("Dracut Interconnect") to delivery points on Transporter's Concord Lateral ("Concord Open Season") in connection with the proposed Concord Lateral Expansion Project (the "Project"); and

**WHEREAS**, Shipper participated in Transporter's Concord Open Season for additional firm capacity and requested Transporter to provide it long-term firm natural gas transportation service; and

**WHEREAS**, Shipper acknowledges that the rendition by Transporter of the firm natural gas transportation service requested by Shipper may require Transporter to construct certain facilities (the "Project Facilities") on Transporter's System.

**NOW, THEREFORE**, in consideration of the mutual covenants and agreements contained herein, Transporter and Shipper agree as follows:



1. Transporter agrees, subject to the satisfaction of the conditions set forth herein, to construct the necessary Project Facilities to render firm transportation service for Shipper at the applicable rate selected by Shipper below and pursuant to a firm transportation agreement ("Firm Agreement") between Transporter and Shipper, which Firm Agreement shall be in a form substantially similar to Exhibit A hereto.

2. Subject to the terms and conditions of this Agreement, Transporter and Shipper agree to execute and deliver the Firm Agreement, in accordance with the provisions of Section 11 of this Agreement, pursuant to which Transporter shall transport and deliver for Shipper on a firm basis up to 30,000 dekatherms ("Dth") of natural gas per day. Service thereunder shall commence on the latter of November 1, 2009, or the date on which Transporter is able to render service to Shipper under the Project (the "Commencement Date"), for a primary term ending twenty years from the Commencement Date, from the receipt point as specified in Section 3 below ("Receipt Point") to the delivery point as specified in Section 3 below ("Delivery Point").

3. The Receipt Point shall be Dracut, Massachusetts; meter #12538. The Delivery Point shall be Laconia, New Hampshire ; meter #20426.

4. Transporter shall have the right to reduce the transportation quantity specified in Section 2 above if that reduction is necessary, in Transporter's sole discretion, to render the overall Project or any applicable portion of the Project economic. Transporter shall have the right to either terminate this Agreement or reduce the transportation quantity specified in Section 2 if, in Transporter's sole discretion, such termination or reduction is necessary to comply with any Federal Energy Regulatory Commission ("FERC") regulation, requirement, directive, or order, or with Transporter's FERC Gas Tariff.

5. Upon execution of this Agreement, Shipper must select one of the following rate options:

X

Shipper selects for the primary term of the Firm Agreement the negotiated rate for its service as reflected in Exhibit B hereto.

\_\_\_\_\_

Shipper selects the recourse rate for its service, which shall be the applicable rate, surcharges, and fuel and loss percentage under Transporter's Rate Schedule FT-A, as may be revised from time-to-time.

6. Shipper shall use reasonable efforts to obtain before October 1, 2007, the approval of its executive management and board of directors to execute the Firm Agreement pursuant to the terms of this Agreement. Shipper shall have the right, upon thirty days prior written notice provided to Transporter no later than October 1, 2007, to terminate this Agreement if Shipper's executive management or board of directors does not approve the execution of the Firm Agreement pursuant to the terms of this Agreement.

7. Transporter shall use reasonable efforts to obtain before October 26, 2007, the approval of its executive management and board of directors for the construction of the Project Facilities and the execution of the Firm Agreement pursuant to the terms of this Agreement. Transporter shall have the right, upon thirty days prior written notice provided to Shipper no later than October 26, 2007, to terminate this Agreement if Transporter's executive management or board of directors does not approve the construction of the Project Facilities and the execution of the Firm Agreement pursuant to the terms of this Agreement.

8. If Shipper or Transporter exercises the right to terminate this Agreement pursuant to Section 6 or 7, respectively, the parties shall attempt in good faith to negotiate within the thirty day period an amendment to this Agreement to accomplish the business objectives of this Agreement in light of such executive management's or board of



directors' disapproval. This Agreement shall terminate upon the expiration of the foregoing thirty day period unless within such period (a) both parties' respective executive management and board of directors provide the necessary approvals, (b) the parties mutually agree to an amendment of this Agreement, or (c) the parties agree in writing to extend the thirty day period.

9. Transporter shall use commercially reasonable efforts to obtain all necessary authorizations, including any necessary authorizations from the FERC (collectively, "Transporter's Authorizations"), to construct the Project Facilities, sign the Firm Agreement, and to render the proposed firm transportation service for Shipper pursuant to the terms and conditions specified herein, in the Firm Agreement, and in Transporter's FERC Gas Tariff. Shipper agrees to support Transporter's filing(s) to implement the Project Facilities, service, and rates, as proposed by Transporter.

10. If the Transporter's Authorizations referenced in Section 9 are not satisfactory to Transporter, in Transporter's sole discretion, then Transporter shall have the right to terminate this Agreement upon ninety days prior written notice to Shipper. The authorizations that must be satisfactory to Transporter include, but are not limited to, rates, facilities, terms and conditions of service, and environmental conditions. If notice is given by Transporter that the Transporter's Authorizations are not satisfactory, the parties shall attempt in good faith to negotiate within the ninety day period an amendment to this Agreement to accomplish the business objectives of this Agreement in light of the lack of satisfactory Transporter's Authorizations. This Agreement shall terminate upon the expiration of the foregoing ninety day period unless within such period (a) a change to the Transporter's Authorizations renders them satisfactory to Transporter, (b) the parties otherwise mutually agree to an amendment of this Agreement, or (c) the parties agree in writing to extend the ninety day period.

11. If the Transporter's Authorizations are satisfactory to Transporter, in Transporter's sole discretion, Transporter shall so notify Shipper. Within ten days after such notice, Transporter and Shipper shall execute and deliver the Firm Agreement.

12. If Transporter determines at any time that all or any applicable portion of the Project would not be economic, in Transporter's sole discretion, Transporter shall have the right to terminate this Agreement upon thirty days prior written notice to Shipper ("Notice of Termination"). This Agreement shall terminate upon the expiration of the thirty day period unless within such period (a) Transporter, in writing, withdraws such Notice of Termination or (b) the parties, in writing, enter into a mutually acceptable amendment to this Agreement.

13. Shipper shall use commercially reasonable efforts to obtain before March 1, 2008, all necessary authorizations from the New Hampshire Public Utility Commission ("NHPUC") to sign the Firm Agreement pursuant to this Agreement. If such authorizations are not satisfactory to Shipper, in Shipper's sole discretion, then Shipper shall have the right to terminate this Agreement upon thirty days prior written notice to Transporter given before March 1, 2008. If such notice is given by Shipper, the parties shall attempt in good faith to negotiate within the thirty day period an amendment to this Agreement to accomplish the business objectives of this Agreement in light of the lack of satisfactory authorizations. This Agreement shall terminate upon the expiration of the foregoing thirty day period unless within such period (a) a change to the NHPUC authorizations render them satisfactory to Shipper, (b) the parties otherwise mutually agree to an amendment of this Agreement, or (c) the parties agree in writing to extend the thirty day period.

14. Notwithstanding anything contained in this Agreement to the contrary, Transporter shall be under no obligation to commence or continue at any time the acquisition of pipe and materials, the acquisition of rights-of-way, the construction of the Project Facilities, or any other activity involving either the commitment or actual

expenditure of funds by Transporter that may be required to construct the Project Facilities or to provide the proposed transportation service for Shipper unless (a) Transporter has received all Transporter's Authorizations on terms satisfactory to Transporter, in Transporter's sole discretion; (b) Transporter has determined, in its sole discretion, that construction of the Project Facilities and the rendition of firm transportation service to Shipper is economic; and (c) Shipper and Transporter have executed the Firm Agreement.

15. Shipper shall satisfy the credit assurance provisions outlined in Transporter's FERC Gas Tariff by October 1, 2007, and shall have a continuing obligation to maintain such credit assurance. In the event Shipper fails to establish itself as creditworthy by October 1, 2007, and/or maintain such creditworthiness thereafter, Transporter shall have the right to terminate this Agreement upon thirty days written notice.

16(a). If Transporter exercises its termination right under Section 15, then Shipper shall reimburse Transporter for Shipper's pro rata share, based upon Shipper's contracted volume divided by the total Project contracted volume, of all of Transporter's costs incurred, accrued, allocated to, or for which Transporter is contractually obligated to pay in conjunction with its efforts to satisfy its obligations under this Agreement ("Pre-Service Costs"). Shipper's reimbursement for such Pre-Service Costs shall constitute Transporter's sole and exclusive remedy for the actions described this Section 16(a).

(b) If Shipper (i) fails to perform, in whole or in part, its material duties and obligations hereunder; (ii) during the term of this Agreement, interferes with or obstructs the receipt by Transporter of any Transporter's Authorizations and, as a result of such actions by Shipper, Transporter does not receive any of Transporter's Authorizations in form and substance as requested by Transporter or does not receive such Transporter's Authorizations at all; or (iii) otherwise breaches this Agreement, Transporter shall, without limiting its ability to collect any and all other damages related to such breach by

Shipper, be entitled to collect from Shipper all of the Pre-Service Costs incurred or accrued as of the date of such breach.

(c) Pre-Service Costs shall include, but not be limited to, costs and/or out-of-pocket expenditures incurred, accrued, allocated to, or for which Transporter is contractually obligated to pay to third parties, as well as all internal overhead and administration and any other internal costs incurred or accrued, from the effective date of this Agreement through and including the effective date of any termination, associated with engineering, construction, materials and equipment, environmental, regulatory, and/or legal activities incurred in furtherance of Transporter's efforts to satisfy its obligations under this Agreement.

17. Any notice and/or request provided for in this Agreement or any notice either party may desire to give to the other shall be in writing transmitted by facsimile before 5 p.m. Central time and then by overnight courier to the post office address of the party intended to receive the same, as the case may be, as follows:

Transporter: Tennessee Gas Pipeline Company  
1001 Louisiana Street  
Houston, TX 77002  
Attn: Director, Marketing and Business Development  
FAX: (713) 420-4343

Shipper:  
EnergyNorth Natural Gas, Inc.  
d/b/a KeySpan Energy Delivery New England  
52 Second Avenue, 4<sup>th</sup> Floor  
Waltham, MA 02451  
Attn: Elizabeth Arangio  
FAX: (781-290-0186)

Notice is effective as of the date of the facsimile.

18. Any entity that shall succeed by purchase, merger, consolidation, or other transfer to the properties of either Transporter or Shipper, either substantially or as an entirety, shall be entitled to the rights and shall be subject to the obligations of its

predecessor in interest under this Agreement. Either party may, without relieving itself of its obligations under this Agreement, assign any of its rights hereunder to a company with which it is affiliated, but otherwise no assignment of this Agreement or of any of the rights or obligations hereunder shall be made, unless there first shall have been obtained the written consent thereto of the other party to this Agreement, which consent shall not be unreasonably withheld. It is agreed, however, that the restrictions on assignment contained in this section shall not in any way prevent either party to this Agreement from pledging or mortgaging its rights hereunder as security for its indebtedness. Once the Firm Agreement is executed, any assignment of such Firm Agreement is subject to the terms and conditions of Transporter's FERC Gas Tariff and the terms of this Agreement shall no longer control.

19. Shipper agrees to cooperate in the preparation and filing of all necessary applications for authorizations and, subject to the terms and conditions herein, agrees to proceed with due diligence to prosecute such application(s), if necessary.

20. No modification of the terms and provisions of this Agreement shall be made except by the execution by both parties of a written agreement.

21. THE INTERPRETATION AND PERFORMANCE OF THIS AGREEMENT SHALL BE IN ACCORDANCE WITH AND CONTROLLED BY THE LAWS OF THE STATE OF TEXAS, EXCEPT THAT ANY CONFLICT OF LAWS RULE OF THE STATE OF TEXAS THAT WOULD REQUIRE REFERENCE TO THE LAWS OF SOME OTHER STATE OR JURISDICTION SHALL BE DISREGARDED.

22. Unless terminated sooner pursuant to the terms herein, this Agreement shall terminate upon the execution of the Firm Agreement. Upon termination of this

Agreement for any reason provided for herein, neither party shall have any further rights or obligations under this Agreement.

23. No waiver by a party of any default(s) by the other party in the performance of any provision, condition, or requirement of this Agreement shall operate or be construed as a waiver of any future default(s), whether of a like or of a different character, nor in any manner release the defaulting party from performance of any other provision, condition, or requirement herein.

24. This Agreement, and all of the terms and provisions contained herein, and the respective obligations of the parties hereunder, are subject to Transporter's FERC Gas Tariff and to all valid laws, orders, rules, and regulations of duly constituted governmental authorities having jurisdiction.

25. If any provision of this Agreement is declared null and void or voidable by a court of competent jurisdiction, such declaration shall in no way affect the validity or effectiveness of the other provisions of this Agreement, which shall remain in full force and effect, and the parties shall thereafter undertake commercially reasonable efforts to agree upon an equitable adjustment of the provisions of this Agreement with a view to effecting its purpose.

26. No presumption shall operate in favor of or against any party as a result of any responsibility or role that any party may have had in the drafting of this Agreement.

27. This Agreement sets forth all understandings and agreements between the parties respecting the subject matter hereof, and all prior agreements, understandings, and representations, whether written or oral, respecting the subject matter hereof are merged into and superseded by this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representatives as of the date first hereinabove written.

TENNESSEE GAS PIPELINE COMPANY

By: 

Name: JAMES B. BUSSARD

Title: AGENT & ATTORNEY-IN-FACT

ENERGY NORTH NATURAL GAS, INC.  
d/b/a KeySpan Energy Delivery New England

By: 

Name: RICHARD A. RAPP, JR.

Title: Vice President

**EXHIBIT A**

Service Package No: \_\_\_\_\_  
Amendment No: \_\_\_\_\_

**GAS TRANSPORTATION AGREEMENT**  
(For Use under FT-A Rate Schedule)

THIS AGREEMENT is made and entered into as of the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, by and between TENNESSEE GAS PIPELINE COMPANY, a Delaware Corporation, hereinafter referred to as "Transporter" and EnergyNorth Natural Gas, Inc., d/b/a KeySpan Energy Delivery New England, a New Hampshire Corporation, hereinafter referred to as "Shipper." Transporter and Shipper shall collectively be referred to herein as the "Parties."

WHEREAS, Shipper and Transporter have entered into a Precedent Agreement dated [DATE] (the "Precedent Agreement"), pursuant to which Transporter agreed to file an application with the Federal Energy Regulatory Commission ("FERC") for the necessary authorizations to (i) provide certain natural gas transportation service and (ii) construct and operate the facilities necessary to provide such service; and

WHEREAS, Transporter has now been authorized by the FERC order issued on [DATE] in [DOCKET] to render the firm transportation service described herein and to construct and operate the necessary facilities;

THEREFORE, the Parties agree to the following:

**ARTICLE I - DEFINITIONS**

- 1.1 **TRANSPORTATION QUANTITY** - shall mean the maximum daily quantity of gas which Transporter agrees to receive and transport on a firm basis, subject to Article II herein, for the account of Shipper hereunder on each day during each year during the term hereof, which shall be 30,000 dekatherms. Any limitations on the quantities to be received from each Point of Receipt and/or delivered to each Point of Delivery shall be as specified on Exhibit "A" attached hereto.
- 1.2 **EQUIVALENT QUANTITY** - shall be as defined in Article I of the General Terms and Conditions of Transporter's FERC Gas Tariff.

**ARTICLE II – TRANSPORTATION**

2.1 **TRANSPORTATION SERVICE** – After receipt and acceptance by Transporter, in its sole determination, of all FERC and other authorizations necessary to provide service hereunder and the satisfactory completion by Transporter, in Transporter's sole determination, of the facilities required to provide such service, beginning on the Commencement Date (as defined in Section 2.2 below), Transporter agrees to accept and receive daily on a firm basis, at the Point(s) of Receipt from Shipper or for Shipper's account such quantity of gas as Shipper makes available up to the Transportation Quantity, and to deliver to or for the account of Shipper to the Point(s) of Delivery an Equivalent Quantity of gas.

2.2 **COMMENCEMENT OF SERVICE** – Upon completion of construction of the pipeline facilities required to enable Transporter to render the transportation service described herein and after





receipt and acceptance by Transporter of all FERC and other necessary authorizations, as further described in Section 2.1 above, Transporter will notify Shipper, in writing, of the date on which transporter will be ready to commence transportation service under this Agreement (the "Commencement Date").

### ARTICLE III - POINT(S) OF RECEIPT AND DELIVERY

The Primary Point(s) of Receipt and Delivery shall be those points specified on Exhibit "A" attached hereto.

### ARTICLE IV

Transporter shall construct, install, own, and operate the facilities necessary for Transporter to receive and deliver the gas as contemplated herein for Shipper's account at the Point(s) of Receipt and the Point(s) of Delivery.

### ARTICLE V - QUALITY SPECIFICATIONS AND STANDARDS FOR MEASUREMENT

For all gas received, transported and delivered hereunder the Parties agree to the Quality Specifications and Standards for Measurement as specified in the General Terms and Conditions of Transporter's FERC Gas Tariff Volume No. 1. To the extent that no new measurement facilities are installed to provide service hereunder, measurement operations will continue in the manner in which they have previously been handled. In the event that such facilities are not operated by Transporter or a downstream pipeline, then responsibility for operations shall be deemed to be Shipper's.

### ARTICLE VI - RATES AND CHARGES FOR GAS TRANSPORTATION

- 6.1 TRANSPORTATION RATES - Commencing upon the Commencement Date, the rates, charges, and surcharges to be paid by Shipper to Transporter for the transportation service provided herein shall be in accordance with Transporter's Rate Schedule FT-A and the General Terms and Conditions of Transporter's FERC Gas Tariff. Except as provided to the contrary in any written or electronic agreement(s) between Transporter and Shipper in effect during the term of this Agreement, Shipper shall pay Transporter the applicable maximum rate(s) and all other applicable charges and surcharges specified in the Summary of Rates in Transporter's FERC Gas Tariff and in this Rate Schedule. Transporter and Shipper may agree that a specific discounted rate will apply only to certain volumes under the agreement. Transporter and Shipper may agree that a specified discounted rate will apply only to specified volumes (MDQ, TQ, commodity volumes, Extended Receipt and Delivery Service Volumes or Authorized Overrun volumes) under the Agreement; that a specified discounted rate will apply only if specified volumes are achieved (with the maximum rates applicable to volumes above the specified volumes or to all volumes if the specified volumes are never achieved); that a specified discounted rate will apply only during specified periods of the year or over a specifically defined period of time; that a specified discounted rate will apply only to specified points, zones, markets or other defined geographical area; and/or that a specified discounted rate will apply only to production or reserves committed or dedicated to Transporter. Transporter and Shipper may agree to a specified discounted rate pursuant to

the provisions of this Section 6.1 provided that the discounted rate is between the applicable maximum and minimum rates for this service.

In addition, a discount agreement may include a provision that if one rate component which was at or below the applicable Maximum Rate at the time the discount agreement was executed subsequently exceeds the applicable Maximum Rate due to a change in Transporter's Maximum Rates so that such rate component must be adjusted downward to equal the new applicable Maximum Rate, then other rate components may be adjusted upward to achieve the agreed overall rate, as long as none of the resulting rate components exceed the Maximum Rate applicable to that rate component. Such changes to rate components shall be applied prospectively, commencing with the date a Commission Order accepts revised tariff sheet rates. However, nothing contained herein shall be construed to alter a refund obligation under applicable law for any period during which rates that had been charged under a discount agreement exceeded rates which ultimately are found to be just and reasonable.

- 6.2 INCIDENTAL CHARGES - Shipper agrees to reimburse Transporter for any filing or similar fees, which have not been previously paid for by Shipper, which Transporter incurs in rendering service hereunder.
- 6.3 CHANGES IN RATES AND CHARGES - Shipper agrees that Transporter shall have the unilateral right to file with the appropriate regulatory authority and make effective changes in (a) the rates and charges applicable to service pursuant to Transporter's Rate Schedule FT-A, (b) the rate schedule(s) pursuant to which service hereunder is rendered, or (c) any provision of the General Terms and Conditions applicable to those rate schedules. Transporter agrees that Shipper may protest or contest the aforementioned filings, or may seek authorization from duly constituted regulatory authorities for such adjustment of Transporter's existing FERC Gas Tariff as may be found necessary to assure Transporter just and reasonable rates.

#### ARTICLE VII - BILLINGS AND PAYMENTS

Transporter shall bill and Shipper shall pay all rates and charges in accordance with Articles V and VI, respectively, of the General Terms and Conditions of the FERC Gas Tariff.

#### ARTICLE VIII - GENERAL TERMS AND CONDITIONS

This Agreement shall be subject to the effective provisions of Transporter's Rate Schedule FT-A and to the General Terms and Conditions incorporated therein, as the same may be changed or superseded from time to time in accordance with the rules and regulations of the FERC.

#### ARTICLE IX - REGULATION

- 9.1 This Agreement shall be subject to all applicable and lawful governmental statutes, orders, rules and regulations and is contingent upon the receipt and continuation of all necessary regulatory approvals or authorizations upon terms acceptable to Transporter. This Agreement shall be void and of no force and effect if any necessary regulatory approval is not so obtained or continued. All Parties hereto shall cooperate to obtain or continue all necessary approvals or authorizations, but no Party shall be liable to any other Party for failure to obtain or continue such approvals or authorizations.
- 9.2 The transportation service described herein shall be provided subject to Subpart G, Part 284

of the FERC Regulations.

#### ARTICLE X - RESPONSIBILITY DURING TRANSPORTATION

Except as herein specified, the responsibility for gas during transportation shall be as stated in the General Terms and Conditions of Transporter's FERC Gas Tariff Volume No. 1.

#### ARTICLE XI - WARRANTIES

- 11.1 In addition to the warranties set forth in Article IX of the General Terms and Conditions of Transporter's FERC Gas Tariff, Shipper warrants the following:
- (a) Shipper warrants that all upstream and downstream transportation arrangements are in place, or will be in place as of the requested effective date of service, and that it has advised the upstream and downstream transporters of the receipt and delivery points under this Agreement and any quantity limitations for each point as specified on Exhibit "A" attached hereto. Shipper agrees to indemnify and hold Transporter harmless for refusal to transport gas hereunder in the event any upstream or downstream transporter fails to receive or deliver gas as contemplated by this Agreement.
  - (b) Shipper agrees to indemnify and hold Transporter harmless from all suits, actions, debts, accounts, damages, costs, losses and expenses (including reasonable attorneys fees) arising from or out of breach of any warranty by Shipper herein.
- 11.2 Transporter shall not be obligated to provide or continue service hereunder in the event of any breach of warranty.

#### ARTICLE XII - TERM

- 12.1 This contract shall be effective as of the date hereof; provided, however, that Transporter shall be under no obligation to receive or to deliver any quantities of natural gas hereunder prior to the Commencement Date. This Agreement shall remain in force and effect, unless modified as per Exhibit B, until the expiration of twenty years following the Commencement Date ("Primary Term") and on a month to month basis thereafter unless terminated by either Party upon at least thirty (30) days prior written notice to the other Party; provided, however, that if the Primary Term is less than one year, then notice of termination may be provided via PASSKEY; provided further, that if the Primary Term is one year or more, then any rights to Shipper's extension of this Agreement after the Primary Term shall be governed by Article III, Section 10.4 of the General Terms and Conditions of Transporter's FERC Gas Tariff; and provided further, that if the FERC or other governmental body having jurisdiction over the service rendered pursuant to this Agreement authorizes abandonment of such service, this Agreement shall terminate on the abandonment date permitted by the FERC or such other governmental body.
- 12.2 Any portions of this Agreement necessary to resolve or cash out imbalances under this Agreement as required by the General Terms and Conditions of Transporter's Tariff shall survive the other parts of this Agreement until such time as such balancing has been accomplished; provided, however, that Transporter notifies Shipper of such imbalance not



later than twelve months after the termination of this Agreement.

- 12.3 This Agreement will terminate automatically upon written notice from Transporter in the event Shipper fails to pay all of the amount of any bill for service rendered by Transporter hereunder in accord with the terms and conditions of Article VI of the General Terms and Conditions of Transporter's FERC Gas Tariff.

#### ARTICLE XIII - NOTICE

Except as otherwise provided in the General Terms and Conditions applicable to this Agreement, any notice under this Agreement shall be in writing and mailed to the post office address of the Party intended to receive the same, as follows:

TRANSPORTER: Tennessee Gas Pipeline Company  
P. O. Box 2511  
Houston, Texas 77252-2511  
  
Attention: Director, Transportation Control

SHIPPER:  
NOTICES: EnergyNorth Natural Gas, Inc.  
d/b/a KeySpan Energy Delivery New England  
52 Second Avenue, 4<sup>th</sup> Floor  
Waltham, MA 02451  
  
Attention: Elizabeth Arangio

BILLING: EnergyNorth Natural Gas, Inc.  
d/b/a KeySpan Energy Delivery New England  
52 Second Avenue, 4<sup>th</sup> Floor  
Waltham, MA 02451  
  
Attention: Elizabeth Arangio

or to such other address as either Party shall designate by formal written notice to the other.

#### ARTICLE XIV - ASSIGNMENTS

- 14.1 Either Party may assign or pledge this Agreement and all rights and obligations hereunder under the provisions of any mortgage, deed of trust, indenture, or other instrument which it has executed or may execute hereafter as security for indebtedness. Either Party may, without relieving itself of its obligation under this Agreement, assign any of its rights hereunder to a company with which it is affiliated. Otherwise, Shipper shall not assign this Agreement or any of its rights hereunder, except in accord with Article III, Section 11 of the General Terms and Conditions of Transporter's FERC Gas Tariff.
- 14.2 Any person which shall succeed by purchase, merger, or consolidation to the properties, substantially as an entirety, of either Party hereto shall be entitled to the rights and shall be subject to the obligations of its predecessor in interest under this Agreement.



## ARTICLE XV - MISCELLANEOUS

- 15.1 THE INTERPRETATION AND PERFORMANCE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH AND CONTROLLED BY THE LAWS OF THE STATE OF TEXAS, WITHOUT REGARD TO THE DOCTRINES GOVERNING CHOICE OF LAW.
- 15.2 If any provision of this Agreement is declared null and void, or voidable, by a court of competent jurisdiction, then that provision will be considered severable at either Party's option; and if the severability option is exercised, the remaining provisions of the Agreement shall remain in full force and effect.
- 15.3 Unless otherwise expressly provided in this Agreement or Transporter's Gas Tariff, no modification of or supplement to the terms and provisions stated in this Agreement shall be or become effective until Shipper has submitted a request for change through PASSKEY and Shipper has been notified through PASSKEY of Transporter's agreement to such change.
- 15.4 Exhibit "A" attached hereto is incorporated herein by reference and made a part hereof for all purposes.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed as of the date first hereinabove written.

TENNESSEE GAS PIPELINE COMPANY

BY: \_\_\_\_\_  
Agent and Attorney-in-Fact

SHIPPER: ENERGINORTH NATURAL GAS, INC.  
d/b/a KEYSPAN ENERGY DELIVERY NEW ENGLAND

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_



**EXHIBIT "A"**  
**TO GAS TRANSPORTATION AGREEMENT**  
DATED \_\_\_\_\_  
BETWEEN \_\_\_\_\_  
TENNESSEE GAS PIPELINE COMPANY  
AND \_\_\_\_\_  
EnergyNorth Natural Gas, Inc. d/b/a KeySpan Energy Delivery New England

EFFECTIVE DATE OF AMENDMENT: Commencement Date  
RATE SCHEDULE: FTA  
SERVICE PACKAGE:  
SERVICE PACKAGE TQ: 30,000 Dth

METER	METER NAME	INTERCONNECT PARTY NAME	COUNTY	ST	ZONE	R/D	LEG	TOTAL-TQ	BILLABLE-TQ
012538	Dracut Receipt				06	R	200	30,000	30,000
020426	Laconia, New Hampshire				06	D	200	30,000	30,000
						Total TQ		30,000	30,000

NUMBER OF RECEIPT POINTS: 1 \_\_\_\_\_  
NUMBER OF DELIVERY POINTS: 1 \_\_\_\_\_

**Note:** Exhibit "A" is a reflection of the contract and all amendments as of the amendment effective date.

GAS TRANSPORTATION AGREEMENT  
(For Use under FT-A Rate Schedule)

EXHIBIT B

TO GAS TRANSPORTATION AGREEMENT  
DATED \_\_\_\_\_  
BETWEEN  
TENNESSEE GAS PIPELINE COMPANY  
AND  
\_\_\_\_\_

BUYOUT/EARLY TERMINATION PROVISIONS\*

SERVICE PACKAGE: \_\_\_\_\_

BUYOUT PERIOD(S) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

AMOUNT OF TQ REDUCED \_\_\_\_\_  
FOR PERIOD(S) \_\_\_\_\_  
\_\_\_\_\_

AMOUNT OF  
BUYOUT PAYMENT \_\_\_\_\_  
FOR PERIOD(S) \_\_\_\_\_  
\_\_\_\_\_

ANY LIMITATIONS ON  
THE EXERCISE OF THE  
BUYOUT/TERMINATION  
OPTION AS BID BY  
THE SHIPPER:

\* NOTICE MUST BE GIVEN AS PROVIDED FOR IN THE NET PRESENT VALUE  
STANDARD OF THE GENERAL TERMS AND CONDITIONS.



EXHIBIT B

DATE

EnergyNorth Natural Gas, Inc.  
d/b/a KeySpan Energy Delivery New England  
52 Second Avenue, 4<sup>th</sup> Floor  
Waltham, MA 02451  
Attention: Ms. Elizabeth Arangio

RE: Firm Transportation Negotiated Rate Letter Agreement  
Tennessee FT-A Service Package No. \_\_\_\_\_

Dear Ms. Arangio:

Tennessee Gas Pipeline Company ("Transporter") held an open season in accordance with applicable provisions of its FERC Gas Tariff entitled "Concord Open Season" ("Open Season"). EnergyNorth Natural Gas, Inc. d/b/a KeySpan Energy Delivery New England ("Shipper") was a successful bidder in the Open Season and elected the negotiated rate option as offered by Transporter.

In response to the request of Shipper, and pursuant to Section 5.6 of Transporter's FT-A Rate Schedule, and upon the completion of the construction and placing in-service of the necessary facilities, Transporter hereby agrees to adjust its then applicable FT-A transportation rate for FT-A service provided under the above referenced Service Package as follows:

1.
  - a) If Shipper, its assignee(s) or its agent(s) (hereinafter collectively referred to as "Shipper") violates the terms of this Negotiated Rate Agreement or the terms of the above-referenced Service Package, Transporter shall have the right, in its sole discretion, to immediately terminate this Negotiated Rate Agreement and/or assess, from the date of the violation, the applicable maximum monthly reservation rate for the entire contract quantity and the maximum applicable daily commodity rates on all transactions occurring under this Negotiated Rate Agreement.
  - b) For the period commencing on the Commencement Date and extending through the Primary Term (as defined in Sections 2.2 and 12.1 of the above referenced Service Package) for gas delivered by Transporter on behalf of Shipper under the above referenced service package, the applicable FT-A rates shall be a monthly reservation rate of \$12.17 per Dth and the maximum applicable commodity rates under Rate Schedule FT-A. These rates are not inclusive of surcharges.

In addition, Shipper shall pay applicable fuel and lost and unaccounted for charges.

2. This Negotiated Rate Agreement shall be filed with the Federal Energy Regulatory Commission ("FERC") and is subject to approval by the FERC. In addition, the effectiveness of this Negotiated Rate Agreement is contingent upon a) the Parties executing the above-referenced Service Package and b) service commencing thereunder.
3. If any terms of this Negotiated Rate Agreement are disallowed by any order, rulemaking, regulation or policy of the FERC, Transporter may immediately terminate this Negotiated Rate Agreement. If any terms of this Negotiated Rate Agreement are in any way modified by order, rulemaking, regulation or policy of the FERC, Transporter and Shipper may mutually agree in good faith to amend this Negotiated Rate Agreement in order to ensure that the original commercial intent of the



TENNESSEE GAS PIPELINE COMPANY  
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parties is preserved. In the event that the parties cannot achieve mutual agreement, Transporter reserves the right to immediately terminate this Negotiated Rate Agreement.

Please acknowledge your acceptance of this proposal by signing and returning via mail or facsimile to the undersigned at (713) 420-4343. One fully executed copy will be returned for your records.

Sincerely,

Dodson Skipworth  
Manager, Marketing  
Tennessee Gas Pipeline Company

TENNESSEE GAS PIPELINE COMPANY

By: \_\_\_\_\_

Date: \_\_\_\_\_

J. Heath Deneke  
Agent and Attorney-In-Fact

ENERGYNORTH NATURAL GAS INC.  
d/b/a KeySpan Energy Delivery New England

By: \_\_\_\_\_

Date: \_\_\_\_\_



