# STATE OF NEW HAMPSHIRE

# PUBLIC UTILITIES COMMISSION

**DG 21-008**

**In the Matter of:**
**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
**Transportation Agreement with Tennessee Gas Pipeline, Inc.**

**Direct Testimony**

**of**

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

**June 17, 2021**

**New Hampshire Public Utilities Commission**

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

**DG 21-008**

**Testimony of**
**Stephen P. Frink, Director, Gas & Water Division**

## INTRODUCTION & SUMMARY

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

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

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

**A.** I joined the Commission in 1990 as a member of the Audit Team and worked as a Utility Analyst, Senior Utility Analyst, Assistant Finance Director, and Assistant Director of the Gas & Water Division before becoming the Director of the Gas & Water Division in 2018. I have primary responsibility for the administration of the financial aspects of the regulation of gas utilities in New Hampshire.

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

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

**A.** The purpose of my testimony is to recommend the Commission grant conditional approval of the Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty (Liberty, or the Company) Transportation Agreement (Contract) with Tennessee Gas Pipeline, Inc. (TGP). Staff recommends the Commission find the contract to be reasonable and prudent, conditioned on certain reporting requirements, use of a 30-year average to calculated design day requirements, and Commission approval prior to the retirement of any Company propane or liquid natural gas (LNG) peaking plants.

**Q. Please briefly describe the Contract.**

**A.** The Contract is a firm transportation agreement with TGP for 40,000 dekatherms (Dths) per day of capacity on the TGP-owned Concord Lateral from Dracut, Massachusetts to Londonderry, New Hampshire, at TGP tariffed rates, currently set at $0.14 per Dth. The in-service date for the Contract is November 1, 2021 with an initial term of 20 years, and Liberty has the unilateral right to renew.

**Q. Does the contract require any capital investment?**

**A.** In negotiating the Contract, several receipt points were considered and the one selected does not require TGP capital spending but does require new facilities on the Liberty system to fully utilize the additional 40,000 Dth of capacity. Liberty identified four distinct projects with a total estimated cost of approximately $50 million for the four projects. The Contract rate would have been significantly higher at alternative receipt points requiring TGP capital investment, and the resulting increase in annual supply costs would have far exceeded the expected annual revenue requirement from the proposed Liberty capital investment related to the Contract.

**Q. Is Liberty requesting the Commission to find the capital investments related to the Contract prudent at this time?**

**A.** No. Liberty's petition request is that the Commission determine that the Company's decision to enter into the Contract was prudent and reasonable, and approve the Contract.

**Q. Please provide a brief summary of events leading to Liberty's petition.**

**A.** Liberty last approved (DG 13-313) and current (DG 17-152) Least Cost Integrated Resource Plans (LCIRPs) identified a need for additional supply resources based on projected customer growth. Liberty's current LCIRP determined that design day demand would exceed supply resources beginning in split year 2018-2019.[1]

According to Liberty, the Company evaluated resource alternatives and determined that there were only two viable options for incremental capacity - a contract for incremental capacity on the TGP Concord Lateral or a Company-sponsored capacity and supply project. At the time Liberty evaluated resource alternatives, the Concord Lateral was fully subscribed and would have required a significant capital investment by TGP to expand capacity. Liberty elected at that point to pursue a Company-sponsored plan, the proposed Granite Bridge Project (Granite Bridge), and petitioned the Commission to find Granite Bridge prudent in Docket DG 17-198.

In 2019, a customer who had held reserved capacity on the Concord Lateral elected not to renew its expiring contract with TGP and Liberty was able to contract for incremental capacity on the Concord Lateral at a cost well below the estimated cost for Granite Bridge capacity. Liberty subsequently contracted for TGP capacity and abandoned the Granite Bridge Project.

**Q. Does Liberty need additional supply resources to meet projected customer design day demand?**

1 A split year (November through October) is used for demand and supply planning.

**A.** Yes. As testified to by Staff's expert witnesses in the Granite Bridge docket:[2]

> **"**We see a need for additional capacity. We consider the Concord Lateral an alternative to the Granite Bridge Pipeline. However, we do not think that alternative has been seriously explored by the Company. It should be, and promptly. Development of more data and analysis about both the Granite Bridge Pipeline and the Concord Lateral alternatives is necessary to permit a fully-informed decision between them."

Shortly after Staff and intervenor testimony was filed in the Granite Bridge docket, Liberty contacted TGP and contracted for additional capacity on the Concord Lateral.

**Q. Did Liberty's filing in this docket update its demand forecast?**

**A.** Yes. Liberty's petition in this docket was accompanied by supporting testimony and attachments, which include an update of the Company's demand forecast provided in the Granite Bridge docket for split test years (November through October) 2021-2022 through 2038-2039. The updated forecast shows Liberty's current supply portfolio will not meet design day demand requirements in 2021-2022 and that the supply deficiency is anticipated to increase in each subsequent year.[3]

**Q. Does Staff have any concerns regarding the updated demand forecast?**

**A.** Yes. Staff has four specific concerns.

The forecast includes demand related to Liberty's franchise expansion into Windham. Liberty did not commence service within two years of the Commission order approving that expansion and Liberty's franchise right to the Windham service territory has expired.

The demand forecast also includes demand related to iNATGAS sales. Under the terms of a contract between Liberty and iNATGAS, iNATGAS is required to pay for no less than a specified level of sales each year over the life of the contract. The demand forecast

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2 DG 17-198. Testimony of The Liberty Consulting Group filed September 13, 2019, Bates pages 28-29.
3 DaFonte/Killeen testimony, Table 2, Bates page 18.

includes the sales to iNATGAS at the take-or-pay volumes even though iNATGAS sales have been minimal and there is little reason to expect a change in iNATGAS usage, as explained in Staff testimony filed in Docket DG 20-105.[4]

The demand forecast does not reflect savings from increased natural gas energy efficiency as proposed by Liberty in the Company's 2021-2023 NH Saves Triennial Plan.[5]

The Heating Degree Day (HDD) factor used to calculate design day demand is based on the average heating degree days for 1977 through 2016 (40 calendar years). Natural gas utilities commonly use the most recent 30-year average, which better reflects changes in the climate.

**Q. Has Liberty provided an updated demand forecast based on the most recent 30-year weather?**

**A.** Given the significant time needed to estimate and review a new calculation of the Design Day planning standard based on an average of the most recent 30 years of weather data, Liberty provided a reasonable alternative - a range of Design Day demand and associated resource reserve/deficiency based on 1 HDD incremental changes to the existing Design Day planning standard.

Liberty's Updated Base Case Design Day used a Design Day planning standard of 72.4 HDD. Liberty reviewed the most recent 30 years of weather data and the highest observation over the most recent 30 years was 70 HDD, which was experienced on January 15, 2004. That observed value produced a Design Day planning standard between the 69.4 HDD and 70.4 HDD scenarios.

4 DG 20-105, Exhibit 7, Frink testimony, Bates pages 10-16.
5 Filed in Docket DE 20-092, 2021–2023 NH Saves Triennial Plan.

**Q. What is the impact on the demand forecast if adjusted to address Staff's concerns?**

**A.** Table 1 compares the Liberty Design Day supply shortfall (without Contract capacity)[6] with the Shortfall using a Design Day planning standard of 69.4 HDD, removing iNATGAS and Windham demand and including incremental design day energy efficiency saving

| Table 1 | | | | | |
|---|---|---|---|---|---|
| Liberty & Staff Adjusted Supply Shortfall - w/o Contract | | | | | |
| Split-Year (Nov-Oct) | Liberty Design Day Demand | Staff Design Day Demand | Current Design Day Resources | Liberty Supply Surplus/ (Deficiency) | Staff Supply Surplus / (Deficiency) |
| 2021/22 | 174,618 | 170,038 | 162,033 | (12,585) | (8,005) |
| 2022/23 | 183,409 | 173,805 | 155,033 | (28,376) | (18,772) |
| 2023/24 | 187,181 | 177,266 | 155,033 | (32,148) | (22,233) |
| 2024/25 | 190,657 | 180,548 | 155,033 | (35,624) | (25,515) |
| 2025/26 | 193,952 | 183,653 | 155,033 | (38,919) | (28,620) |
| 2026/27 | 196,975 | 186,493 | 155,033 | (41,942) | (31,460) |
| 2027/28 | 199,349 | 188,705 | 155,033 | (44,316) | (33,672) |
| 2028/29 | 202,008 | 191,191 | 155,033 | (46,975) | (36,158) |
| 2029/30 | 204,467 | 193,483 | 155,033 | (49,434) | (38,450) |
| 2030/31 | 206,942 | 195,790 | 155,033 | (51,909) | (40,757) |
| 2031/32 | 209,168 | 197,855 | 155,033 | (54,135) | (42,822) |
| 2032/33 | 211,373 | 199,900 | 155,033 | (56,340) | (44,867) |
| 2033/34 | 213,536 | 201,902 | 155,033 | (58,503) | (46,869) |
| 2034/35 | 215,447 | 203,659 | 155,033 | (60,414) | (48,626) |
| 2035/36 | 216,995 | 205,064 | 155,033 | (61,962) | (50,031) |
| 2036/37 | 218,679 | 206,600 | 155,033 | (63,646) | (51,567) |
| 2037/38 | 220,381 | 208,154 | 155,033 | (65,348) | (53,121) |
| 2038/39 | 222,210 | 209,833 | 155,033 | (67,177) | (54,800) |

Table 2 provides the same comparison with the Contact capacity.

6 DaFonte/Killeen testimony, Table 3, Bates page 31

| Table 2 | | | | | |
|---|---|---|---|---|---|
| Liberty & Staff Adjusted Supply Shortfall - w/ Contract | | | | | |
| Split-Year (Nov-Oct) | Liberty Design Day Demand | Staff Design Day Demand | Current Design Day Resources + Contract | Liberty Supply Surplus/ (Deficiency) | Staff Supply Surplus / (Deficiency) |
| 2021/22 | 174,618 | 170,038 | 202,033 | 27,415 | 31,995 |
| 2022/23 | 183,409 | 173,805 | 195,033 | 11,624 | 21,228 |
| 2023/24 | 187,181 | 177,266 | 195,033 | 7,852 | 17,767 |
| 2024/25 | 190,657 | 180,548 | 195,033 | 4,376 | 14,485 |
| 2025/26 | 193,952 | 183,653 | 195,033 | 1,081 | 11,380 |
| 2026/27 | 196,975 | 186,493 | 195,033 | (1,942) | 8,540 |
| 2027/28 | 199,349 | 188,705 | 195,033 | (4,316) | 6,328 |
| 2028/29 | 202,008 | 191,191 | 195,033 | (6,975) | 3,842 |
| 2029/30 | 204,467 | 193,483 | 195,033 | (9,434) | 1,550 |
| 2030/31 | 206,942 | 195,790 | 195,033 | (11,909) | (757) |
| 2031/32 | 209,168 | 197,855 | 195,033 | (14,135) | (2,822) |
| 2032/33 | 211,373 | 199,900 | 195,033 | (16,340) | (4,867) |
| 2033/34 | 213,536 | 201,902 | 195,033 | (18,503) | (6,869) |
| 2034/35 | 215,447 | 203,659 | 195,033 | (20,414) | (8,626) |
| 2035/36 | 216,995 | 205,064 | 195,033 | (21,962) | (10,031) |
| 2036/37 | 218,679 | 206,600 | 195,033 | (23,646) | (11,567) |
| 2037/38 | 220,381 | 208,154 | 195,033 | (25,348) | (13,121) |
| 2038/39 | 222,210 | 209,833 | 195,033 | (27,177) | (14,800) |

**Q. If the actual demand growth is less than projected or there is a decrease in demand, will Liberty have the opportunity to reduce its TGP Concord Lateral capacity during the term of the Contract?**

**A.** Yes. Although the Contract is for twenty years, Liberty has two other contracts for capacity on the Concord Lateral and all three contracts provide Liberty with the option to renew all or a portion of the capacity from TGP for an additional five years. Liberty will have multiple opportunities to reduce capacity on the Concord Lateral over the next twenty years, in 2025, 2029, 2030, 2034, 2035, 2039 and 2040. Table 3 provides the amount of capacity, contract expiration dates, and renewal notice dates to terminate or extend the existing Concord Lateral capacity contracts.

| Table 3 | | | | | |
|---|---|---|---|---|---|
| Liberty Concord Lateral Capacity (Dth) | | | | | |
| Capacity | Expiration | Renewal Notice Dates | | | |
| Amount | Date | First | Second | Third | Fourth |
| 20,000 | 13-Oct-25 | 31-Oct-24 | 31-Oct-29 | 31-Oct-34 | 31-Oct-34 |
| 30,000 | 31-Oct-29 | 31-Oct-28 | 31-Oct-33 | 31-Oct-38 | |
| 40,000 | 31-Oct-41 | | | | |

See ***Attachment SPF-1 (Company Response to Staff DRs 1-1, 1-2 & TS 1-2).***

**Q. Will Liberty have the opportunity to sell excess capacity it holds on the Concord Lateral?**

**A.** Yes, Liberty issues a request for proposals for use of its capacity to asset managers to generate additional revenues that would offset supply costs to be recovered through the cost of gas (COG). The Contract capacity may provide added value to an asset manager and result in higher revenue, which would translate to lower COG rates for Liberty's firm sales customers. Liberty could also pursue a contract with the prior holder of the TGP capacity that was unwilling to renew its TGP capacity contract for another five years but may be interested in purchasing Liberty's excess Concord Lateral capacity on a short-term contract.

**Q. Please describe anticipated Liberty capital investments related to the Contract.**

**A.** Liberty testified that four projects will need to be completed in order to use the full additional contracted capacity on the Concord Lateral to be delivered to the Manchester gate station.[7] The first three proposed projects include rebuilding the Manchester gate station, uprating certain mains in Manchester to accommodate higher pressure, and installing a new meter and regulator station on Brown Avenue in Manchester. Liberty expects the total cost for those

7 Gate stations (or 'city gates') are metering and pressure regulating facilities located at the custody transfer points where natural gas is delivered from transmission pipelines into the high-pressure lines of a local distribution company.

three projects to be $10.3 million and that they will enable the Company to use the additional capacity afforded by those projects to meet 2021-2022 design day demand. According to Liberty, the fourth project, the installation of a new 10.5-mile main from Manchester to the Budweiser plant in Nashua is estimated to cost approximately $40.2 million, and may be needed to meet design day demand beyond 2021-2022. Table 2 lists the four projects, estimated costs, and the incremental amount of Contract capacity that will become available upon completion of each project.

Table 4
Liberty Capital Projects for Contract Capacity (Dth)

| Project Description | Estimated Cost | Incremental Capacity * | Cummulative Capacity * |
|---|---|---|---|
| Rebuild Manchester Gate Station | 4,500,000 | 0 | 0 |
| Uprate Manchester main for higher pressure | 1,000,000 | 2,880 | 2,880 |
| New Meter & Regulator Station in Manchester | 4,800,000 | 5,640 | 8,520 |
| New 10.5 Mile Main to Budweiser in Nashua | 40,200,000 | 26,400 | 34,920 |
| Total | 50,500,000 | 34,920 | 34,920 |

* Capacity estimates based on existing customers, ability to use Contract capacity increases with growth.

See ***Attachment SPF-2 (Company Response to Staff DRs 1-5 & TS 1-4).***

**Q. How soon will Liberty need to complete the fourth anticipated project to meet future demand?**

**A.** That will depend on demand growth and Liberty's ability to acquire additional peaking supplies.

Efforts to reduce peak day demand could be accomplished through increased spending on energy efficiency and/or cost effective tariff offerings that would incent customers with dual-fuel capability to curtail gas usage on peak days.

Peak day supply resources could be increased by continuing to contract with a third party provider that holds capacity on the Concord Lateral and is able to deliver supplies to

Liberty's city gates and/or adding on-system peaking capability.

**Q. Did Liberty's analysis of the cost of the capital investments factor into the Company's determination that the Contract was the least cost option?**

A. According to the Company, yes. In negotiating the Contract, Liberty and TGP discussed multiple delivery points, volumes to deliver to each, and the rate TGP would charge under each scenario. The annual Contract cost was significantly lower than what the contract cost would have been under alternative scenarios.[8]

Liberty calculated the levelized cost[9] of the Company's capital investments, and the combined annual levelized cost and annual cost of the Contract was far less than the annual cost of the next lowest cost scenario.

**Q. Has Staff performed a similar financial analysis?**

A. Yes, Staff performed a discounted cash flow (DCF) analysis to determine the net present value (NPV) of the Liberty investment relative to the savings from the anticipated investments over 10 and 20 years. Staff considered two scenarios, one in which the projects are retired in year 20 and one in which there is no early retirement. Staff's analysis assumes that the projects go into service in year one, a conservative assumption as the largest project is not expected to be in service for several years.

**Q. What were the results of Staff's analysis?**

A. Under both scenarios the investment results in NPVs well in excess of $3 million, over both 10 and 20 year projections. If the projects are not retired early or are retired early but after 20 years of service, the NPV would be higher than those that were calculated assuming

8 DaFonte/Killeen testimony, Bates page 24, line 4, provides TGP indicative rate for the second lowest priced scenario option.
9 Levelized cost is a measure of the average net present cost of a project over its lifetime.

retirement in 20 years. The DCF analysis if provided ***Attachment SPF-3***.

**Q. Do the cost savings justify the risk associated with cost recovery of a project with a 50 to 60 year average life compared to a 20 year contract?**

**A.** Based on currently available information, the projected savings are significant enough to justify the risk. It is also worth noting that the Contract costs will be reflected in 2021 COG rates and Liberty will not commence recovery of the majority of the project costs until the projects begin service, Liberty seeks recovery, and the Commission determines the costs were prudent and approves recovery.

**Q. What conditions do you recommend the Commission set in approving the contract?**

**A.** The Commission should set the following conditions:

- Liberty supply surplus/(deficiency) analysis shall use a Design Day standard based on the most recent 30 year weather data;
- No less than six months prior to a Company decision on whether to exercise its right to extend any of the three Tennessee Gas Pipeline contracts that originate from Dracut, Massachusetts, Liberty shall file with Staff an updated supply deficiency analysis;
- Company shall request Commission approval no later than 12 months prior to retiring any of the Company's propane or LNG facilities;
- Liberty shall file with Staff annual reports of customer complaints received during the preceding winter related to the Company's use of propane;
- Not less than 90 days prior to commencing construction of the Budweiser Line, Liberty shall provide Staff with detailed engineering and construction plans, most recent cost estimates, construction schedules, and the expected increase in the Company's ability to use the Contract capacity expect upon completion.

**Q. Please explain why the Commission should impose the recommended conditions.**

**A.** The Using a Design Day planning standard based on the most recent 30 years of weather data will better reflect the impact of climate changes, which is likely to result in lower demand forecasts that more accurately reflect weather risks.

Requiring Liberty to file updated demand forecasts in advance of any renewals of the TGP Concord Lateral contract will give Staff and other parties the opportunity to discuss with the Company Liberty's renewal options in advance of a Commitment by Liberty to renew, reduce or terminate capacity on the Concord Lateral, and alert the Commission of any concerns.

Requiring Liberty to seek Commission approval for the retirement of any of its propane and LNG peaking facilities will allow the Commission to determination whether such retirements would be cost effective in meeting demand needs.

Requiring reporting on customer complaints of damage to energy efficient equipment will help in determining if propane use was a contributing factor and, if so, how to remedy the situation.

Requiring Liberty to provide Staff with detailed engineering and construction plans and the Company's most recent cost estimates prior to commencing construction of the Budweiser Line will enable Staff to review the plans for cost and safety elements prior to construction. The requirement will also assist Staff and other parties to evaluate the merits of going forward with the project at that time as opposed to alternative solutions to address a perceived supply deficiency.

**Q. Do you have any other recommendations?**

**A.** Yes. The Commission's decision should make clear that on–system enhancements are not part of the conditional approval of the Contract and, therefore, that the decision does not impute pre-approval any of the system enhancements related to the Contract.

Liberty is permitted to request recovery of the investments in a future rate case, and conditional approval will not preclude Staff of any other parties from taking an opposing position with regard to such a request.

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

**A.** Yes.