STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

DOCKET 21-036

In the Matter of:

LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP.
d/b/a LIBERTY UTLITIES

Petition for Approval of a Renewable Natural Gas Supply and Transportation Agreement

DIRECT TESTIMONY

OF

DANIEL T. PHELAN

Utility Analyst, IV
New Hampshire Department of Energy

November 12, 2021

Q. Please state your full name?

A. My name is Daniel T. Phelan.

Q. By whom are you employed and what is your business address?

A. I am employed by the New Hampshire Department of Energy as a Utility Analyst IV. My business address is 21 S. Fruit Street, Suite 10, Concord, New Hampshire 03301.

Q. Please summarize your education and professional work experience.

A. I graduated from the University of Vermont in 2012 with a Bachelor's Degree in Political Science. I joined the National Regulatory Research Institute (NRRI) as a Research Assistant in December 2012. In June 2014, I was promoted to Research Associate, and worked for the NRRI in that capacity until June 2016. During my tenure at the NRRI, my work included authoring published reports on utility regulatory issues with a focus on critical infrastructure cybersecurity. I also constructed training programs for state utility commissioners and staff on energy topics, including cybersecurity, the smart grid, and electric vehicles. In June of 2016, I joined the Public Utilities Commission (PUC) as a Utility Analyst III (UA III) in the Wholesale Electricity Division. In 2018, I was promoted to UA IV. When the PUC split into two agencies in July 2021, my job title changed to UA IV with the New Hampshire Department of Energy (Energy). *See* **Attachment DTP-1** (resume)

Q. What were your job responsibilities with the PUC?

A. In addition to my work in this docket, while a member of the Public Utilities Commission Staff, my job responsibilities included, but were not limited to, participating in technical meetings with representatives of other regulatory state commissions, New England States Committee on Electricity (NESCOE), and ISO-New England (IS0-NE); advocating on behalf of New Hampshire consumers; working cooperatively with the managers and staff of NESCOE with the goal of developing positions on important wholesale market issues that are beneficial/acceptable to New Hampshire and can be supported by other New England states; analyzing issues relating to the region's wholesale energy and reserve markets such as ISO NE's Energy Security Improvements (ESI) proposal; assessing the impact on consumers of proposed changes in the rules and regulations that govern the region's Forward Capacity Market such as ISO NE's Pay-for-Performance program; representing the Public Utilities Commission at designated New England Power Pool (NEPOOL) technical committees including the Reliability, Transmission and Power Supply Planning committee; reviewing the costs and benefits of proposed transmission projects; analyzing issues regarding transmission system reliability and constraints; and making recommendations for consideration and action by the Public Utilities Commission.

Q. What are your job responsibilities with the Department of Energy?

A. I continue to hold the same responsibilities at the Department of Energy as I did at the PUC. Please see my previous answer.

Q. Have you previously testified before the Public Utilities Commission?

A. No.

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

A. My testimony presents my analysis of the financial impacts of the proposed RNG *Supply and Transportation Agreement* ("RNG Agreement") between Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities ("Liberty" or "the Company") and RUDARPA North Country, LLC ("RUDARPA"). Under the RNG Agreement, Liberty would purchase renewable natural gas (RNG) from RUDARPA's facility at the North Country Environmental Services (NCES) landfill in Bethlehem, New Hampshire. *See* **Attachment DTP-2** (Petition (filed March 4, 2021) Testimony of WJC/MRS Attachment 1 (executed RNG Supply and Transportation Agreement dated October 9, 2020). ("RNG Agreement)

Q. Please summarize your finding and recommendations.

A. The Public Utilities Commission should not approve the RNG Agreement because it will likely result in higher rates than if Liberty met its supply needs through other means. The RNG Agreement also creates significant risk related to regulatory and economic factors. Liberty has not demonstrated that the risks associated with this RNG Agreement have been sufficiently mitigated.

Q. Please briefly describe Liberty's filing in this docket.

A. On March 4, 2021**,** Liberty filed for approval of the RNG Agreement to purchase processed, pipeline quality RNG from the to-be-built RUDARPA facility to Liberty. Under the proposal, RUDARPA will construct a cleaning/production system at the NCES landfill and deliver pipeline quality gas to three delivery points on the Liberty distribution system. Liberty will construct, maintain, and operate the receipt points. Under the RNG Agreement, RUDARPA must deliver a Minimum Annual Supply Quantity (MASQ) to Liberty in each year of the RNG Agreement. In turn, Liberty must purchase the entire output of the RUDARPA facility at a price specified in the RNG Agreement. The price increases according to an annual inflation adjustment.

Under the RNG Agreement, Liberty would also have the ability to purchase the RNG facility after four years. Liberty would also have a right-of-first-refusal under any circumstance which RUDARPA would sell the facility. Were Liberty to purchase the production facility, RUDARPA would continue to operate and maintain the facility, while also retaining responsibility for delivery of the RNG to the receipt points. Liberty claims that purchasing the facility will result in a 25% savings in the commodity cost of RNG. Liberty has signed Letters of Intent (LOIs) with three customers that indicate their willingness to purchase RNG. The commodity cost, as specified by the RNG Agreement, will be passed through to the LOI customers. Liberty will then develop an "opt-in" tariff that would sell RNG to residential customers. Liberty proposes that if "opt-in" and LOI RNG sales volume is below the delivered quantity of RNG, the remaining volume be injected into distribution pipelines with RNG costs to be recovered through Liberty's overall cost of gas (COG).

Q. What regulatory issues are unresolved in Liberty's filing?

A. Liberty has proposed to sell the RNG to voluntary customers, beginning with the three commercial customers who have signed LOIs. These customers would pay the same commodity price that Liberty will pay RUDARPA under the RNG Agreement's terms. The quantity of RNG sold to LOI customers would be recovered directly from those customers, with the remaining quantity of RNG being offered to residential customers under an opt-in tariff provision. As explained above, the remaining unsubscribed RNG would be sold to residential customers ("involuntary RNG customers") and included in Liberty's standard overall COG.

As of October 13, 2021, when Liberty updated its (confidential) responses to Energy data request 1-3 (revised) and data request 3-11, no LOI customers have signed actual contracts. Letters of Intent are non-binding and even if special contracts are signed, the contracts will need to be reviewed and approved by the Commission before LOI customers can take delivery of RNG. The contracts might not be approved. If they are approved, then Liberty will need additional time to construct decompression facilities at each receipt point. While these contracts await approval and Liberty builds the appropriate infrastructure, Liberty will not be able to deliver RNG to LOI customers. Additionally, one of these LOI customers is located outside of Liberty's franchise area. In its March 4, 2021 filing (WJC/MS Testimony Bates 016), Liberty indicated its intent to petition the Commission for a new franchise solely to serve this one customer. This new franchise would have to be granted before the customer could receive RNG. *See* **Attachment DTP-3** (Petition excerpts).

Liberty has also proposed an unreasonably short timeframe for the franchise to be filed, reviewed and (Liberty presumes) granted. A final decision on any franchise petition Liberty might submit may prove more complex than Liberty anticipates. For example, Franchise approval in DG 15-362 (Pelham/Windham) took approximately 18 months from petition to order; approval in DG 16-852 (Lebanon) took approximately 16 months. Liberty expects to file for the new Lebanon franchise once the LOI contracts have been executed, and then receive a ruling from the Public

Utilities Commission on the contracts and the franchise petition four to five months thereafter. *See* **Attachment DTP-4** (Liberty's Response to Energy DR 1-26). Even if Liberty filed executed special contracts and a franchise petition on December 15, 2021, the goal the Company identified in August 2021*, see id.,* the time required for the Public Utilities Commission to review the franchise petition, and whether or not a franchise would be granted for one customer, cannot be predicted.

While the regulatory challenges associated with LOI customers (described above) are awaiting resolution, Liberty proposed to offer RNG to opt-in commercial and retail customers, if any. However, the tariff provisions to allow participation in such a program do not exist at this time. Liberty will need to create the tariff provision and get it approved by the Public Utility Commission before offering RNG to (any) opt-in customers. This would be a further regulatory challenge and would take additional time.

Liberty has attempted to gauge interest in an RNG opt-in program through a consultant. *See* **Attachment DTP -5** (Liberty's Response to OCA DR 1-7). This report finds that, even under its most optimistic scenario, it would take at least three years to generate any significant residential participation. The report was unable to quantify any participation by commercial customers. These factors lead me to the conclusion that there will be no RNG sold to LOI or opt-in customers during the initial years of the RNG Agreement. The cost of the RNG Agreement would then be recovered from all of Liberty's customers regardless of their desire to purchase RNG. (I reserve the opportunity to identify other limitations on the referenced report's conclusions and analysis.)

Q. What would the economic impact on customers be if the RNG Agreement were approved?

A. The RNG Agreement would cause Liberty's customers to pay above-market rates for gas, without consideration of their desire to do so.

Q. Please describe the economic analysis Liberty performed and the results of that analysis.

A. Liberty provided an analysis of the delivered cost of RNG under RUDARPA's ownership, and a separate analysis of the delivered cost of gas under Liberty's ownership, were Liberty to buy the RNG facility. In the event that Liberty were to purchase the facility, the purchase price would be negotiated at the time of purchase, but Liberty has provided an estimated facility value in year one of $13,304,368. This purchase price, with straight-line depreciation over a 20-year life cycle, shows a delivered cost of $10.47-$16.55 per dekatherm (Dth) under RUDARPA's ownership, and $9.69-$11.06 per Dth under Liberty's ownership. *See* **Attachment DTP-3** (Bates 099-100)**, Attachment DTP-2** (RNG Agreement). Liberty also attempted to quantify the cost effects of including the unsold volume of RNG in its standard COG rates.

Q. What did Liberty conclude from its analysis?

A. Liberty concluded that (Bates 022, line 11) "[t]he impact of including the unsold RNG in the Liberty COG would be *de minimus*." Liberty continued: (Bates 022, lines 12-14) "[i]ncluding all of the currently uncontracted RNG in the 2020-2021 COG at the Year 1 contract price of $1.047 (and making reasonable simplifying assumptions) would cause the Liberty COG rate to increase by less than one penny per therm." *See* **Attachment DTP-3**.

Q. Do you agree with Liberty's analysis and conclusion?

A. No. Liberty's assumptions do not represent a realistic scenario and understate the risk associated with the contract. Furthermore, it does not sufficiently analyze the future impacts of the RNG Agreement on Liberty's overall cost of gas (COG) rate.

Q. Please explain.

A. First, Liberty has assumed that all LOI customers will in fact sign purchase contracts. The LOI customers have a combined annual demand of 317,169 Dth. This would represent 59% of RUDARPA's projected Year 1 output. However, these customers have not signed contracts with Liberty to receive RNG. Liberty will need Commission approval for any such contracts and has not indicated a reasonable timeline or ability to do so. Notably, one of the LOI customers is physically located outside of Liberty's franchise area and Liberty would need a new franchise for that single customer. Liberty has not yet sought approval of that franchise.

Without signed contracts, Liberty will recover the above-market cost of RNG from all of its customers rather than from customers who have made the decision to pay for RNG. Liberty has not filed any contracts to sell RNG. The recovery of the contract costs, at a higher rate than Liberty's approved cost of gas, would therefore fall to non-voluntary customers. An analysis of overall impacts on Liberty's COG rates should assess the full volume of RNG delivery.

Second, Liberty has performed the analysis based on the MASQ instead of the projected facility output. The difference between RUDARPA's projections and the MASQ is significant: RUDARPA expects to produce 48,083 Dth above the MASQ in Year 1. This is nearly 10% of the MASQ in that year.

Third, Liberty has only provided an analysis of winter months. Liberty has "assumed to be consistent over the year" (Liberty Response to Energy DR 3-2) but has not provided a pricing analysis of each month of the year. *See* **Attachment DTP-6**

Fourth, Liberty has used data from its most recent COG proceeding to estimate the impact of the RNG Agreement, rather than using projected future commodity costs. The rate impacts of the RNG Agreement are based on the difference between the contracted RNG price and the commodity cost of replacement gas. That is, if commodity costs are lower than RNG costs, the RNG Agreement increases rates. Conversely, if commodity costs are higher than RNG costs, the RNG Agreement decreases rates. When calculating the cost impact of the RNG Agreement in Year 1, Liberty did not use reasonable assumptions about the future commodity cost of gas.

Q. Have you performed an analysis that corrects these assumptions?

A. Yes. My analysis assumes that no volume of RNG is sold directly to LOI customers, that the RUDARPA facility meets its projected output, and used Liberty's projected commodity costs, *see* **Attachment DTP-7** (Liberty's Response to Energy DR 2-3.a), to estimate the impact of the contract in Year 1, the split year of May 2022-May 2023.

Q. What were the results of that analysis?

A. Under those assumptions, I find that the RNG Agreement results in a ¢2.4 per therm increase in May 2022-May 2023. The RNG Agreement will cost Liberty's ratepayers $2,650,866 above the cost of gas for the year. This increase represents a 3.48%

increase to the cost of gas for Liberty's ratepayers. *See* **Attachment DTP-8 and DTP 8.xlsx** (DTP calculations).

Q. Has Liberty proposed any mechanism to mitigate customer costs?

A. Liberty has offered to cap the volume of RNG included in its COG rate at 5% of EnergyNorth's annual sendout.

Q. Does the proposed 5% cap change your analysis?

A. No. In Year 1, the projected output is marginally below the 5% cap. However, over the seventeen-year duration of the RNG Agreement, using the simplifying assumption of zero load growth, this cap would exceed the projected production of the facility in all but two years of the RNG Agreement. In those two years, the cap would limit ratepayer exposure to the cost of 23,447 Dth. Given the contract pricing in those two years, this would protect ratepayers from paying $271,948. That dollar amount represents just 0.27% of the increased $99,917,946 gross contract commodity cost over the course of the RNG Agreement. *See* **Attachment DTP 9 and DTP 9.xls** (DTP calculations). Thus, even including the two years when projected production exceeds the cap, this five percent cap does not sufficiently protect ratepayers from the risks associated with this contract. The cap offers minimal protection in the first five years, then effectively none after. If Liberty does in fact sign contracts with its LOI customers, the resulting reduction in unsold RNG would eliminate the protections altogether. When those contracts expire, Liberty would include the entire cost of RNG in its overall COG without significant risk mitigation. Furthermore, the projected production of the RNG facility will decrease over time, making the production farther below the five percent cap even as the contract costs escalate on a dollar per Dth basis. This, along with the inability to predict the cost of pipeline gas as time goes on -- and thus the inability to predict the ratepayer cost of the contract -- represents significant risk to which non-voluntary customers will be exposed.

Q. Does Energy's or Liberty's analysis include the impact of potential opt-in residential customers?

A. No. Liberty does not include an analysis of opt-in customer participation, and Energy finds it unreasonable to expect opt-in participation. In Year 1 of the RNG Agreement, as analyzed here, it is unlikely that Liberty will have had an opportunity to implement an approved tariff provision for opt-in customers.

Q. Has the value of TRECs been included in either Energy or Liberty's analysis?

A. No. To date, Liberty's economic analysis, as described above, does not include any revenue from TRECs. Energy does not believe that any revenue from TRECs should be included in the analysis. *See also* Testimony of the Department of Energy's Deandra Perruccio.

Q. Are there other risks associated with the RNG Agreement?

A. Yes. Liberty would have the ability to purchase the production facility under the RNG Agreement and has indicated that doing so would create a 25%-33% savings in RNG commodity cost over the facility's 20-year life. Liberty said it would negotiate the purchase price of the facility in the future, but has provided an estimated facility value in year one of $13,304,368. However, purchasing the facility would place Liberty's customers at risk of stranded costs related to this purchase. Liberty has not identified gas production facilities owned by a similar utility. Furthermore, purchasing the facility would spread the cost of the facility, and its associated RNG, to all of Liberty's customers. The facility would be put into Liberty's rate base and therefore increase expenses to all ratepayers, whether or not they had any desire to purchase RNG. This risk is compounded by the lack of signed contracts from LOI customers and places ratepayers at risk for both the entire value of the production facility and the above-market cost of RNG.

Another significant risk is the seventeen-year duration of the RNG Agreement. While Energy has been able to analyze the cost impacts of the RNG Agreement in Year 1, neither Energy nor Liberty can estimate the long-term rate impacts of the RNG Agreement. As previously discussed, the cost of the RNG Agreement is measured by its relationship to what it is replacing, i.e., the cost of gas. It is appropriate to compare the RNG cost to the cost of pipeline gas. However, Liberty has provided a projection of that cost for just twenty-eight months. *See* **Attachment DTP 7.** Beyond this period, neither Liberty nor Energy has a basis of comparison for the RNG Agreement's prices. Thus the RNG Agreement creates an obligation for Liberty to purchase RNG without knowing that doing so will be cost-effective. Additionally, the RNG Agreement gives Liberty the ability to extend it for an additional ten years at the end of its term, without subsequent Commission approval. Liberty would have the sole discretion to continue the RNG Agreement, regardless of whether or not the RNG Agreement has provided benefit – or significant harm – to ratepayers.

Q. Is this testimony based on the information Liberty provided prior to October 15, 2021?
A. Yes.

Q. Does this conclude your testimony?

A. Yes.