

Deandra M. Perruccio

dmperruccio@gmail.com
603.475.7482

Education

Master of Science, Community Development and Applied Economics, University of Vermont 9/2013- 1/2016
Graduate Fellow, Gund Institute for Ecological Economics, Concentration: Ecological Economics
Thesis research: *Sustainability from Concept to Implementation: Developing a Sustainability Assessment for Small Scale Biomass Gasification Systems in Rural East Africa*

Academic Coursework

Quantitative Research Methods

Developing research projects with the scientific methods; evaluating alternative literature review, sampling, surveying, and analytic methods; and reporting the results.

Advanced Microeconomics

Principles and applications of advanced microeconomics: consumer and market demand, firm and market supply, perfect and imperfect markets, partial and general equilibrium, and policy analysis.

Decision Making Models

Develop intelligent decision support systems, including agent based simulation models; artificial intelligence (AI)-based technologies such as logic rule-based systems, neural networks, fuzzy logic, case-based reasoning, genetic algorithms, data-mining algorithms; and deliberative decision making models such as mediated modeling and collaborative management techniques.

Bachelor of Arts, Global Studies, Assumption College. 9/2004 -5/2008

Major: Global Studies, Social Science Concentration, Minor: Foundations of Western Civilization

Overall GPA **3.78**, Major related GPA **3.80** *Summa cum Laude*

Research and Economic Experience

Utility Analyst III 3/2017-Present

New Hampshire Public Utilities Commission, New Hampshire Department of Energy Concord NH

- Manage renewable energy rebate programs including assistance in program evaluation and development, staff recommendations, public education and inquiry resolution.
- Renewable Energy Certificate (REC) facility registration, ongoing eligibility, and issue resolution including staff recommendations.
- Group net metering program management, public education, inquiry resolution.
- Rules development; Lead analyst on Puc2500 rules changes to incorporate changes to RPS statute and Puc900 rules changes to incorporate net metering Orders as well as changes to net metering legislation.
- Assistance in docket-related work related to net energy metering including methodology research, development of Commission studies on system-wide and locational value of distributed generation.

Analyst 3/2016-3/2017

New Hampshire Office of Energy and Planning, Concord NH

Assist office with policy related initiatives including data collection, analysis and presentation, secondary research, grant reporting, outreach and education, and representing the office in stakeholder groups. Responsibilities have included researching and synthesizing energy supply and demand in New Hampshire, electric pricing research, heating fuel pricing data collection including developing wood pellet pricing survey, biodiesel, electric vehicles, and capacity markets.

Graduate Position; Energy Purchasing and UVM's Climate Action Plan 6/2015-1/2016 (20 hrs/week)

University of Vermont Office of Sustainability, Burlington VT

Co-developed and conducted research and engagement regarding energy decision making to address climate action goals at University of Vermont. Responsibilities included:

- Educating and creating dialogue with UVM extension offices regarding the purchase of “Cow Power” electricity credits to achieve climate action goals for electricity consumption.
- Researching Cow Power program and anaerobic digestion including a sustainability assessment of the energy system in Vermont as well as presenting information to decision-makers

Field Researcher, 5/2014-8/2014 (full time)

Gund Institute for Ecological Economics, Kamapla, Uganda

Planned, coordinated, and conducted thesis research including survey tool development, logistics and budget oversight, and three months of field data collection in central and northern Uganda.

- In person surveying including interviews, focus groups, and meetings in rural and urban settings
- Research focused around development of a sustainability assessment tool for small scale biomass gasification energy systems in partnership with Pamoja Cleantech AB.

Teaching Assistant, Quantitative Research Methods LAB 8/2013-12/2014 (10 hrs/week)

University of Vermont, Burlington VT

Instructed lab section for QRM including review of and projects using SPSS statistical analysis software. Responsible for curriculum, teaching, and grading for LAB portion of course.

Teaching Assistant Macroeconomics for Community Development 8/2013-5/2015 (10 hrs/week)

University of Vermont, Burlington VT

Assisted professor with course support ranging from teaching sessions, grading and creating rubrics, to providing student support, study sessions, and curriculum development. Course topics included monetary theory and policy, labor and employment, ISLM modeling, foreign exchange.

BRIDGE Assessment Project Assistant 2/2014-5/2014 (contracted services)

University of Vermont, Burlington VT

Assisted in the development of project evaluation report for international coalition conducting democracy and governance training. Responsibilities included thematic grouping of interview notes, assisting in report outline development, editing and formatting of the final document.

Service and Leadership Experience

Circle Program Mentor

7/2017-Present

Board member, Education Committee, 2012- Present

Central New Hampshire Bicycle Coalition

UVM Clean Energy Fund Advisory Committee,

8/2014-5/2017 *Clean Energy Fund*

Volunteer Trip Leader In-Training, 6/2012-8/2015

Appalachian Mountain Club

Awards and Professional Associations

YES Team Community Impact Award

InTown Concord 2011

George A. Doyle Merit Award for Excellence in Economics or Global Studies

Assumption College 2008

Community Leadership Award

Green Concord Business Group 2010

Honors Award in Global Studies/Economics

Assumption College 2008

Technology Experience

Experience learning and working with variety of social media, data analysis, and other computer software programs including Contribute, SPSS, Hyper-research, Microsoft Suite, Survey Monkey, Constant Contact, Network Solutions, Basecamp

1 **Q. Have you previously testified before the Commission?**

2 A. Yes, I have testified before the Commission regarding Liberty's various growth
3 initiatives.

4 **Q. Mr. Stevens, please state your educational background and professional experience.**

5 A. I graduated from Saint Anselm College in Goffstown, New Hampshire, with a Bachelor
6 of Science degree in Business in 2000. I have approximately six years of experience in
7 the natural gas and LDC industry with roles in Sales and Business Development. I joined
8 Liberty in July 2015 as a Sales Account Manager and have been in my current position as
9 a Business Development Professional since January 2019. In my current role I am
10 responsible for strategic growth and expansion opportunities for Liberty's New
11 Hampshire businesses.

12 **Q. Have you previously testified before the Commission?**

13 A. No, I have not previously testified before the Commission.

14 **II. PURPOSE OF TESTIMONY**

15 **Q. What is the purpose of this filing?**

16 A. In this filing, Liberty is seeking Commission approval of an *RNG Supply and*
17 *Transportation Agreement* ("RNG Agreement") with RUDARPA North Country, LLC
18 ("RUDARPA"). An executed copy of the RNG Agreement is provided as Attachment
19 WJC/MRS-1. The Company is also requesting approval (a) to credit the proceeds from
20 the sale of the New Hampshire environmental attributes of the RNG toward the
21 Company's cost of gas ("COG"), excluding the attributes of the RNG sold to those

1 customers who have entered into special contracts, and (b) to cap at five percent the
2 quantity of “unsold” RNG included in the Company’s overall COG.

3 Our testimony provides an overview of RNG, including the interchangeability of RNG
4 and traditional pipeline natural gas, and the new infrastructure required. We describe the
5 material terms of the RNG Agreement and explain how Liberty will utilize and account
6 for the RNG, including the related environmental attributes. We also review the Letters
7 of Intent (“LOIs”) from three commercial customers who will sign special contracts to
8 purchase the RNG, and the Company’s plans to offer RNG more broadly through a
9 customer “Opt-In” tariff.

10 **III. OVERVIEW OF RENEWABLE NATURAL GAS**

11 **Q. What is Renewable Natural Gas?**

12 A. Renewable natural gas, or RNG, is pipeline compatible gas derived from biogenic or
13 other renewable sources. The majority of RNG produced today comes from capturing
14 emissions from existing waste streams found in landfills, wastewater treatment plants,
15 food waste, and animal manure. To produce RNG, this gas must be treated and cleaned
16 to remove non-methane components. Once treated and cleaned so that the RNG meets
17 quality specifications for the receiving natural gas pipeline, it is fully interchangeable
18 with conventional natural gas and can be injected into the existing gas pipeline system.

19 The many advantages of RNG include the double environmental benefits resulting from
20 the lower use of fossil fuels and the elimination of natural sources of methane and
21 greenhouse gas (“GHG”) emissions. That is, use of RNG reduces the methane directly

1 drivers, and payments for fuel and tolls. Liberty will pay a fixed charge per DTH for
2 these services with annual CPI adjustments. As mentioned previously and as
3 demonstrated in Attachment WJC/MRS-4, the revenue requirement associated with
4 Liberty's future ownership of the facility, plus these fixed costs, could reduce the cost of
5 RNG for Liberty's customers by approximately 25% starting in production Year 5, as
6 compared to the costs that would be incurred under continued RUDARPA ownership.

7 **Q. Where are the designated receipt points?**

8 A. There are three designated receipt points, as identified below:

- 9 • Broken Bridge Road, Concord, NH, and/or Tilton Road, Tilton, NH;
- 10 • Production Avenue, Keene, NH; and
- 11 • West Lebanon, NH.³

12 Liberty also retains the option to designate the specific receipt points within the Liberty
13 franchise area, provided that the receipt point is at an equal or shorter distance than the
14 original designated receipt point in Concord. Liberty may choose an alternate designated
15 receipt point that is a greater distance than the designated receipt points, provided the
16 parties agree to a delivery adder.

³ Liberty will include a geographically targeted franchise filing along with the special contract filing in order to serve the commercial customer utilizing the West Lebanon receipt point.

- 1 • Helps achieve environmental protection that is cost-effective and enables
- 2 economic growth;
- 3 • Generates in-state economic activity without reliance on the permanent
- 4 subsidization of energy; and
- 5 • Leads to the siting of appropriate energy infrastructure with the input and
- 6 guidance of stakeholders.

7 New Hampshire requires, and this project delivers, a new source of clean, renewable
8 energy that meets the current and future demands of Liberty customers with minimally
9 disruptive impact and at reasonable cost.

10 **Q. Are there customers who want to buy RNG?**

11 A. Yes. As societal demands for clean, affordable, renewable energy continue to grow, our
12 customers are increasingly expressing interest in products and services that will help
13 them achieve their own sustainability goals and help them manage their carbon and
14 environmental footprint. Specific to this RNG project, Liberty secured LOIs from three
15 commercial and industrial customers. Please see Confidential Attachments WJC/MRS-5,
16 WJC/MRS-6, and WJC/MRS-7. In each LOI, the customer agreed to execute special
17 contracts for delivery of RNG whereby they will pay the actual cost of the RNG in the
18 cost of gas portion of their gas bill. All other charges (Customer Charge, Distribution
19 Charges, and the Local Distribution Adjustment Clause charge) will be at standard tariff
20 rates applicable to each customer's rate classification, as adjusted by future rate
21 proceedings. These customers will also own any State of New Hampshire environmental

1 attributes such as TRECs that may be available to them. Liberty is in ongoing
2 communication with all three customers who are waiting for estimated RNG availability
3 dates before finalizing their special contracts and filing for Commission approval.
4 Liberty expects to finalize these special contracts and file them for Commission approval
5 in the near future. And, as mentioned above Liberty will include with the special contract
6 filing for the industrial customer in West Lebanon a request for a targeted franchise area
7 to serve that customer.

8 **Q. What portion of the annual RNG volume are theses three LOI Customers expected**
9 **to purchase?**

10 A. Liberty has commitments from these LOI Customers for approximately 317,000
11 DTH/year. This quantity represents approximately 65% of the MASQ for each of the
12 first five contract years, and 85% of the MASQ for each of the second five contract years.
13 In terms of production volumes, current customer commitments represent approximately
14 60% of the landfill's estimated average annual output over the first five contract years
15 and 80% over the second five contract years. The result is that the LOI Customer volume
16 would consume 70% of the Bethlehem facility's estimated production capacity over the
17 first ten years.

18 The remaining 30% would be offered to all Liberty customers through an RNG Opt-In
19 tariff, as discussed below.

20 After ten years, when the production of RNG is expected to decline, the estimated
21 production volumes from the Project would then be less than the annual volumes of the

1 from potentially higher costs of RNG. In short, when the production of RNG under the
2 RNG Agreement results in volumes that exceed the volumes required under the special
3 contracts, the Company's proposed cap provides a practical solution to meet customer
4 demand for RNG while limiting the exposure of other customers.

5 **Q. Are TRECs available for customers who use RNG to create “useful thermal**
6 **energy”?**

7 A. Yes. Due in large part to Liberty's efforts, in 2018 the Legislature amended RSA 362-
8 F:4, I(e) to clarify its intent that the combustion of “methane gas” (which includes RNG)
9 is eligible for TRECs “if the methane gas energy output is in the form of useful thermal
10 energy.” Laws 2018, Ch. 340:4. Therefore, customers who burn RNG to heat their
11 homes or business or for other thermal processes are eligible for TRECs.

12 There remain questions of how customers connected to a utility's distribution system may
13 take credit for the thermal energy produced by the RNG they purchased, that is, whether
14 they may take credit for the fossil fuel displaced by their RNG similar to how renewable
15 electric generation is treated, or through some other mechanism. Liberty expects to
16 resolve this question during the Commission's upcoming Puc 2500 rulemaking docket.

17 **Q. How does the Company intend to treat any New Hampshire environmental**
18 **attributes, such as TRECs, of the RNG not sold to the special contract customers?**

19 A. When the opt-in tariff is in place and the above question is resolved, Liberty plans to
20 monetize the TRECs of the opt-in customers and use the proceeds to reduce the COG.
21 The Company will aggregate and sell the TRECs through the established marketplace and

1 credit 100% of the proceeds back to customers through the COG. The TREC proceeds
2 will be allocated proportionally to customers in each division based on the volumes of
3 RNG delivered to each receipt point.

4 **Q. What if the rule changes necessary to monetize TRECs do not occur?**

5 A. If the Company is unable to monetize the TRECS for its opt-in customers, it would add
6 the slightly higher cost of the additional RNG to the overall cost of gas, which will have a
7 *de minimus* impact on the COG for existing customers, as illustrated above. After
8 accounting for the LOI volumes, the remaining RNG only represents approximately 1%
9 of the total annual send-out volume for Liberty.⁸

10 **Q. Is expansion of the NCES landfill required to provide the needed volumes of RNG**
11 **to support the project's economics??**

12 A. No. All RNG volumes discussed in this testimony and attachments are based on the
13 estimated production of the existing landfill footprint. Neither the current operations nor
14 any future expansion of the NCES landfill has any bearing on the economics of the
15 project as presented.

16 **Q. Why is it in the public interest to approve this project?**

17 A. This RNG project is in the public interest and should be approved by the Commission
18 because it:

⁸ See 2018 Annual Report.

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

DG 21-036

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

Department of Energy Data Requests - Set 1

Date Request Received: 7/23/21
Request No. DOE 1-8

Date of Response: 8/6/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference testimony of Clark and Stevens Bates page 16, lines 7-16 and attachment WJC/MS-1, Bates 63.

- a. Will these delivery points be used exclusively by any of the LOI customers referenced in this filing, or will they serve multiple customers and/or multiple meters? Are any of the LOI customers taking RNG without needing to use a distribution line shared with non-renewable gas customers?
- b. Please describe in detail the service points and metering for the three LOI customers, specifically indicating for each if the RNG supply points and lines serve only the LOI customer or additional customers who may be using non-renewable natural gas on the same service line and any additional metering equipment required.

RESPONSE:

- a. The Broken Bridge Road receipt point will be utilized to serve the on-system LOI customer and on system customers that opt in to purchase RNG. The Keene receipt point location is yet to be determined and could be located at Production Ave where the Company's current CNG facility is located or located on the Keene LOI customer's private property. If the Keene receipt point is on the private property of the Keene LOI customer, it would be used exclusively by this customer. The West Lebanon receipt point will be located on the LOI customer's private property and used exclusively by this customer until and unless Liberty is able to add additional customers located nearby. In that event, the decompression facility could be relocated to another property and serve multiple utility customers.
- b. The service point and metering for the existing on-system LOI customer will remain as-is with no required modifications to accept RNG. This would be the same for all on-system customers who choose to opt-in to purchase RNG. The final location of the receipt point in Keene will determine if the receipt point and main lines are shared by the LOI customer and customers utilizing conventional CNG. The West Lebanon LOI customer will not be sharing the receipt point or service line with other customers, unless the Company wishes to expand service to other customers located within the targeted

Docket No. DG 21-036 Request No. DOE 1-8

franchise area. If the Company decides it is prudent to serve other customers within the targeted franchise area, the receipt point will be relocated and removed from the West Lebanon LOI customer's property.

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

DG 21-036

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

Department of Energy Data Requests - Set 1

Date Request Received: 7/23/21
Request No. DOE 1-10

Date of Response: 8/6/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference testimony of Clark and Stevens, Bates page 20, lines 1-7.

- a. Please update information on the status of these special contract agreements. Does the Company have an estimate of when executed contracts will be submitted to the Commission for review? Does the Company assert a decision in this docket is required prior to submitting these contracts for Public Utilities Commission review and approval?
- b. What will the Company do with the associated RNG if one or all of the LOI customers do not ultimately sign a contract for RNG? Will the cost of unallocated RNG then be recovered from all customers on the pipeline? If so, what is the financial impact on COG for existing customers if no LOI special contracts are entered?
- c. Please provide details as to whether or not REC values are included as part of the contracts being considered by LOI customers and if so what assumptions about these values are being presented in these contracts? I.e., are any of the LOI contract customer agreements contingent upon or actually using a TREC value and if so how and at what assumed value?

RESPONSE:

- a. The Company is in continuing negotiations with all three LOI customers, and is hopeful to have all three executed by year end. The Company does not assert a decision in this docket is required prior to submitting the executed contracts for Public Utilities Commission review and approval.
- b. If one or all of the current LOI customers do not sign a contract for RNG, the Company will market the RNG to other large customers with sustainability goals, and develop an Opt-In tariff to allow environmentally conscious customers to purchase the RNG. Attachment DOE 1-10.b.xlsx displays the impact on the COG assuming no RNG is sold to LOI or Opt-In customers. Note, the COG is expected to increase for this upcoming winter based on the projected market price for natural gas, which would make the impact on COG even less if that is the case.

Docket No. DG 21-036 Request No. DOE 1-10

- c. REC values are not included as part of the contracts being discussed. However, all three LOI contract customers are aware of the TREC program and are hopeful to become eligible for TRECs by utilizing the locally sourced RNG. In discussions with the three LOI contract customers, we have been discussing a conservative TREC value to be utilized to subsidize the higher cost for the renewable fuel, and all three LOI customers may opt to either retire or monetize the TRECs generated or a combination of both.

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

DG 21-036

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

Department of Energy Data Requests - Set 1

Date Request Received: 7/23/21
Request No. DOE 1-15

Date of Response: 8/6/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference OCA data request response 1-1 attachment b2 and attachment WJC/MS-4, Bates page 99-100, in the provided live Excel file.

- a. It appears the TREC value is provided, but not used, in the financial projection calculations provided for the delivered cost of gas; is that correct? If correct, why doesn't the Company use the TREC value in this calculation?
- b. Does the Company understand existing PUC 2500 Rules and statutes to permit Liberty EnergyNorth to own TRECs? Under what specific section of the statutes and PUC 2500 Rules does the Company assert that distribution customers are capable of being certified facilities that produce TRECs?

RESPONSE:

- a. The TREC value is not used in the financial projection calculations provided for the delivered cost of gas. The Company decided to not use the TREC value for this calculation to show a conservative scenario and not make assumptions that TRECs would be generated by the use of RNG or of TREC values.
- b. It is Liberty's opinion that Liberty can "own" TRECs as they are available in the market for purchase by anyone. Liberty may also acquire ownership of TRECs if Liberty becomes an "aggregator" under Puc 2507.

Distribution customers who meet the requirements of Puc 2505 are capable of being certified as Class 1 sources eligible to produce TRECs.

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

DG 21-036

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

Department of Energy Data Requests - Set 1

Date Request Received: 7/23/21
Request No. DOE 1-16

Date of Response: 8/6/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference Bates page 23, lines 19-21 and page 24 lines 1-3. Reference generally mentions monetizing TREC values to reduce the COG for distribution customer; is a TREC value included in the financial projections provided on Bates pages 99-100? Please clarify; is this monetization reflected currently in Company projections, or would it result in additional savings not present in these financial projections?

RESPONSE:

The estimated TREC value is included in column R of Attachment WJC/MRS, Bates 99–100 to show what savings the estimated TREC value would provide. This monetization is not currently reflected in the Company’s projections and would result in additional savings not present in the financial projections.

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

DG 21-036

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

Department of Energy Data Requests - Set 1

Date Request Received: 7/23/21
Request No. DOE 1-18

Date of Response: 8/6/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference Bates page 23, lines 19-21 and page 24 lines 1-3. In referenced text the Company generally references monetizing T-REC value to reduce the COG for Opt-in and for involuntary distribution (pipeline) customers:

- a. Please describe in detail the specific role Liberty suggests it will perform in regard to aggregation referenced for opt-in and involuntary customers. Does this include assisting with REC facility certification, REC sales, REC monitoring?
- b. Puc 2505.10(h) states, "No source or facility shall use an independent monitor who is a member of the immediate family of the owner of the source or facility, holds a direct or indirect ownership interest in the source or facility, is an employee of the source or facility, or is an aggregator of certificates." Please clarify if Liberty is proposing to act as an independent monitor for distribution line RNG customers seeking TRECs, or as an aggregator for those customers, and please indicate if the Company has identified a party to fulfill the other role as well as any estimated cost for this service and how that will be recovered.
- c. Please indicate if the Company believes current PUC 2500 rules enable the metering of thermal energy for distribution (pipeline) customers a/k/a sources, and explain the Company's position.

RESPONSE:

- a. Liberty has not determined the role it will play with regard to opt-in customers as there are many details of the opt-in program to be developed. However, the Company believes it could act as an aggregator pursuant to Puc 2507 if that is the role that would best serve the opt-in program.
- b. Liberty has not determined the role it will play with regard to the opt-in program. However, it appears to be consistent with Puc 2505.10(b) that Liberty could serve as an independent monitor. As currently in effect, it is not likely that Liberty could serve as both an aggregator and as an independent monitor. Again, Liberty will assess the best

Docket No. DG 21-036 Request No. DOE 1-18

role for it to play to foster the opt-in program. The Company has not identified any other company that could serve in these roles.

- c. The rules currently allow thermal sources to be metered through an “alternative metering method” as provided in Puc 2506.06. This section imposes no particular restriction on an alternative metering method, thus the Company could propose use of the customers’ existing utility meters to measure the RNG input, and propose appropriate calculations to convert that input into the amount of useful thermal energy produced. The Company has not yet prepared such a calculation. Of course, the Commission must approve any alternative metering method. Puc 2506.06(a).

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

DG 21-036

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

Department of Energy Data Requests - Set 1

Date Request Received: 7/23/21
Request No. DOE 1-20

Date of Response: 8/6/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference Bates 23 lines 5-21 and 24 lines 1-9

- a. Please describe the Company's understanding with regard to the number and type of meters each RNG facility that wishes to qualify for TRECs would need for small and large thermal sources. Please indicate whether the customer, the Company, or all Company customers, will pay for some or all of the metering required to register and produce TRECs.
- b. Please confirm that a Special Contract Customer who is not part of a general pipeline will have a decompression meter, a volume (retail) meter, and a production (thermal energy) meter. How will the production meter distinguish between RNG and any alternative fuel provided if there is insufficient RNG supply in a given month necessitating the use of a different fuel?
- c. Please explain how the Company anticipates that, consistent with statutes and PUC 2500, Special Contract Customers on the distribution pipeline general distribution pipeline customers (including opt-in customers and involuntary customers) will measure the production of thermal energy. Will distribution pipeline customers and/or the Company require a decompression meter, a volume (retail) meter, and a production meter?
- d. TRECs generation includes a knowledge of the efficiency of the facilities burning the RNG to produce useful thermal energy; how does the Company propose to measure and/or estimate facility efficiency for distribution pipeline customers, by type of customer and size of facility?

RESPONSE:

As background to the Company's responses, the Company understands that Puc 2506.04 provides that all "sources" of useful thermal energy must meter the "production" of useful thermal energy. According to a plain reading of RSA 362-F, the Company considers the "source" in this case to be the new facilities necessary to create useful thermal energy, without which the useful thermal energy would not exist. The definition of the term "sources" under 362-F:2 XV and of "useful thermal energy" under 362-F:2 XV-a support this interpretation. In

this case, the necessary new facility, or “source,” is the production facility located in Bethlehem. As explained below, Liberty finds that the production meter at this facility is what is necessary for eligibility under RSA 362-F:4 I(e) and for compliance with Puc 2506.04.

The purpose of RSA 362-F is to “stimulate investment” in “new or existing facilities.” RSA 362-F:4I(e), which defines eligibility of methane gas under the thermal portion of Class I, is only related to “Class I (New),” and implies that the “source” is the same as the “unit” which must have become operational after January 1, 2013, in order to be considered a Class I source. This supports the Company’s interpretation that the Bethlehem facility is the “source” which must be metered, because the “investment” necessary to be “stimulated” in order to create “new” useful thermal energy in this case is the production facility in Bethlehem. This is different from how “source” is defined in the case of wood chips and pellets, because in that case the “source” in which “investment” is necessary to be “stimulated” is the customer’s equipment which actually consumes the fuel, not the forests, logging operations, and mills which produce the biomass fuel as these facilities already exist. In the RNG case, the “new” facility necessary to produce the useful thermal energy is the production facility, not the customer’s equipment. Whether a customer’s boiler was installed after January 1, 2013, is irrelevant to whether the fuel it consumes is renewable, making it illogical for “investment” in the customer’s boiler to be that which RSA 362-F:4I(e) is intended to “stimulate.” For these reasons and because we know that “methane gas” is an eligible useful thermal energy technology, as evidenced by the passage of SB577 which amended RSA 362-F:4I(e) to this effect in 2018, the RNG production facility must therefore be “source” of useful thermal energy in this case.

- a. It is the Company’s understanding that the necessary meters are those that measure the quantity of RNG produced at the production facility and put into the trucks that will be delivered to Liberty, which measurements will be confirmed by the Company’s meters at the decompression facilities. Rudarpa will pay for the meters at its facility; Liberty will pay for the meters at the decompression facility.
- b. Confirmed that special contract customers not connected to the Company’s distribution system will have a Liberty-owned volume (retail) meter. Not confirmed as to a production (thermal) meter because, assuming such a thermal meter is required to generate TRECs, (*see* above), that metering would be the responsibility of the special contract customer, not Liberty.

Any required production meter would probably not distinguish between RNG and any alternative fuel as the measuring of the different fuels would likely be performed by the retail meter and Liberty’s records of which fuel was delivered when.

- c. The Company anticipates that customers on the distribution system (both special contract customers and other customers wishing to produce TRECs) will not be required to measure the production of thermal energy for the reasons discussed above. In the alternative, special contract customers on the distribution system who wish to certify themselves would use a combination of their specific retail meter, any production meter that they deem appropriate, and the Company’s metering of the RNG that was injected into the distribution system. And again in the alternative, non-special contract customers on the distribution system would likely use a combination of their retail meter, Liberty’s

Docket No. DG 21-036 Request No. DOE 1-20

meter at the decompression site, and appropriate calculations to determine useful thermal energy produced.

- d. The Company has not determined exactly how to measure or estimate facility efficiency for distribution system customers, but options include (1) requiring such information from the customers who chose to opt in to an RNG program; (2) estimating efficiency of non-opt in customers by selecting geographic locations where the Company knows the most recent appliances have been installed (e.g., new franchise areas); and (3) using industry data that estimates the efficiency of broad customer bases.

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

DG 21-036

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

Department of Energy Data Requests - Set 1

Date Request Received: 7/23/21
Request No. DOE 1-26

Date of Response: 8/6/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference Bates 20, lines 8-19. Why does the Company believe that 65% of RNG production will be able to be sold to LOI customers in approximately one year, and explain the Company's position, given the following:

- a. LOI customers have not signed actual contracts as of 7/23/21
 - i. Parties cannot yet review the terms or duration of LOI customer RNG use;
 - ii. Liberty has not yet filed petitions for PUC review and approval of LOI customer special contracts;
 - iii. Some portion of the LOI customers include a distribution customer who could only burn RNG as part of mixed pipeline fuel that will be a combination of RNG and natural gas and there is not a clear statutory/regulatory pathway for distribution pipelines customers to qualify their facilities for TRECs;
 - iv. Liberty has not filed a petition for a Lebanon franchise, of any size and:
 - v. DG 15-362 (Pelham/Windham) took approximately 18 months from petition to order;
 - vi. DG 16-852 (Lebanon Franchise) took approx. 16 months from petition to order.
 - vii. Facilities that will receive pipeline RNG do not have production meters at this time.
- b. Please provide a timeline illustrating how the Company will address the above issues with a timeline end date of August 2022.

RESPONSE:

- a. The Company anticipates executing the special contracts and filing petitions for PUC approval of these special contracts prior to the RNG being delivered to the receipt points. If the special contracts are not approved or the off system receipt points are not ready to accept gas prior to RUDARPA being able to provide the Company with RNG, the Company has been in discussions with a third party that could potentially purchase RNG

Docket No. DG 21-036 Request No. DOE 1-26

from the Company and contract with the off system LOI customers and supply them with RNG during the interim period.

Please see response to DOE 1-20 for the Company's interpretation of statutory and regulatory pathway options for distribution pipeline customers.

The Company does not plan to file for a petition for a Lebanon franchise until the special contract with the Lebanon LOI customer is executed.

- b. The Company will endeavor to have the three special contracts executed by December 15, 2021, and file for PUC approval as soon as they are executed. If filed by December 15, it is the Company's desire to have Commission approval of the petitions by May 1, 2022, including a ruling on the Lebanon franchise in this timeframe.

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

DG 21-036

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

Department of Energy Data Requests - Set 1

Date Request Received: 7/23/21
Request No. DOE 1-44

Date of Response: 8/6/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Please confirm that Liberty expects to provide executed special contracts for all three LOI customers as part of discovery in this docket on or before September 1, 2021. Please identify the specific month and year when Liberty anticipates filing a petition with the Public Utilities Commission for approval of each special contract.

RESPONSE:

The Company cannot confirm that it will provide executed special contracts for all three LOI customers as part of discovery in this docket before September 1, 2021. Each of the three LOI contract negotiations are at different stages, and a date of December 15, 2021, would be more realistic at this time.

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

DG 21-036

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

Energy Data Requests - Set 2

Date Request Received: 8/27/21
Request No. Energy 2-1

Date of Response: 9/10/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference: Response to DOE 1-8 a.

Please clarify the status of the Keene Letter of Intent (LOI) receipt point including a timeline for final decision on the placement of the receipt point in the next two years, and subsequent five years. Who (the LOI customer, Liberty, Rate base customers, someone else?) will pay for the installation of the receipt point in the event it is located at Production Ave? Who will pay in the event it is located on the Keene LOI customer's property? Have special contract discussions with this or any other LOI customer clarified that TREC eligibility may be questionable for a facility with a service point: i) on a distribution system ii) being supplied with a sequential mix of CNG and RNG or other fuel and iii) being supplied with a simultaneous mix of CNG and RNG or other fuel.

RESPONSE:

At this time, it is most likely that the receipt point for the Keene LOI customer will be located on the private property of the Keene LOI customer. Given the Company is continuing to assess Keene system conversion options, it is likely the receipt point for the Keene LOI customer will remain on the private property of the Keene LOI customer for a minimum of five years. Given that the Keene LOI customer will be a new customer, the Company will perform the appropriate calculations for the investment required to serve this customer based on the Service and Main Extension Policy contained in the Company's tariff at the time. If a CIAC is required, the amount will be incorporated into the Special Contract. If, in the future, the receipt point is relocated to Production Avenue or another centralized supply facility, the Keene LOI customer would pay a negotiated "facility charge." Since a future supply facility will be utilized to serve all Keene customers including the LOI customer, and since this LOI customer would likely cause no incremental cost for that future facility, the "facility charge" would reduce rates for all other customers.

Contract discussions with all LOI customers have clarified that TREC eligibility is not guaranteed for facilities with service points on a distribution system, being supplied with a sequential mix of CNG and RNG or other fuel, and being supplied with a simultaneous mix of CNG and RNG or other fuel.

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

DG 21-036

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

Energy Data Requests - Set 2

Date Request Received: 8/27/21
Request No. Energy 2-7

Date of Response: 9/10/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference: Response to DOE 1-20

Please clarify the planned approach for pursuing eligibility under the Renewable Energy Portfolio statute (RPS) for RNG under this project proposal.

- a. Please confirm that the Company understands that the approach proposed in the background information of response to Request DOE 1-20 and the approach proposed thus far in the docket are mutually exclusive; meaning that even assuming distribution customers could be TREC eligible, and assuming Liberty were production REC eligible for RNG, the Company and its RNG customers (LOI and/or distribution customers) cannot both receive RECs simultaneously under the multiple approaches now put forth in this docket. In Energy's view, under a scenario where RUDARPA/Liberty obtained production RECs, RNG customers would not be eligible for TRECS, and vice-versa.
- b. Please clarify if Liberty has made a decision with regard to the approach for REC eligibility for the RNG at issue in this docket. If no decision has been made, please provide an estimate as to when such a decision will be finalized. Does the Company expect special contracts to be submitted before a decision is reached as to whether Liberty/RUDARPA will pursue production RECs for all or some quantity of the RNG produced?

RESPONSE:

- a. Confirmed.
- b. The Company intends to pursue the interpretation that the production facility is the entity that should be considered the "source" under RSA 362-F. However, the execution and approval of the special contracts are independent of a determination of REC eligibility. The special contract customers have agreed to purchase the RNG with the understanding that they bear the risk of REC eligibility; the special contracts are not contingent on REC eligibility.

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

DG 21-036

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

Energy Data Requests - Set 2

Date Request Received: 8/27/21
Request No. Energy 2-8

Date of Response: 9/10/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference: Responses to DOE 1-10c; DOE 1-21d and attachment 1-21 d; Petition, Attachments to the Testimony of Clark and Stevens, Bates 99-100

Given that, if eligible, the RECs generated by the MASQ of 490k Dth per year would meet 60%-90% of the thermal REC RPS requirement at minimum over the next five years, how does the estimated REC value being discussed with LOI customers (response Request DOE 1-10 c) and provided in Bates pages 099-100 reflect this impact? Are the values being discussed with LOI customers and the value provided in Bates 099-100 the same? If different, please provide TREC values Liberty is discussing or proposing with LOI customers.

RESPONSE:

The Company would like to revise its response to DOE 1-21 parts c. and d. Please see Attachment Energy 2-8.xlsx for the Company's revised response to DOE 1-21 parts c. and d. Based on the Company's 2017 analysis, the Company expects the RECs generated by the MASQ of 490k Dth per year would be approximately 20% of the TREC market; this is indicated in yellow in cell R:25 on Attachment Energy 2-8.xlsx. The Company expects the RNG fueled facilities in this docket would represent 40% of the Class 1 Thermal slack currently in the market. This is indicated in blue in cell P:25 on Attachment Energy 2-8.xlsx.

The Company has discussed conservative REC values with LOI customers, assuming a discount to the ACP, and the Company has advised the LOI customers that REC prices will fluctuate and that the risk of pricing would be on the LOI customers.

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

DG 21-036

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

Energy Data Requests - Set 2

Date Request Received: 8/27/21
Request No. Energy 2-13

Date of Response: 9/10/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference: Petition, Clark and Stevens Testimony, Bates page 063, Attachment WJC/MRS-1, Exhibit A

Liberty stated during the August Tech Session that the designated receipt points on Exhibit A are incorrect. Please provide an updated Exhibited A, "Designated Recipient Points," Bates page 063.

RESPONSE:

Please see Attachment Energy 2-13 for updated and revised receipt points on Exhibit A.

EXHIBIT A
Designated Receipt Points

There will be a total of three Designated Receipt Points as identified below:

1. 10 Broken Bridge Rd. Concord, NH 03301
2. 43 Production Ave. Keene, NH 03431 OR located on LOI Keene private property, 03431
3. Technology Drive, West Lebanon, NH 03784

Liberty shall have the option to choose an alternate Designated Receipt Point within the EnergyNorth franchise areas provided that Designated Receipt Point is equal to or shorter distance than the Designated Receipts Points listed above.

Liberty shall have the option to choose an alternate Designated Receipt Point at a distance greater than the Designated Receipt Points listed above for a mutually agreed upon Delivery Adder

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

DG 21-036

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

Energy Data Requests - Set 2

Date Request Received: 8/27/21
Request No. Energy 2-21

Date of Response: 9/10/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference: DOE Set-1 and technical session discussions

Liberty has referred to the LOI customers as “LOI Keene, LOI Other, and LOI Lebanon,” and also as “LOI 1, LOI 2, and LOI 3.” Please confirm that LOI Keene = LOI 1; LOI Other is LOI 2 and LOI Lebanon is LOI 3. Please confirm that Liberty will consistently use these references in DR responses and testimony. Please make corrections to any responses filed to date so that references are consistent throughout. See e.g. Attachment DOE 1-22b (LOI 2 seems to be LOI Lebanon).

RESPONSE:

The Company confirms LOI Keene = LOI 1, LOI Other = LOI 2, and LOI Lebanon = LOI 3. The Company confirms it will consistently use these references. Please see Corrected Attachment DOE 1-22.b.xlsx with correct nomenclature for LOI 3 in Tab LOI Volumes.

000055

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

DG 21-036

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

Energy Data Requests - Set 3

Date Request Received: 9/29/21
Request No. Energy 3-3

Date of Response: 10/13/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

When, i.e. what exact date, does Liberty expect to take the first delivery of RNG associated with this contract?

RESPONSE:

The Company cannot predict an exact date on when it expects to take the first delivery of RNG associated with this contract. The Company expects to take first delivery of RNG associated with this contract in late Q2Q3 of 2022.

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

DG 21-036

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

Energy Data Requests - Set 3

Date Request Received: 9/29/21
Request No. Energy 3-4

Date of Response: 10/13/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference: Liberty's response to Energy's data request 2-8, and Attachment 2-8
Please update and resubmit the referenced response and attachment as follows:

- a. Update all figures, confirm accuracy, provide clear labels for all values, and reference all sources of all non-formula figures.
- b. Update the quantity of supply that is assumed REC eligible from representing one LOI customer only (LOI # 3, the pipeline LOI), to representing all supply (daily maximum). If the Keene LOI supply is not included, please describe the reason for that omission and provide an additional spreadsheet, in all other respects similar to the updated 2-8 spreadsheet, that does include the RNG quantity Liberty has assigned to the Keene LOI
- c. Explain in narrative format what the attachment is demonstrating, and clarify based on updated figures, what percent of the RPS thermal REC market requirement would be estimated to be met with this RNG if all the RNG Liberty expects to supply were determined to be eligible.
- d. Please also confirm that the 20% estimate Liberty provided in its response to Energy 2-8, was based on a figure that included the RNG supply of only one LOI customer; and did not include distribution system customers or other LOI customers.

RESPONSE:

- a. Please reference Attachment OCA 2-17.xlsx for requested updates to Attachment Energy 2-8.xlsx.
- b. Please reference Attachment Energy 3-4.b.xlsx for requested scenarios. The Keene LOI supply was not included as the RNG from the project will not generate additional TRECs for Keene LOI as Keene LOI is currently generating TRECs from the use of bio-oil and will not be using RNG and bio-oil simultaneously.
- c. Please reference Attachment OCA 2-17.xlsx, tabs "2022 Chart" and "2028 Chart" for market requirement estimate percentages for those years.
- d. Confirmed.

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

DG 21-036

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

Energy Data Requests - Set 3

Date Request Received: 9/29/21

Request No. Energy 3-5

Date of Response: 10/13/21

Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference: Liberty's response to Energy's data request 2-13 and attachment 2-13.

- a. Please clarify if it is planned that the franchise, and potential single or multiple customer distribution systems, will use 100% RNG fuel or, instead, will customers use a mix i.e. a physical blend, of conventional natural gas and RNG, or a blend of RNG and LNG. Please specify by LOI customer, voluntary customers, and non-voluntary distribution customers.

RESPONSE:

- a. LOI Keene and LOI Lebanon will utilize 100% RNG unless RNG is not available at any given time, at which time they will utilize CNG, which would be delivered and metered separately from RNG, or switch to their alternative fuel sources, which would also be delivered and metered separately. LOI 2 will purchase the RNG injected into the Company's distribution system in Concord or Tilton and displace their conventional natural gas usage by the amount of RNG they purchase. The Company's on-system injection point in Concord or Tilton will receive pipeline quality RNG which will then be physically blended with conventional natural gas and provided to all customers connected to that system, similar to how LNG and propane are currently blended into the fuel mix.

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

DG 21-036

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

Energy Data Requests - Set 3

Date Request Received: 9/29/21
Request No. Energy 3-6

Date of Response: 10/13/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference: Liberty's response to Energy 2-7, Testimony of Clark and Stevens at Bates 023 and 024 (filed March 4, 2021).

In light of the parties discussions during Technical Session #3, including the supplemental session, please explain whether Liberty will ask the Commission to consider TREC values in any concrete way at the scheduled February hearing.

- a. If yes, please explain the role TRECs will play in Liberty's request to have the contract approved, and provide information on the value Liberty asserts the TRECs will or may have, and why.
- b. If no, please confirm that economic review and assessment of this RNG supply contract, i.e. its financial viability, should not include any TREC values, and instead should be evaluated as if the TRECs did not exist.
- c. Please provide updated testimony of Clark and Stevens at Bates pages 023-024 to conform to Liberty's answers to part "a" and "b" above. Specifically, please update answers to the following questions, as currently provided in Clark/Stevens testimony as applicable to February 2022 and the remainder of 2022:
 1. "How does the Company intend to treat any New Hampshire environmental attributes such as TRECs, of the RNG not sold to the special contract customers?" and
 2. "What if the rule changes necessary to monetize TRECs do not occur?" In this answer please calculate and include the actual estimated impact on COG customer rates.

RESPONSE:

- a. Although it is not clear what the question intends by "any concrete way," the Company can offer the following. The Commission is entitled to look at all relevant information in deciding whether to approve the RNG Agreement. Information relating to TRECs is relevant. Given that the availability of TRECs for customers using RNG is currently

Docket No. DG 21-036 Request No. Energy 3-6

uncertain and given that this uncertainty is likely to persist through the hearing date, the Company intends to advise the Commission at hearing of the then current state of TREC availability. This would likely involve a statement of the remaining issues to be resolved for each category of RNG customers to obtain TRECs (special contract, on-system, opt-in, etc.), the Company's estimate of timing for those issues to be resolved, the Company's opinion on the likelihood of success in resolving those issues, and perhaps the hypothetical impact of estimated TREC values on the price of RNG. The Company has already provided its estimate of TREC values. It will be within the Commission's discretion whether to rely on any of this information in deciding whether to approve the RNG Agreement.

- b. See the response to a. above. The Company currently intends to present at hearing the economic case for approving the RNG Agreement without assigning any value to potential TRECs, but will advise the Commission of the then current status of the likelihood of TREC availability.
- c. No change to the testimony is warranted. The requested analysis of "the actual estimated impact on COG customer rates" is provided in Attachments Energy 2-3.a.xlsx and 2-11.xlsx.

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

DG 21-036

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

Energy Data Requests - Set 3

Date Request Received: 9/29/21
Request No. Energy 3-7

Date of Response: 10/13/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Reference: Testimony of Clark/Stevens at Bates 019

Company testimony states, “The cost of Liberty’s decompression facility on its legacy (non-Keene) system, will be added to the RNG delivery price, which will be paid for only by those customers who agree to buy RNG.” Does Liberty still hold this view?

RESPONSE:

For clarity purposes, the Company notes that the correct reference is Bates 011.

The Company no longer holds this view as the on-system decompression skid will have system redundancy benefits that will benefit all EnergyNorth customers.

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

DG 21-036

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

Energy Data Requests - Set 3

Date Request Received: 9/29/21
Request No. Energy 3-8

Date of Response: 10/13/21
Respondent: Andrew Mills

REQUEST:

Please explain whether and why a decompression facility necessary for injecting RNG into the Concord distribution pipeline may be located in Tilton and included in rate base to achieve reliable system pressure. Where in the testimony is this referenced?

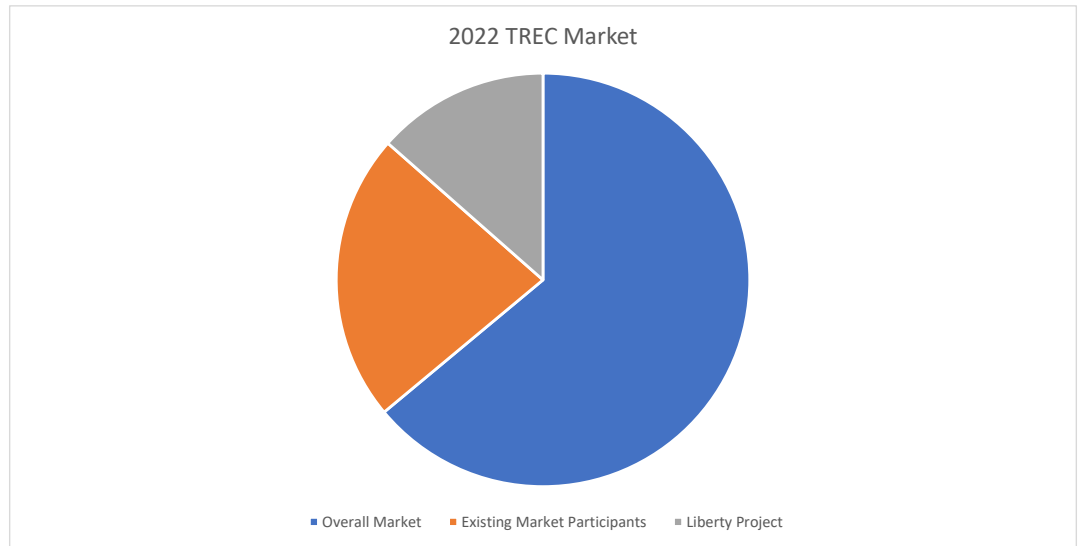
Why does Liberty assert a Tilton decompression facility is necessary, given recent improvements made on Laconia Road (Route 3) in Tilton? Please update Company testimony.

RESPONSE:

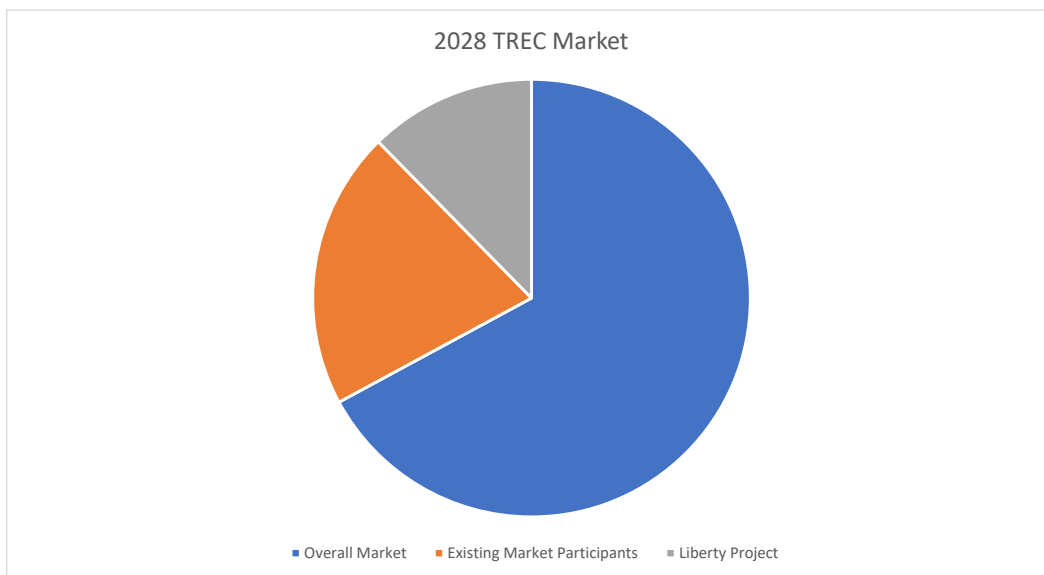
The information regarding the potential installation of a decompression facility in Tilton came to light as a result of ongoing discussions with Liberty's Operations and Engineering departments subsequent to the filing of the testimony in early March.

Liberty Utilities has two main capacity restraints to the Laconia/Gilford area of the distribution system. The most critical at this time, based on customer requests received over the last five years, is the 60 psig line extending from the end of the Concord to Tilton 200 psig line. The recent improvements referenced are a multi-phase project to create a 125 psig system to extend from the end of the 200 psig line to approximately the Tilton/Belmont town line. This, along with a regulator station, will alleviate our capacity constraints from Tilton to Laconia/Gilford. However, it does not solve the capacity constraint caused by approximately 10.4 miles of 6" coated steel gas main operating at 200 psig. This gas line is the sole source of gas for all of Tilton, Franklin, Northfield, Belmont, Laconia, and Gilford. Placing a decompression skid at the end of the 200# line in Tilton would allow for additional capacity to the aforementioned towns, which otherwise would have to come by replacing the 6" coated steel gas main with a larger diameter gas main.

000063



	Overall Market	Existing Market Participants	Liberty Project		Overall Market	Existing Market Participants	Liberty Project
2022	4926420	1736819.64	1040159	2028	6021180	1843669.05	1107035



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

DG 21-036

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

OCA Data Requests - Set 1

Date Request Received: 3/31/21
Request No. OCA 1-5

Date of Response: 4/12/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Refer Testimony of William J. Clark and Mark Stevens, Bates page 016, footnote 3.

- a. What is a “geographically targeted franchise” and are there examples of the Commission having authorized any such franchises in the past? If the answer is yes please provide a list.
- b. Has the company considered, and would it consider, establishing other receipt points and geographically targeted franchise territory outside its existing franchise footprint in order to executive special contracts with other customers interested in using RNG?
- c. What is the proposed “geographically targeted” franchise territory the company intends to seek in West Lebanon? Please provide a map or other diagram and indicate the extent to which this territory will allow the Company to enter into special contracts with other customers interested in RNG and/or to serve customers pursuant to the Company’s tariffed rates.

RESPONSE:

- a. The Company considers a “geographically targeted franchise” as the right to serve one or more customers located within a well-defined boundary of a municipality and not the municipality in full. Please reference Attachment OCA 1-5.a for a list of examples.
- b. Yes, the Company has and would consider establishing other receipt points and geographically targeted franchise territories outside its existing franchise territory to serve other customers interested in using RNG.
- c. Reference Attachment OCA 1-5.c for map of the proposed geographically targeted franchise territory in Lebanon, NH. If the Company is granted the targeted franchise rights, the Company’s goal is to eventually serve all the potential customers located within the franchise boundary with a combination of CNG and RNG.

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

DG 21-036

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

OCA Data Requests - Set 1

Date Request Received: 3/31/21
Request No. OCA 1-12

Date of Response: 4/12/21
Respondent: William J. Clark
Mark R. Stevens

REQUEST:

Refer Attachments WJC/MRS-5, -6 and -7 (Bates pages 105-115):

- a. These letters of intent (LOIs) are dated, respectively, August 29, 2018, February 27, 2018, and November 6, 2019. What is the basis for the Company's belief that each of the LOI counterparties still intends to enter into a special contract given the extended period since these LOIs were executed?
- b. Have either of the LOI counterparties in WJC/MRS -6 and -7 terminated Liberty's exclusive right to negotiate with the counterparty pursuant to section 6 of each LOI?
- c. The section 6 exclusivity rights referenced in subpart b of this question are not identical. Why do they differ?

RESPONSE:

- a. The Company has maintained regular communications with the three LOI counterparties and is currently in the final stages of executing the Special Contracts with all three.
- b. No.
- c. The exclusivity rights are not identical as each LOI was the subject of separate negotiations with the counterparty, each of which had different concerns and issues to be addressed.

D. Perruccio attachment DMP-7
Copy of attachment ENERGY 1-24 supplied by Liberty on 8-6-2021
Black text= original filing by Liberty utilities
RED text = D. Perruccio notes and calculations

	Days	LOI 1 (Keene)	LOI 2 (Other)	LOI 3 (Lebanon)	Total	RNG supply 5 yr average	Socialized		
January	31	16,509	10,533	6,347	33,389	46,026	12,636	Production Facility	1484.70
February	28	13,426	9,844	6,347	29,617	41,572	11,954	Daily 5 Year Average	
March	31	12,799	10,692	6,347	29,838	46,026	16,187		
April	30	9,561	9,925	6,347	25,833	44,541	18,708		
May	31	5,874	11,796	6,347	24,017	46,026	22,008		
June	30	3,983	11,381	6,347	21,711	44,541	22,830		
July	31	3,988	12,286	6,347	22,621	46,026	23,404		
August	31	2,218	11,691	6,347	20,256	46,026	25,769		
September	30	4,773	11,699	6,347	22,819	44,541	21,722		
October	31	8,292	11,755	6,347	26,394	46,026	19,631		
November	30	12,239	10,095	6,347	28,681	44,541	15,860		
December	31	15,294	10,348	6,347	31,989	46,026	14,036		
	365	108,956	132,045	76,168	317,169	541,915	224,746		

Blended fuel issue:	supply on dist. system	projected total supply	%
	356,791	541,915	66%

LOI Keene, Lebanon:	supply to LOI Keene, Lebanon	projected total supply	%
	185,124	541,915	34%

DP note- 541,915 provided here matches 5 year annual average from annual Dth projections provided by Liberty in OCA 1-9 att c-2

Docket No. DG 21-036
Direct Testimony of Deandra M. Perruccio
Attachment DMP-8
Page 1 of 1

D. Perruccio attachment DMP-8
Copy of attachment ENERGY 1-24 supplied by Liberty on 8-6-2021
Black text= original filing by Liberty utilities
RED text = D. Perruccio notes and calculations

	Days	LOI 1 (Keene)	LOI 2 (Other)	LOI 3 (Lebanon)	Total	RNG supply	Socialized		
						5 yr average			
January	31	16,509	10,533	6,347	33,389	46,026	12,636	Production Facility	1484.70
February	28	13,426	9,844	6,347	29,617	41,572	11,954	Daily 5 Year Average	
March	31	12,799	10,692	6,347	29,838	46,026	16,187		
April	30	9,561	9,925	6,347	25,833	44,541	18,708		
May	31	5,874	11,796	6,347	24,017	46,026	22,008		
June	30	3,983	11,381	6,347	21,711	44,541	22,830		
July	31	3,988	12,286	6,347	22,621	46,026	23,404		
August	31	2,218	11,691	6,347	20,256	46,026	25,769		
September	30	4,773	11,699	6,347	22,819	44,541	21,722		
October	31	8,292	11,755	6,347	26,394	46,026	19,631		
November	30	12,239	10,095	6,347	28,681	44,541	15,860		
December	31	15,294	10,348	6,347	31,989	46,026	14,036		
	365	108,956	132,045	76,168	317,169	541,915	224,746		

DMP RPS requirement analysis					
Assuming 2020 sales all years (MWh)		10,386,717			
Year	Class I-T RPS requirement %	Requirement (MWh)	Projected (Dth)	Projected (MWh)	% of total RPS requirement
1 (2022)	2.00%	207,734	541,915	158,826	76%
5 (2027)	2.20%	228,508	541,915	158,826	70%
Assuming LOI 1, Keene, is already producing TREC's and therefore does not add TREC supply:					
1 (2022) no LOI 1	2.00%	207,734	432,959	126,893	61%
5 (2027) no LOI 1	2.20%	228,508	432,959	126,893	56%

Customer TREC Calculation

T	96,000,000,000
Eff	80%
EC	960,000
V	125,000
R	50%
Eug	120,000,000,000
Eum	48,000,000,000

Btu's/Trec	3,412,000
Q=	14,068.00

Value calculation

Trec	14068.00
------	----------

		<u>TREC ACP</u>	<u>Discount Factor</u>
\$/Trec	\$ 16.88	\$ 25.97	65%

		<u>\$/Mmbtu</u>	<u>Retirement Factor</u>
\$/Mmbtu	\$ 4.95	\$ 4.95	0%

Savings	\$ 237,474.79
---------	---------------

TREC valued at current 2018 ACP of \$25.97/MWh

- (1) "Q" means the useful thermal energy generated, stated in MWh
- (2) "T" means calculated total useful thermal energy Btu's equal to EUg multiplied by Eff or (EUg*Eff)
- (3) "Eff" means average estimated efficiency of .80
- (4) "EC" means Btu's per Mcf of gas delivered
- (5) "V" means Mcf of gas delivered as measured by sources utility standard gas meter
- (6) "R" means the percentage of gas delivered that is qualified methane supply as certified by the suppliers delivery documents
- (7) "EUg" means BTU's of gas delivered (V multiplied by EC or V*EC)
- (8) "EUm" means BTU's of qualified methane delivered (R multiplied T or R*T)

$$Q = EUm / 3,412,000$$