

Michael J. Sheehan, Esq.
Director, Legal Services
Phone: 603-724-2135
Email: Michael.Sheehan@libertyutilities.com

April 25, 2022

Via Electronic Mail Only

Daniel Goldner, Chairman

New Hampshire Public Utilities Commission
21 South Fruit Street, Suite 10

Concord, New Hampshire 03301-2429

Re: Docket No. DG 22-015; Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty-Keene Division

Revised Summer 2022 Cost of Gas

Dear Chairman Goldner:

On behalf of Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty-Keene Division, enclosed for filing are a redacted public version and a confidential version of Liberty's Keene Division Revised Summer 2022 Cost of Gas filing, which includes the Direct Testimony of Deborah Gilbertson and Catherine McNamara, with attachments. The confidential material consists of pricing and other information that is presumed confidential pursuant to Puc 201.06(a)(11).

Pursuant to the Commission's March 17, 2020, secretarial letter, only an electronic version of this filing will be provided. Thank you.

Sincerely,

Michael J. Sheehan

Millian

Enclosures

Cc: Service List

REDACTED

STATE OF NEW HAMPSHIRE BEFORE THE PUBLIC UTILITIES COMMISSION

Docket No. DG 22-015

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

Revised Summer 2022 Cost of Gas

DIRECT TESTIMONY

OF

DEBORAH M. GILBERTSON

AND

CATHERINE A. McNAMARA

April 25, 2022



THIS PAGE INTENTIONALLY LEFT BLANK

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty–Keene Division
Docket No. DG 22-015
Revised Summer 2022 Cost of Gas
Direct Testimony of D. Gilbertson and C. McNamara
Page 1 of 17

^	$\mathbf{\Omega}$	DI 4 4	C 11	1 ' 11	1
,	()	PIAGGA STOTA VA	aiir fiill name	niiginegg addregg	and nosition
_	\mathbf{v} .	I ICase state v	Jui Tuii HaiiiCa	business address.	anu postuon.

- 3 A. (DG) My name is Deborah M. Gilbertson. My business address is 15 Buttrick Road,
- 4 Londonderry, New Hampshire. My title is Senior Manager, Energy Procurement.
- 5 (CM) My name is Catherine A. McNamara. My business address is 15 Buttrick Road,
- 6 Londonderry, New Hampshire. My title is Rates Analyst II, Rates and Regulatory
- 7 Affairs.

8 Q. By whom are you employed?

- 9 A. We are employed by Liberty Utilities Service Corp. ("LUSC"), which provides services
- to Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty ("Liberty" or the
- "Company") and Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty.
- 12 Q. On whose behalf are you testifying?
- 13 A. We are testifying on behalf of the Company.
- 14 Q. Ms. Gilbertson, please describe your educational background, and your business
- and professional experience.
- 16 A. I graduated from Bentley College in Waltham, Massachusetts, in 1996 with a Bachelor of
- Science in Management. In 1997, I was hired by Texas Ohio Gas where I was employed
- as a Transportation Analyst. In 1999, I joined Reliant Energy, located in Burlington,
- Massachusetts, as an Operations Analyst. From 2000 to 2003, I was employed by Smart
- 20 Energy as a Senior Energy Analyst. I joined Keyspan Energy Trading Services in 2004
- as a Senior Resource Management Analyst following which I was employed by National

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty–Keene Division
Docket No. DG 22-015
Revised Summer 2022 Cost of Gas
Direct Testimony of D. Gilbertson and C. McNamara
Page 2 of 17

1		Grid from 2008 through 2011 as a Lead Analyst in the Project Management Office. In
2		2011, I was hired by LUSC as a Natural Gas Scheduler and was promoted to Manager of
3		Retail Choice in 2012. In October 2016, I was promoted to Senior Manager of Energy
4		Procurement. In this capacity, I provide gas procurement services to Liberty.
5	Q.	Ms. McNamara, please describe your educational background, and your business
6		and professional experience.
7	A.	I graduated from the University of Massachusetts, Boston, in 1993 with a Bachelor of
8		Science in Management with a concentration in Accounting. In November 2017, I joined
9		LUSC as an Analyst in Rates and Regulatory Affairs. Prior to my employment at LUSC,
10		I was employed by Eversource as a Senior Analyst in the Investment Planning group
11		from 2015 to 2017. From 2008 to 2015, I was a Supervisor in the Plant Accounting
12		department. Prior to my position in Plant Accounting, I was a Financial Analyst/General
13		Ledger System Administrator within the Accounting group from 2000 to 2008.
14	Q.	Ms. Gilbertson, and Ms. McNamara, have you previously testified in regulatory
15		proceedings before the New Hampshire Public Utilities Commission (the
16		"Commission")?
17	A.	Yes, we have.
18	Q.	What is the purpose of your updated testimony?
19	A.	The purpose of our updated testimony is to explain the Company's proposed Cost of Gas
20		("COG") rates for its Keene Division for the 2022 summer (off-peak) period to be

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty–Keene Division
Docket No. DG 22-015
Revised Summer 2022 Cost of Gas
Direct Testimony of D. Gilbertson and C. McNamara
Page 3 of 17

1 effective beginning May 1, 2022. Our testimony will also address bill comparisons and 2 other items related to the summer period. 3 II. **SUMMER 2022 COST OF GAS FACTOR** Q. What is the proposed firm summer cost of gas rate? 4 The Company proposes an updated firm cost of gas rate of \$1.7865 per therm for the 5 A. Keene Division as shown on Proposed Third Revised Page 93. 6 Please explain the calculation of the Cost of Gas rate on tariff page Proposed Third 7 Q. Revised Page 93. 8 Proposed Third Revised Page 93 contains the calculation of the 2022 Summer Period 9 A. 10 COG and summarizes the Company's forecast of propane and compressed natural gas ("CNG") sales and propane and CNG costs. The total anticipated cost of the gas sendout 11 from May 1 through October 31, 2022, is \$554,874. The information presented on the 12 tariff page is supported by Schedules A through N which are described later in this 13 14 testimony. 15 To derive the Total Anticipated Cost of Gas, the following adjustments have been made: 1) The prior period under-collection of \$18,016 is added to the anticipated cost of 16 gas sendout; and 17

2) Interest of \$274 is added to the anticipated cost of gas sendout. Schedule F shows this forecasted interest calculation for the period November 2021 through April 2022. Interest is accrued using the monthly prime lending rate as reported by the Federal Reserve Statistical Release of Selected Interest Rates.

18

19

20

21

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty–Keene Division
Docket No. DG 22-015
Revised Summer 2022 Cost of Gas
Direct Testimony of D. Gilbertson and C. McNamara
Page 4 of 17

- The Non-Fixed Price Option ("Non-FPO") cost of gas rate of \$1.7865 per therm was calculated by dividing the Total Anticipated Cost of Gas of \$573,165 by the Projected Gas Sales of 320,838 therms. There is no Fixed Price Option for the summer period.
- 4 Q. Please describe Schedule A.
- A. Schedule A converts the propane gas volumes and unit costs from gallons to therms. The 321,744 therms represent sendout as detailed on Schedule B, lines 3 and 8. The blended unit cost of those supplies is \$1.6170 per therm which represents the weighted average cost per therm for the summer period gas sendout as detailed on Schedule D, line 37.

9 Q. What is Schedule B?

18

10 A. Schedule B presents the Final (over)/under collection calculation for the summer 2022 period based on the prior period (over)/under collection, forecasted volumes, the cost of 11 gas, and applicable interest amounts. The forecasted total propane sendout of 251,510 12 therms on line 3, plus total CNG sendout of 70,233 therms on line 8, is the sum of the 13 forecasted summer 2022 total firm sendout. The forecasted Firm Sales on line 26 14 represent weather normalized 2022 summer period firm sales. The weather 15 normalization calculations for sendout and sales are found in Schedules G and H, 16 respectively. 17

Q. Are CNG demand charges included in this filing?

19 A. Yes, CNG demand charges are included in Schedule B on line 11.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty-Keene Division Docket No. DG 22-015 Revised Summer 2022 Cost of Gas

Direct Testimony of D. Gilbertson and C. McNamara

Page 5 of 17

1		Schedule B, line 11, includes 25% of the 2022 demand charges. These charges are
2		\$ per month or \$ for the season and represent the portion attributable to
3		the summer period.
4	Q.	Is this an approved allocation of summer demand charges?
5	A.	Yes, in Order No. 26,505 (July 30, 2021), the Commission approved the Settlement
6		Agreement in the Company's recent distribution service rate case, which fixed the
7		allocation of Keene CNG demand charges to be 75% in the winter period and 25% in the
8		summer period. The total demand charge for the summer period is thus the total annual
9		demand charge of \$ times 25%, or \$.
10	Q.	Are incremental costs/savings for prior summer periods related to the use of CNG
11		vs. propane included in this filing?
12	A.	Yes, the calculation of prior summer period incremental costs/savings between propane
12 13	A.	Yes, the calculation of prior summer period incremental costs/savings between propane and CNG have been calculated for the summer of 2019, 2020, and 2021, per Section 7.1
	A.	
13 14	A.	and CNG have been calculated for the summer of 2019, 2020, and 2021, per Section 7.1 of the Settlement Agreement in Docket No. DG 20-105, which states, in part, as follows:
13	A.	and CNG have been calculated for the summer of 2019, 2020, and 2021, per Section 7.1
13 14 15	A.	and CNG have been calculated for the summer of 2019, 2020, and 2021, per Section 7.1 of the Settlement Agreement in Docket No. DG 20-105, which states, in part, as follows: The Company shall recover one-half of the incrementally higher CNG supply costs as compared to the propane supply cost, incurred from the commencement of CNG service through October 31, 2021, to be recovered
13 14 15 16 17 18	A.	and CNG have been calculated for the summer of 2019, 2020, and 2021, per Section 7.1 of the Settlement Agreement in Docket No. DG 20-105, which states, in part, as follows: The Company shall recover one-half of the incrementally higher CNG supply costs as compared to the propane supply cost, incurred from the commencement of CNG service through October 31, 2021, to be recovered through inclusion over one year in the next Keene cost of gas during the
13 14 15 16 17 18 19	A.	and CNG have been calculated for the summer of 2019, 2020, and 2021, per Section 7.1 of the Settlement Agreement in Docket No. DG 20-105, which states, in part, as follows: The Company shall recover one-half of the incrementally higher CNG supply costs as compared to the propane supply cost, incurred from the commencement of CNG service through October 31, 2021, to be recovered through inclusion over one year in the next Keene cost of gas during the winter or summer periods consistent with the season in which the
13 14 15 16 17 18 19 20	A.	and CNG have been calculated for the summer of 2019, 2020, and 2021, per Section 7.1 of the Settlement Agreement in Docket No. DG 20-105, which states, in part, as follows: The Company shall recover one-half of the incrementally higher CNG supply costs as compared to the propane supply cost, incurred from the commencement of CNG service through October 31, 2021, to be recovered through inclusion over one year in the next Keene cost of gas during the winter or summer periods consistent with the season in which the incremental costs were originally incurred. The Company shall provide the
13 14 15 16 17 18 19 20 21	A.	and CNG have been calculated for the summer of 2019, 2020, and 2021, per Section 7.1 of the Settlement Agreement in Docket No. DG 20-105, which states, in part, as follows: The Company shall recover one-half of the incrementally higher CNG supply costs as compared to the propane supply cost, 8 incurred from the commencement of CNG service through October 31, 2021, to be recovered through inclusion over one year in the next Keene cost of gas during the winter or summer periods consistent with the season in which the incremental costs were originally incurred. The Company shall provide the supporting calculations in the Winter 2021-2022 Keene Cost of Gas filing.
13 14 15 16 17 18 19 20	A.	and CNG have been calculated for the summer of 2019, 2020, and 2021, per Section 7.1 of the Settlement Agreement in Docket No. DG 20-105, which states, in part, as follows: The Company shall recover one-half of the incrementally higher CNG supply costs as compared to the propane supply cost, incurred from the commencement of CNG service through October 31, 2021, to be recovered through inclusion over one year in the next Keene cost of gas during the winter or summer periods consistent with the season in which the incremental costs were originally incurred. The Company shall provide the

the propane supply cost as described in footnote 8, the Company

25

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty–Keene Division
Docket No. DG 22-015
Revised Summer 2022 Cost of Gas
Direct Testimony of D. Gilbertson and C. McNamara
Page 6 of 17

shall recover one-half of the incrementally higher CNG supply cost, as determined through the cost of gas reconciliation process. If the CNG supply cost is lower than the propane supply cost, the Company shall recover and retain the full amount of the incrementally lower CNG supply cost up to the amount of incrementally higher CNG costs accrued since the commencement of CNG service, which has not then been recovered from customers, at which point the Company shall recover and retain one-half of the incrementally lower CNG supply costs. Reconciliation of the incremental CNG supply costs shall occur semi-annually in the Winter and Summer Cost of Gas filings, as applicable.

Settlement Agreement in Docket No. DG 20-105, Exhibit 49 ("Settlement Agreement"), at Bates 13–14. Footnote 8 described the calculation:

Incremental CNG supply cost/savings shall be calculated by multiplying the CNG therm purchases by the difference between the average per therm CNG supply cost and the propane supply costs for the applicable summer/winter period. Average CNG supply costs shall include all CNG supplier charges properly allocated between summer and winter periods. Average propane supply costs shall include Mont Belvieu propane pricing, transportation costs, and Broker Fee.

Id. at 14. The above calculations for the summers of 2019 and 2020 were included in the Settlement Agreement and have been applied here. *Id.* at Bates 33. The above calculation for the summer of 2021 was also included in the Settlement Agreement, *id*, but it was based on projected numbers since the Settlement Agreement was signed during that summer period. The Summer 2021 calculations have been updated with actual numbers in this filing. The calculations for all three summer periods can be found on Schedule M.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty–Keene Division
Docket No. DG 22-015
Revised Summer 2022 Cost of Gas
Direct Testimony of D. Gilbertson and C. McNamara
Page 7 of 17

1	Q.	Can you itemize the previous years' incremental costs/savings which are included in
2		this filing?
3	A.	Yes, the previous period's incremental costs/savings calculations can be found on
4		Schedule N. For the summer of 2019, the Company had collected 100% of the
5		incrementally higher CNG costs, which totaled \$5,048. In light of the Settlement
6		Agreement authorizing the Company to recover only 50% of the incrementally higher
7		CNG costs, \$2,524 will be returned to customers over the Summer 2022 period through
8		the rates proposed in this filing.
9		For the summer of 2020, CNG costs were \$16,214 higher than propane costs. Over the
10		course of the 2020 summer the Company deferred 100% of those incremental costs, that
11		is, the Company did not collect any of the \$16,214. The Settlement Agreement now
12		authorizes the Company to collect 50% of those charges, and thus the rate prosed here
13		includes recovery of \$8,107 of the incrementally higher CNG costs. Again, these exact
14		calculations for the 2019 and 2020 summers were specifically included in the Settlement
15		Agreement.
16		For the summer of 2021, CNG costs were \$13,026 less expensive than propane. The
17		Company again deferred, i.e., did not include, these savings in the 2020 COG rates. The
18		Settlement Agreement allows the Company to recover 100% of these savings "up to the
19		amount of incrementally higher CNG costs accrued since the commencement of CNG
20		service, which has not then been recovered from customers," and thereafter shares any

remaining savings with customers equally. Settlement Agreement at Bates 14. The

21

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty–Keene Division
Docket No. DG 22-015
Revised Summer 2022 Cost of Gas
Direct Testimony of D. Gilbertson and C. McNamara
Page 8 of 17

1		amount of the "incrementally higher COG costs accrued since the commencement of
2		CNG service" that the Company did not recover is \$10,631. The rates proposed here thus
3		include recovery of that amount, leaving \$2,395 in savings to be addressed. The
4		Settlement Agreement states that this remaining amount of CNG savings is to be shared
5		equally with customers and, since the 2021 rates did not include recovery of any of the
6		remaining \$2,395 of incremental CNG savings, the rates proposed here include recovery
7		of one-half of this remaining amount, or \$1,197.
8		The net incremental costs/savings for all three periods included in this filing are \$15,017.
9		These items can also be found on Schedule B, lines 12–14.
10	Q.	Do the incremental costs/savings from above reconcile with Appendix 4 of the
11		Settlement Agreement?
12	A.	No. As mentioned above, the summer 2021 incremental costs of \$3,577 reported in
13		Appendix 4 of the Settlement Agreement were estimated. This filing contains the actual
14		increment savings for 2021. The amounts used above include the actual incremental cost
15		calculations which can be found on Schedule N.
16	Q.	Are projected 2022 incremental cost/savings included in this filing?
17	A.	Yes. Over the summer of 2022, the Company projects CNG to be \$39,183 less than
18		propane costs over the summer of 2022 resulting in a savings for customers. The

Settlement Agreement in DG 20-105, Section 7.1(a). The calculated incremental

20

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty-Keene Division Docket No. DG 22-015 Revised Summer 2022 Cost of Gas Direct Testimony of D. Gilbertson and C. McNamara Page 9 of 17

- 1 projected savings are 50% of \$39,183, or \$19,592. This can be found on line 15 of Schedule B. The detailed calculation can be found on Schedule L.
- 2
- 3 Q. Are unaccounted-for gas volumes included in the filing?
- Unaccounted-for gas is included in the firm sendout on Schedule B, lines 1 and 8. The 4 A.
- Company actively monitors its level of unaccounted-for volumes, which amounted to 5
- 0.19% for the twelve months ended June 30, 2021. 6
- Please describe Schedules C and K. 7 Q.
- Schedule C presents the forecasted market spot prices of propane. Column 1 shows the 8 A.
- Mont Belvieu propane futures quotations as of March 2, 2022. Subsequent columns 9
- show expected broker/supplier fees, pipeline fees, and Propane Education & Research 10
- Council (PERC) fees. These prices when added together represent a forecasted summer 11
- price of propane. This price is also represented in Schedule K, line 40. Note: as actual 12
- 13 prices are realized, they will replace estimate pricing. The reconciliation of actual costs
- 14 to estimated costs is continued throughout the summer as the actual data becomes
- 15 available.

16 III. PROPANE PURCHASING STABILIZATION PLAN

- Please describe the Propane Purchasing Stabilization Plan ("PPSP"). 17 Q.
- 18 A. The Propane Purchasing Stabilization Plan is a Commission-approved strategy that the
- Company undertakes to provide stability in the winter COG rate and to facilitate the 19
- offering of a Fixed Price Option. Under this strategy, the Company systematically 20
- hedges supply purchases over the off-peak period, to be utilized and called upon in the 21

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty–Keene Division
Docket No. DG 22-015
Revised Summer 2022 Cost of Gas
Direct Testimony of D. Gilbertson and C. McNamara
Page 10 of 17

L	peak period. The strategy is intended to provide price stability rather than to secure lower
2	prices. The PPSP was approved in Order No. 24,617 (Apr. 28, 2006), and has been
3	discussed repeatedly in Keene's cost of gas proceedings ever since.

4 Q. Has the Company performed any analysis regarding its Propane Purchasing

Stabilization Plan?

A. Yes. The Company performed two analyses. In Schedule J-1, the Company evaluated the premium/discount associated with securing the pre-purchased volumes for delivery in the winter of 2021–2022 relative to securing a floating price at Mont Belvieu. The comparison reflects the net premium/discount results of the Company's competitive RFP process. In Schedule J-2, the Company performed a comparison of propane purchase costs under the contract versus representative spot prices had the Company not implemented the Plan. The analysis shows that the cost of the pre-purchased gallons was 18% lower than the average representative spot purchase cost for the first four months of the current winter period, reflecting an increase in spot propane prices over the pre-purchased volumes.

Q. Has the Company issued a Request for Proposals ("RFP") to potential suppliers for the 2022–2023 Plan?

A. Yes. The Company issued the RFP for the 2022–2023 Plan on February 22, 2022. The
RFP process was the same as the process used last summer. The RFP was sent to thirteen
suppliers. Once a winning bidder has been selected, they will be notified.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty–Keene Division
Docket No. DG 22-015
Revised Summer 2022 Cost of Gas
Direct Testimony of D. Gilbertson and C. McNamara
Page 11 of 17

- 1 Q. Is the Company proposing any changes to the 2022–2023 Plan?
- 2 A. No. The Plan structure specified in the RFP, as detailed on Schedule J-3, has not
- changed from the design that was used for the previous winter. The Company will
- 4 purchase 700,000 gallons to maintain a consistent ratio of hedged volumes to expected
- sales approximately 65%, which also includes storage at the Amherst facility.

6 IV. FIXED PRICE OPTION PROGRAM

- 7 Q. Will there be a Fixed Price Option ("FPO") rate offered for the summer period?
- 8 A. No, there will not be an FPO rate offered for the summer period. The FPO program is
- only offered during the winter (peak) period.

10 V. COST OF GAS RATE AND BILL COMPARISONS

- 11 Q. How was the cost of CNG purchases determined?
- 12 A. The CNG costs are shown in Schedule K, lines 21 through 29. These costs reflect the
- contractual agreement between the Company and its supplier, Xpress Natural Gas, LLC.
- 14 Q. Please describe Schedule D.
- 15 A. Schedule D contains the calculation of the expected weighted average cost of inventory
- for each month through October 2022. The unit cost of projected gas to be sent out each
- month includes CNG deliveries. Note that the CNG deliveries are shown in separate
- columns from the propane-weighted cost but are included in the average summer rate,
- which is shown on line 37 of Schedule D.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty–Keene Division
Docket No. DG 22-015
Revised Summer 2022 Cost of Gas

Direct Testimony of D. Gilbertson and C. McNamara Page 12 of 17

1 Q. What is shown on Schedule E?

- 2 A. Schedule E shows the under-collected balance for the prior summer 2021 period,
- including interest calculated in a manner consistent with prior years. The under-collected
- balance of \$16,078 (line 36) is shown on Schedule E, line 1, Column 1.

5 Q. How is the information in Schedule F represented in the cost of gas calculation?

- 6 A. Schedule F presents the interest calculation and adjustments on (over)/under-collected
- balances through October 2022. This is represented in the cost of gas calculation on
- Schedule B. The prior Period Balance is calculated below and found on Schedule B,
- 9 Column 1, line 36.

10

15

Prior Period GL Balance at 10/31/2021, Sched F, Col 1, Ln 1	\$ 16,080.00
Adjustments, Schedule F, Column 3	\$ 1,937.00
Interest November 2021 - April 2022, Sched F Col 8, Ln 1-6	\$ 274.00
Prior Period Ending Balance at 4/30/2022, Schedule B Column 1, Line 36	\$ 18,291.00

The forecasted over/under collection from Schedule F, Column 2, is included in Schedule

12 B, Columns 2–7, line 36.

13 Q. What is included in the Adjustments, Column (3) of Schedule F?

14 A. The total \$1,936.89 included in the adjustments column is listed below.

November 2021 - January 2022 Demand charges to the summer deferral in winter months	\$ 6,875.01
Revenue appropriately booked to the summer deferral in winter months	\$ (43,266.68)
Reversal of the October 2021 Summer Accrual in November 2021	\$ 38,328.56
Total Adjustments	\$ 1,936.89

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty-Keene Division Docket No. DG 22-015 Revised Summer 2022 Cost of Gas Direct Testimony of D. Gilbertson and C. McNamara Page 13 of 17

1	Q.	How does the proposed Summer 2022 cost of gas rates compare with the previous
2		summer's rates?
3	A.	The proposed Non-FPO COG rate of \$1.7865 per therm is an increase of \$0.6044 or
4		51.1% from the summer 2021 approved rate of \$1.1821 per therm, per Order No. 26,475
5		(April 30, 2021).
6	Q.	What are the primary reasons for the change in rates?
7	A.	The main reason for the \$0.6044 increase is the increase in projected market supply costs
8		This accounts for approximately 74.8% of the price increase. The remaining 25.1% of
9		the increase is due to having started the Summer 2021 period with an over-collection
10		versus starting the Summer 2022 period with an under-collection.
11	Q.	What is the impact of the Summer 2022 COG rate on the typical residential heat
12		and hot water customer?
13	A.	As shown on Schedule I-1, Column 14, lines 50 and 51, the typical residential heat and
14		hot water customer would experience an increase of \$32.47 or 38.8% in the gas
15		component of their bills compared to the prior summer period. When the monthly
16		customer charge, therm delivery charge, and LDAC are factored into the analysis, the

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty–Keene Division
Docket No. DG 22-015
Revised Summer 2022 Cost of Gas
Direct Testimony of D. Gilbertson and C. McNamara
Page 14 of 17

- typical residential customer would see a total bill increase of \$36.70 or 16.9%, as shown on lines 54 and 55.
- Q. Please describe the impact of the Summer 2022 COG rate on the typical commercial customer compared to the prior summer period.
- As shown on Schedule I-2, Column 14, lines 50 and 51, the typical commercial customer would experience an increase of \$103.32 or 39.0% in the gas component of their bills compared to the prior summer period. When the monthly customer charge, therm delivery charge, and LDAC are factored into the analysis, the typical commercial customer would see a total bill increase of \$116.18 or 16.5%, as shown on lines 54 and 55.

VI. OTHER ITEMS

12 Q. What is the status of CNG currently?

13 A. The Company began serving customers with CNG in October 2019. At present, the
14 service territory for CNG is limited to the Monadnock Marketplace and a small portion of
15 Key Road. The Company's short-term plan involves adding/converting more customers
16 and expanding the natural gas footprint in this limited area as contemplated in the
17 Settlement Agreement. Since the fall, the Company has added two new commercial

-

11

¹ "Phase 1 of the Keene conversion to natural gas shall consist of: (1) installation of the existing temporary CNG facility; (2) conversion of the propane-air customers' premises at the Monadnock Marketplace to natural gas as of the date of this Settlement; and (3) acquisition of customers at any additional premises not currently physically connected to the gas utility system in Keene after the date of this settlement who would be served CNG from both the existing CNG temporary facility and through existing mains." Settlement Agreement at Bates 14 (emphasis added).

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty-Keene Division Docket No. DG 22-015 Revised Summer 2022 Cost of Gas Direct Testimony of D. Gilbertson and C. McNamara Page 15 of 17

1	customers and extended the main by approximately 700 feet. There are plans to add a
2	couple of other customers in the area, but likely not until later this year. The Company is
3	considering a path forward to the transition to partial renewable fuel (RNG) and has
4	retained a contractor to help determine what is possible and at what cost.

When does the current CNG contract expire? 5 Q.

6 A. The current CNG contract expires on June 30, 2024.

What is the price differential between the cost of spot propane and the cost of CNG? 7 Q.

- For the upcoming off-peak period, spot propane is anticipated to be 56 cents per therm 8 A. 9 more expensive than CNG. The calculation of Spot Purchases cost per therm is found on 10 Schedule K, line 40, less the CNG Deliveries cost per therm found on Schedule K, line 29.
- Q. Does that comparison include the CNG demand charge? 12
- Yes. 13 A.

11

Can you comment on market price conditions as compared to last summer? Q. 14

15 A. Yes, as compared to this time last summer, the commodity prices have increased substantially. Global influences have continued to impact national markets as 16 competition for supply increases in places such as Europe and Asia. These influences are 17 impacting prices in all energy sectors across the US. For example, last year at this time, 18 Mont Belvieu was forecasted to average 79 cents per gallon for the 2021 summer period. 19 This year it is expected to average at 1.33 per gallon for 2022 summer – a 68% increase. 20 As for natural gas benchmark prices, NYMEX at this time last year was averaging \$2.89 21

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty–Keene Division
Docket No. DG 22-015
Revised Summer 2022 Cost of Gas
Direct Testimony of D. Gilbertson and C. McNamara
Page 16 of 17

per dekatherm ("Dth") whereas today it is averaging \$4.85 per Dth – a 68% increase over last year. These costs directly impact the customer rates.

Q. What changes have been since the original filing on March 15, 2022?

A.

4

5

6

7

8

9

10

11

12

13

14

15

16

17

- As described above, the Settlement Agreement defined how incremental costs or savings associated with CNG and propane costs are to be shared with customers. In its initial filing, the Company incorrectly presented the difference between the CNG and propane costs as a benefit to customers resulting in an overall reduction in the cost of gas. This updated filing revises that calculation to show a benefit to the Company resulting in an overall increase in the cost of gas as defined in the risk sharing mechanism in Section 7.1(a) of the Settlement Agreement of DG 20-105 where customers bear 50% of the incremental savings. To share these savings, the Company passes on the incremental savings to customers and therefore needed to increase the cost by \$19,592, not decrease as indicated in the original filing. This change increased the rates by \$0.1222 per therm from \$1.6643 to 1.7865
- Additionally, the LDAC rates used in the commercial bill impact schedule I-2 were incorrect. The company used the residential LDAC rates and should have used the commercial LDAC rates. This did not impact the rates in any way.

18 Q. Have projected market prices changed from the time the original filing was 19 submitted on March 15, 2022?

20 A. Yes, forward market prices have changed. The Company reviewed the impact of market 21 changes as of April 20, 2022, and determined the impact on rates to be minimal. The cost Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty–Keene Division
Docket No. DG 22-015
Revised Summer 2022 Cost of Gas
Direct Testimony of D. Gilbertson and C. McNamara
Page 17 of 17

of CNG is projected to increase by twenty-three cents and the cost of propane is projected to decrease by four cents. This update also changed the delta between the two, of which the Company is allowed to keep 50% of the benefit because the price of CNG is less than the price of propane. This change lessened the gap between the two, thus reducing the chargeback to customers from approximately \$19,000 as seen on Schedule B, line 15 to \$10,000. Although it appears that a lot has changed, overall the impact of these changes had very little impact on the overall rate. The rate increased by one penny which is not a material projected change to the rate.

9 Q. Does this conclude your testimony?

10 A. Yes, it does.

THIS PAGE INTENTIONALLY LEFT BLANK

COST OF GAS RATE FILING - DG 22-015

SUMMER PERIOD 2022

REVISED FILING

CONTENTS

1.	TARIFF PAGE - COST OF GAS RATE	
2.	MARKED TARIFF PAGE - COST OF GAS RATE	
3.	CONVERSION OF GAS COSTS - GALLONS TO THERMS	SCHEDULE A
4.	CALCULATION OF COST OF GAS RATE	SCHEDULE B
5.	PROPANE SPOT MARKET PURCHASE COST ANALYSIS	SCHEDULE C
6.	PROPANE INVENTORY & WACOG CALCULATION	SCHEDULE D
7.	PRIOR PERIOD (OVER)/UNDER COLLECTION	SCHEDULE E
8.	INTEREST CALCULATION	SCHEDULE F
9.	WEATHER NORMALIZATION - SENDOUT	SCHEDULE G
10.	WEATHER NORMALIZATION - SALES	SCHEDULE H
	BILL IMPACT ANALYSES:	
11.	RESIDENTIAL FPO	SCHEDULE I-1
12.	RESIDENTIAL NON-FPO	SCHEDULE I-2
	PROPANE PURCHASING STABILIZATION PLAN:	
13.	PREMIUM FOR PRE-PURCHASED VOLUMES	SCHEDULE J-1
14.	COMPARISON OF CONTRACT COST TO HYPOTHETICAL SPOT COST	SCHEDULE J-2
15.	PRE-PURCHASES AND DELIVERY SCHEDULE	SCHEDULE J-3
16.	WEIGHTED AVERAGE COST OF GAS CALCULATION	SCHEDULE K
17.	PROJECTED INCREMENTAL SAVINGS CNG VS. SPOT PROPANE	SCHEDULE L
18.	CNG INCREMENTAL COSTS/SAVINGS RISK SHARING	SCHEDULE M
19.	HISTORICAL INCREMENTAL COSTS/SAVINGS CNG VS. SPOT PROPANE	SCHDULE N
	APPENDIXES:	
20.	MONT BELVIEU PROPANE FUTURES PRICES	APPENDIX 1
21.	ENTERPRISE TE PRODUCTS PIPELINE FERC TARIFF - EFF. 01/01/21	APPENDIX 2
22.	TRUCKING FUEL SURCHARGE NOTIFICATION	APPENDIX 3A
23.	TRUCKING FUEL SURCHARGE RATE PER GALLON	APPENDIX 3B

Revised Eleventh Revised Page 88
Second Revised Page 88
Superseding Tenth Page 88
Superseding First Revised Page 88

Rates Effective April 1, 2021 April 30, 2021 Rates Effective March 1, 2022 - April 30, 2022 Winter Period Period Rates Effective October 1, 2021 October 31, 2021
Rates Effective May 1, 2022 - October 31, 2022
Summer Period

,	***	intor i dilou	i dilou			Cultillion	1 Onou	
	Delivery <u>Charge</u>	Cost of Gas Rate Page 97	LDAC Page 101	Total <u>Rate</u>	Delivery <u>Charge</u>	Cost of Gas Rate Page 93	LDAC Page 101	Total <u>Rate</u>
Residential Non Heating - R-1 Customer Charge per Month per Meter All therms	\$15.50 \$15.39 \$0.3844 \$0.3860	\$2.4835 \$1.2816	\$0.1318 \$0.0589	\$15.50 \$15.39 \$2.9997 \$1.7265	\$15.39 \$15.39 \$0.3844 \$0.3844	\$1.7865 \$1.2389	\$0.1318 \$0.0589	\$15 39 \$15 39 \$2.3027 \$1.6822
Residential Heating - R-3 Customer Charge per Month per Meter All therms over the first block per month at	\$15.50 \$15.39 \$0.5632 \$0.5678	\$2.4835 \$1.2816	\$0.1318 \$0.0589	\$15.50 \$15.39 \$3.1785 \$1.9083	\$15.39 \$15.39 \$0.5632 \$0.5632	\$1.7865 \$1.2389	\$0.1318 \$0.0589	\$15 39 \$15 39 \$2.4815 \$1.8610
Residential Heating - R-4 Customer Charge per Month per Meter All therms over the first block per month at	\$8.53 \$8.47 \$0.3098 \$0.3123	\$1.3659 \$0.7048	\$0.1318 \$0.0589	\$8.53 \$8.47 \$1.8075 \$1.0760	\$15.39 \$15.39 \$0.5632 \$0.5632	\$1.7865 \$1.2389	\$0.1318 \$0.0589	\$15.39 \$15.39 \$2.4815 \$1.8610
Commercial/Industrial - G-41 Customer Charge per Month per Meter Size of the first block	\$57.46 \$57.06 100 therms			\$57.46 \$57.06	\$57.06 \$57.06 20 therms			\$57 06 \$57 06
Therms in the first block per month at All therms over the first block per month at	\$0.4688 \$0.4711 \$0.3149 \$0.3165	\$2.4835 \$1.2816 \$2.4835 \$1.2816	\$0.0991 \$0.0555 \$0.0991 \$0.0555	\$3.0514 \$1.8082 \$2.8975 \$1.6536	\$0.4688 \$0.4688 \$0.3149 \$0.3149	\$1.7865 \$1.2389 \$1.7865 \$1.2389	\$0.0991 \$0.0555 \$0.0991 \$0.0555	\$2.3544 \$1.7632 \$2.2005 \$1.6093
Commercial/Industrial - G-42 Customer Charge per Month per Meter Size of the first block Therms in the first block per month at	\$172.39 \$171.19 1000 therms \$0.4261	\$2.4835	\$0.0991	\$172.39 \$171.19 \$3.0087	\$171.19 \$171.19 400 therms \$0.4261	\$1.7865	\$0.0991	\$171.19 \$171.19 \$2.3117
All therms over the first block per month at	\$0.4284 \$0.2839 \$0.2855	\$1.2816 \$2.4835 \$1.2816	\$0.0555 \$0.0991 \$0.0555	\$1.7655 \$2.8665 \$1.6226	\$0.4261 \$0.2839 \$0.2839	\$1.2389 \$1.7865 \$1.2389	\$0.0555 \$0.0991 \$0.0555	\$1.7205 \$2.1695 \$1.5783
Commercial/Industrial - G-43 Customer Charge per Month per Meter All therms over the first block per month at	\$739.83 \$734.69 \$0.2620 \$0.2633	\$2.4835 \$1.2816	\$0.0991 \$0.0555	\$739.83 \$734.69 \$2.8446 \$1.6004	\$734.69 \$734.69 \$0.1198 \$0.1198	\$1.7865 \$1.2389	\$0.0991 \$0.0555	\$734 69 \$734 69 \$2.0054 \$1.4142
Commercial/Industrial - G-51 Customer Charge per Month per Meter Size of the first block	\$57.46 \$57.06 100 therms			\$57.46 \$57.06	\$57.06 \$57.06 100 therms			\$57 06 \$57 06
Therms in the first block per month at All therms over the first block per month at	\$0.2819 \$0.2839 \$0.1833 \$0.1846	\$2.4835 \$1.2816 \$2.4835 \$1.2816	\$0.0991 \$0.0555 \$0.0991 \$0.0555	\$2.8645 \$1.6210 \$2.7659 \$1.5217	\$0.2819 \$0.2819 \$0.1833 \$0.1833	\$1.7865 \$1.2389 \$1.7865 \$1.2389	\$0.0991 \$0.0555 \$0.0991 \$0.0555	\$2.1675 \$1.5763 \$2.0689 \$1.4777
Commercial/Industrial - G-52 Customer Charge per Month per Meter Size of the first block	\$172.39 \$171.19 1000 therms			\$172.39 \$171.19	\$171.19 \$171.19 1000 therms			\$171.19 \$171.19
Therms in the first block per month at All therms over the first block per month at	\$0.2428 \$0.2439 \$0.1617 \$0.1624	\$2.4835 \$1.2816 \$2.4835 \$1.2816	\$0.0991 \$0.0555 \$0.0991 \$0.0555	\$2.8254 \$1.5810 \$2.7443 \$1.4995	\$0.1749 \$0.1759 \$0.1000 \$0.1000	\$1.7865 \$1.2389 \$1.7865 \$1.2389	\$0.0991 \$0.0555 \$0.0991 \$0.0555	\$2.0605 \$1.4703 \$1.9856 \$1.3944
Commercial/Industrial - G-53 Customer Charge per Month per Meter All therms over the first block per month at	\$761-39 \$756.10 \$0.1697 \$0.1705	\$2.4835 \$1.2816	\$0.0991 \$0.0555	\$761-39 \$756.10 \$2.7523 \$1.5076	\$756.10 \$756.10 \$0.0814 \$0.0814	\$1.7865 \$1.2389	\$0.0991 \$0.0555	\$756.10 \$756.10 \$1.9670 \$1.3758
Commercial/Industrial - G-54 Customer Charge per Month per Meter All therms over the first block per month at	\$761.39 \$756.10 \$0.0648 \$0.0650	\$2.4835 \$1.2816	\$0.0991 \$0.0555	\$761 39 \$756.10 \$2.6474 \$1.4021	\$756.10 \$756.10 \$0.0352 \$0.0352	\$1.7865 \$1.2389	\$0.0991 \$0.0555	\$756.10 \$756.10 \$1.9208 \$1.3296

DATED: April XX, 2022 DATED September 24, 2021 EFFECTIVE: May 1, 2022 EFFECTIVE: October 1, 2021 ISSUED BY: <u>/s/Neil Proudman</u> Neil Proudman TITLE: President

Authorized by NHPUC Order No. xx,xxx dated April xx, 2022, in Docket No. DG 22-xxx Authorized by NHPUC Order No. 26,475 dated April 30, 2021, in Docket No. DG 21-050-

Rates Effective May 1, 2022 - October 31, 2022

Winter Period Summer Period Cost of Cost of LDAC LDAC Delivery Total Delivery Gas Rate Total Gas Rate Charge Page 97 Page 101 **Charge** Page 93 Page 101 Rate Rate Residential Non Heating - R-1 Customer Charge per Month per Meter \$15.39 \$15.39 \$15.39 \$15.39 All therms \$0.3844 \$2.4835 \$0.1318 \$2.9997 \$0.3844 \$1.7865 \$0.1318 \$2.3027 Residential Heating - R-3 Customer Charge per Month per Meter \$15.39 \$15.39 \$15.39 \$15.39 \$2,4835 \$1.7865 \$0.1318 \$0.1318 All therms \$0.5632 \$3.1785 \$0.5632 \$2.4815 Residential Heating - R-4 \$8.47 \$8.47 \$15.39 Customer Charge per Month per Meter \$15.39 All therms \$0.3098 \$2.4835 \$0.1318 \$2.9251 \$0.5632 \$1.7865 \$0.1318 \$2.4815 Commercial/Industrial - G-41 Customer Charge per Month per Meter \$57.06 \$57.06 \$57.06 \$57.06 Size of the first block 100 therms 20 therms Therms in the first block per month at \$0.4688 \$2 4835 \$0.0991 \$3 0514 \$0.4688 \$1.7865 \$0.0991 \$2 3544 All therms over the first block per month at \$0.3149 \$2,4835 \$0.0991 \$2.8975 \$0.3149 \$1.7865 \$0.0991 \$2.2005 Commercial/Industrial - G-42 Customer Charge per Month per Meter \$172.39 \$172.39 \$171.19 \$171.19 Size of the first block 1000 therms 400 therms Therms in the first block per month at \$0.4261 \$2.4835 \$0.0991 \$3.0087 \$0.4261 \$1.7865 \$0.0991 \$2.3117 All therms over the first block per month at \$0.2839 \$2,4835 \$0.0991 \$2.8665 \$0.2839 \$1.7865 \$0.0991 \$2.1695 Commercial/Industrial - G-43 Customer Charge per Month per Meter \$734.69 \$734.69 \$734.69 \$734.69 All therms over the first block per month at \$0.2620 \$2.4835 \$0.0991 \$2.8446 \$0.1198 \$1.7865 \$0.0991 \$2.0054 Commercial/Industrial - G-51 Customer Charge per Month per Meter Size of the first block \$57.06 \$57.06 \$57.06 \$57.06 100 therms 100 therms Therms in the first block per month at \$0.2819 \$2.4835 \$0.0991 \$2.8645 \$0.2819 \$1.7865 \$0.0991 \$2.1675 All therms over the first block per month at \$2.4835 \$2.7659 \$1.7865 \$0.1833 \$0.0991 \$0.1833 \$0.0991 \$2.0689 Commercial/Industrial - G-52

Rates Effective March 1, 2022 - April 30, 2022

\$171.19

\$0.2428

\$0.1617

\$756.10

\$0.1697

\$756.10

\$0.0648

\$2,4835

\$2.4835

\$2.4835

\$2.4835

1000 therms

Customer Charge per Month per Meter

Therms in the first block per month at

<u>Commercial/Industrial - G-53</u> Customer Charge per Month per Meter All therms over the first block per month at

Commercial/Industrial - G-54

Customer Charge per Month per Meter All therms over the first block per month at

All therms over the first block per month at

Size of the first block

DATED: April XX, 2022

EFFECTIVE: May 1, 2022

ISSUED BY: <u>/s/Neil Proudman</u>
Neil Proudman

TITLE: President

\$0.0991

\$0.0991

\$0.0991

\$0.0991

\$171.19

\$2.8254

\$2.7443

\$756.10

\$2.7523

\$756.10

\$2.6474

\$171.19

\$0.1749

\$0.1000

\$756.10

\$0.0814

\$756.10

\$0.0352

\$1.7865

\$1.7865

\$1.7865

\$1.7865

\$0.0991

\$0.0991

\$0.0991

\$0.0991

1000 therms

Authorized by NHPUC Order No. xx,xxx dated April xx, 2022, in Docket No. DG 22-xxx

\$171.19

\$2.0605

\$1.9856

\$756.10

\$1.9670

\$756.10

\$1.9208

^[1] For Keene rates in effect prior to May 1, 2018 please see tariff

NHPUC NO. 11 - GAS DELIVERY LIBERTY UTILITIES - KEENE DIVISION

Maximum Cost of Gas Rate (per therm)

Revised Third Revised Page 93
First Revised Page 93
Superseding Second Revised Page 93
Superseding Original Page 93

\$1.4776

\$2.2331

CALCULATION OF THE SUMMER COST OF GAS RATE

Period Cove	ered:	Summer Period May 1, 2021, through October 31, 2021 Summer Period May 1, 2022, through October 31, 2022			
Projected G	as Sales - the	erms	-	311,740	320,838
Total Anticip	ated Cost of	Sendout		\$391,714	\$554,874
Add:	Prior Period Interest	d Deficiency Uncollected	\$0 \$0	\$18,017 \$274	
Deduct:	Prior Period Interest	d Excess Collected	(\$23,223) \$18	\$0 \$0	
	Prior Period	d Adjustments and Interest		(\$23,205)	\$18,291
Total Anticip	ated Cost		_	\$368,509	\$573,165
Cost of Gas	Rate - Begin	ning Period (per therm)		\$1.1821	\$1.7865
Mid Period A	Adjustment - N	May 1, 2021		\$0.0000	
Mid Period A	Adjustment - 、	June 1, 2021		\$0.0844	
Mid Period A	Adjustment - 、	July 1, 2021		\$0.2015	
Mid Period A	Adjustment - A	August 1, 2021		\$0.0000	
Mid Period A	Adjustment - S	September 1, 2021		(\$0.1240)	
Mid Period A	Adjustment - 0	October 1, 2021		(\$0.1051)	
Revised Cos	st of Gas Rate	e Effective October 1, 2021 (per therm)	-	\$1.2389	
		16.2(D), the Company may adjust the approved on a monthly basis to the following rate:			

 DATED:
 April XX, 2022
 ISSUED BY: Neil Proudman Neil Proudman

 DATED:
 September 24, 2021
 Neil Proudman

 EFFECTIVE:
 May 1, 2022
 TITLE:
 President

 EFFECTIVE:
 October 1, 2021
 TITLE:
 President

Authorized by NHPUC Order No. xx,xxx dated April xx, 2022, in Docket No. DG 22-xxx Authorized by NHPUC Order No. 26,475 dated April 30, 2021, in Docket No. DG 21-050-

NHPUC NO. 11 - GAS DELIVERY LIBERTY UTILITIES - KEENE DIVISION Revised Third Revised Page 93 Superseding Second Revised Page 93

CALCULATION OF THE SUMMER COST OF GAS RATE

Period Covered: Summer Period May 1, 2022, through October 31, 2022

Projected Gas Sales - therms 320,838

Total Anticipated Cost of Sendout \$554,874

Add: Prior Period Deficiency Uncollected \$18,017 Interest \$274

Deduct: Prior Period Excess Collected \$0

Interest \$0

Prior Period Adjustments and Interest \$18,291

Total Anticipated Cost \$573,165

Cost of Gas Rate - Beginning Period (per therm) \$1.7865

Pursuant to tariff section 17(d), the Company may adjust the approved cost of gas rate upward on a monthly basis to the following rate:

Maximum Cost of Gas Rate (per therm) \$2.2331

Dated: April XX, 2022 ISSUED BY: /s/ Neil Proudman

Effective: May 1, 2022 Neil Proudman
TITLE: President

Authorized by NHPUC Order No. xx,xxx dated April xx, 2022, in Docket No. DG 22-xxx

CONVERSION OF COSTS - GALLONS TO THERMS SUMMER PERIOD 2022

	(1)	(2)	(3)	(4)	(5)	(6)
			VOLU	JMES	UNIT	COST
	<u>UNIT</u>	CONVERSION FACTOR	GALLONS	THERMS	PER GALLON	PER THERM
GAS FROM INVENTORY	GALLONS	0.91502			\$1.5379	\$1.6807
GAS FROM CNG	THERMS	N/A	N/A		N/A	
TOTAL				321,744		

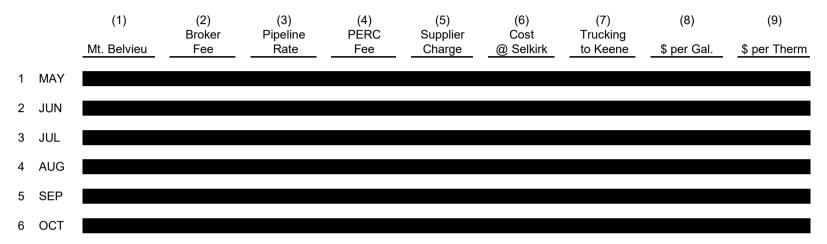
THIS PAGE HAS BEEN REDACTED

CALCULATION OF COST OF GAS RATE SUPPLY / DEMAND BALANCE SUMMER PERIOD 2022

		(1) PRIOR	(2) May-22	(3) Jun-22	(4) Jul-22	(5) Aug-22	(6) Sep-22	(7) Oct-22	(8) TOTAL
1	PROPANE COSTS PROPANE FIRM SENDOUT (therms)								
2	COMPANY USE (therms)	-							
3	TOTAL PROPANE SENDOUT (therms)	_							
4 5 6 7	COST PER THERM (WACOG) TOTAL CALCULATED COST OF PROPANE PROPANE ADJUSTMENTS TOTAL COST OF PROPANE	- -	\$1.2454 \$63,672 \$0 \$63,672	\$1.6335 \$58,362 \$0 \$58,362	\$1.7450 \$60,620 \$0 \$60,620	\$1.8071 \$62,992 \$0 \$62,992	\$1.8489 \$68,320 \$0 \$68,320	\$1.8715 \$108,747 \$0 \$108,747	\$422,713 \$0 \$422,713
8	CNG COSTS CNG SENDOUT (therms)								
9 10	COST PER THERM (WACOG) TOTAL CALCULATED COST OF CNG								
11	CNG DEMAND CHARGES								
12 13 14 15 16	INCREMENTAL COSTS SUMMER 2019 PER Order # 26,505 in DG 20-105 INCREMENTAL COSTS SUMMER 2020 PER Order # 26,505 in DG 20-105 INCREMENTAL COSTS SUMMER 2021 PROJECTED INCREMENTAL COSTS SUMMER 2022 NET INCREMENTAL COSTS								
17	TOTAL CNG COSTS								
18	ACCOUNTING ADJUSTMENT		\$0	\$0	\$0	\$0	\$0	\$0	\$0
19	FPO PREMIUM		\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
20	TOTAL COSTS OF GAS								
21	RETURN ON INVENTORY		\$0	\$0	\$0	\$0	\$0	\$0	\$0
	REVENUES								
22 23	BILLED FPO SALES (therms) COG FPO RATE	_	0 \$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	\$0.0000 \$0	0 \$0.0000 \$0	\$0
24 25	BILLED NON-FPO SALES PRIOR MONTH (therms) COG NON-FPO RATE PRIOR MONTH	-	\$0.0000 \$0	\$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	\$0.0000 \$0	0 \$0.0000 \$0	\$0
26 27	BILLED NON-FPO SALES CURRENT MONTH (therms) COG NON-FPO RATE CURRENT MONTH	-	64,616 \$1.7865 \$115,434	46,386 \$1.7865 \$82,867	45,099 \$1.7865 \$80,568	44,423 \$1.7865 \$79,360	48,068 \$1.7865 \$85,872	72,246 \$1.7865 \$129,065	320,838 \$573,165
28 29	BILLED SALES OTHER PRIOR PERIODS COG OTHER PRIOR PERIODS BLENDED RATE	_	0 \$0.0000 \$0	0 \$0.0000 \$0	\$0.0000 \$0	\$0.0000 \$0	\$0.0000 \$0	\$0.0000 \$0	\$0
30	TOTAL SALES		64,616	46,386	45,099	44,423	48,068	72,246	320,838
31	TOTAL BILLED REVENUES		\$115,434	\$82,867	\$80,568	\$79,360	\$85,872	\$129,065	\$573,165
32	UNBILLED REVENUES (NET)		\$0	\$0	\$0	\$0	\$0	\$0	\$0
33	TOTAL REVENUES	=	\$115,434	\$82,867	\$80,568	\$79,360	\$85,872	\$129,065	\$573,165
34	(OVER)/UNDER COLLECTION		(\$13,789)	(\$6,047)	(\$2,471)	\$202	\$994	\$2,816	(\$18,295)
35	INTEREST AMOUNT		\$31	\$4	(\$7)	(\$11)	(\$9)	(\$4)	\$4
36	FINAL (OVER)/UNDER COLLECTION	\$18,291	(\$13,758)	(\$6,043)	(\$2,478)	\$191	\$985	\$2,812	\$0

THIS PAGE HAS BEEN REDACTED

PROPANE SPOT MARKET PURCHASE COST ANALYSIS SUMMER PERIOD 2022



- 1. Propane futures market quotations (cmegroup.com) on 3/2/2022 close. See Appendix 1.
- 2. A generally accepted broker fee
- 3. Pipeline rate from Mont Belvieu, TX to Selkirk, NY
- 4. Propane Education Research Council (propanecouncel.org)
- 5. A generally accepted supplier charge
- 6. Selkirk Cost all fees plus propane cost
- 7. Northern Gas Transport trucking rate including diesel fuel surcharge. See Appendix 3A & 3B.
- 8. Delivered Price per Gallon
- 9. Delivered Price per therm as converted using per gallon price / .91502

PROPANE INVENTORY & WEIGHTED AVERAGE COST OF PROPANE CALCULATION SUMMER PERIOD 2022

LINE NO		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	May 2022 (forecasted)	Therms	Cost	Therm	Gal.	CNG therms		Total Sendout (1)+(5)	Total Cost (2)+(6)	Therm Rate (8)/(7)
2	Beginning Balance	45,222	\$69,089	\$1.5278	\$1.3979					
3	Purchases Received	50,000	\$49,501	\$2.0445	\$1.8708					
4	Total Available	95,222	\$118,590	\$1.2454	\$1.1396					
5	Less Sendout	51,125	\$63,672	\$1.2454	\$1.1396					
6	Ending Balance	44,097	\$54,918	\$1.2454	\$1.1396					
7	June 2022 (forecasted)	<u>Therms</u>	Cost	<u>Therm</u>	<u>Gal.</u>					
8	Beginning Balance	44,097	\$54,918	\$1.2454	\$1.1396					
9	Purchases Received	50,000	\$98,787	\$1.9757	\$1.8078					
10	Total Available	94,097	\$153,705	\$1.6335	\$1.4947					
11	Less Sendout	35,729	\$58,362	\$1.6335	\$1.4947					
12	Ending Balance	58,368	\$95,343	\$1.6335	\$1.4947					
13	July 2022 (forecasted)	<u>Therms</u>	Cost	<u>Therm</u>	Gal.					
14	Beginning Balance	58,368	\$95,343	\$1.6335	\$1.4947					
15	Purchases Received	35,000	\$67,589	\$1.9311	\$1.7670					
16	Total Available	93,368	\$162,932	\$1.7451	\$1.5968					
17	Less Sendout	34,738	\$60,620	\$1.7450	\$1.5968					
18	Ending Balance	58,630	\$102,312	\$1.7451	\$1.5968					
19	August 2022 (forecasted)	<u>Therms</u>	<u>Cost</u>	<u>Therm</u>	Gal.					
20	Beginning Balance	58,630	\$102,312	\$1.7451	\$1.5968					
21	Purchases Received	35,000	\$66,888	\$1.9111	\$1.7487					
22	Total Available	93,630	\$169,200	\$1.8071	\$1.6536					
23	Less Sendout	34,858	\$62,992	\$1.8071	\$1.6535					
24	Ending Balance	58,772	\$106,208	\$1.8071	\$1.6536					
25	September 2022 (forecasted)	<u>Therms</u>	Cost	<u>Therm</u>	Gal.					
26	Beginning Balance	58,772	\$106,208	\$1.8071	\$1.6536					
27	Purchases Received	40,000	\$76,408	\$1.9102	\$1.7479					
28	Total Available	98,772	\$182,616	\$1.8489	\$1.6918					
29	Less Sendout	36,952	\$68,320	\$1.8489	\$1.6917					
30	Ending Balance	61,819	\$114,296	\$1.8489	\$1.6918					
31	October 2022 (forecasted)	Therms	Cost	<u>Therm</u>	Gal.					
32	Beginning Balance	61,819	\$114,296	\$1.8489	\$1.6918					
33	Purchases Received	55,000	\$104,328	\$1.8969	\$1.7357					
34	Total Available	116,819	\$218,624	\$1.8715	\$1.7124					
35	Less Sendout	58,108	\$108,747	\$1.8715	\$1.7124					
36	Ending Balance	58,712	\$109,877	\$1.8715	\$1.7124					
37	AVI	ERAGE SUMI	MER RATE -	SENDOUT			ļ			

THIS PAGE HAS BEEN REDACTED

CALCULATION OF COST OF GAS RATE SUPPLY / DEMAND BALANCE SUMMER PERIOD 2021

		(1) PRIOR	(2) May-21	(3) Jun-21	(4) Jul-21	(5) Aug-21	(6) Sep-21	(7) Oct-21	(8) TOTAL
	PROPANE COSTS		Actual	Actual	Actual	Actual	Actual	Actual	
1	PROPANE F RM SENDOUT (therms)								
2	COMPANY USE (therms)								
3	TOTAL PROPANE SENDOUT (therms)								
4	COST PER THERM (WACOG)	_	\$1.1069	\$1.1869	\$1.3619	\$1.4048	\$1.4683	\$1 6086	
5 6	TOTAL CALCULATED COST OF PROPANE PROPANE ADJUSTMENTS	_	\$62,060 (\$0)	\$44,436 (\$150)	\$48,722 \$149	\$51,179 \$0	\$56,747 (\$0)	\$91,851 \$0	\$354,995 (\$1)
7	TOTAL COST OF PROPANE		\$62,060	\$44,286	\$48,871	\$51,179	\$56,747	\$91,851	\$354,993
8	CNG COSTS CNG SENDOUT (therms)								
9	COMPANY USE (therms)								
10	TOTAL CNG SENDOUT (therms)								
11 12	COST PER THERM (WACOG)								
13	TOTAL CALCULATED COST OF CNG ACCOUNTING ADJUSTMENT		\$52	\$71	\$728	(\$569)	\$45	\$22	\$350
14 15	CNG DEMAND CHARGES TOTAL CALCULATED COST OF CNG								
	FPO PREMIUM		\$0 0000	\$0.0000	\$0.0000	\$0 0000	\$0.0000	\$0 0000	\$0.0000
16	TOTAL COSTS OF GAS								
17	RETURN ON NVENTORY		\$0	\$0	\$0	\$0	\$0	\$0	\$0
	REVENUES								
18	BILLED FPO SALES (therms)		0	0	0	0	0	0	
19 20	COG FPO RATE TOTAL	_	\$0 0000 \$0	\$0.0000 \$0	\$0.0000 \$0	\$0 0000 \$0	\$0.0000 \$0	\$0 0000 \$0	\$0
21	BILLED NON-FPO SALES CURRENT MONTH (ther	ms)	48,984	35,352	35,014	42,924	33,670	36,773	232,717
22 23	COG NON-FPO RATE CURRENT MONTH TOTAL	· –	\$1.1821 \$57,904	\$1.2665 \$44,773	\$1.4680 \$51,401	\$1.4680 \$63,012	\$1.3440 \$45,252	\$1 2389 \$45,558	\$307,900
24			0						φου,,σου
25	BILLED NON-FPO SALES PRIOR MONTH (therms) COG NON-FPO RATE PRIOR MONTH	_	\$0 0000	20,254 \$1.1821	10,455 \$1.2665	0 \$1.4680	11,164 \$1.4680	13,695 \$1 3440	
26	TOTAL		\$0	\$23,942	\$13,241	\$0	\$16,389	\$18,406	\$71,978
27	BILLED SALES OTHER PRIOR PERIODS		0	(1)	546	13	(31)	8	
28 29	COG OTHER PRIOR PERIODS BLENDED RATE TOTAL	_	\$0 0000 \$0	\$0.8000 (\$1)	\$1.1821 \$645	\$1 2300 \$16	\$0.0000 (\$33)	\$1 3057 \$11	\$638
30	TOTAL SALES		48,984	55,605	46,015	42,937	44,803	50,475	288,819
31	TOTAL B LLED REVENUES		\$57,904	\$68,715	\$65,287	\$63,028	\$61,608	\$63,974	\$380,517
32	UNB LLED REVENUES (NET)		\$18,316	(\$10,435)	\$6,034	\$2,302	\$3,649	\$18,461	\$38,328
33	TOTAL REVENUES	_	\$76,220	\$58,280	\$71,322	\$65,330	\$65,257	\$82,435	\$418,845
34	(OVER)/UNDER COLLECTION		\$483	(\$2,247)	(\$9,055)	(\$3,938)	\$4,508	\$26,904	\$16,653
35	INTEREST AMOUNT		(\$1)	(\$3)	(\$19)	(\$37)	(\$35)	\$7	(\$87)
		(\$488)	\$482						
36	F NAL (OVER)/UNDER COLLECTION	(\$400)	\$48Z	(\$2,250)	(\$9,074)	(\$3,975)	\$4,473	\$26,911	\$16,078

THIS PAGE HAS BEEN REDACTED

SCHEDULE F

LIBERTY UTILITIES-KEENE DIVISION

INTEREST CALCULATION SUMMER PERIOD 2022

		(1) BEG. OF	(2) (OVER)	(3)	(4)	(5) END OF	(6) AVERAGE	(7) ANNUAL	(8)	(9) MONTH END
		MONTH	UNDER			MONTH	BALANCE	INTEREST	INTEREST	BAL. WITH
LINE	MONTH	BALANCE	COLLECT	ADJUSTMENTS	REFUNDS	BALANCE	COL.	RATE	AMOUNT	INTEREST
NO.						(COL.1+2+3)	(COL. [1+4]/2)			(COL. 4+7)
<u> </u>										_
1	NOV 2021	16,080	\$0	(\$2,600)	\$0	\$13,480	\$14,780	3.25%	39	\$13,519
2	DEC	13,519	0	2,226	0	\$15,745	14,632	3.25%	40	15,785
3	JAN 2022	15,785	0	2,311	0	\$18,096	16,941	3.25%	47	18,143
4	FEB	18,143	0	0	0	\$18,143	18,143	3.25%	49	18,192
5	MAR	18,192	0	0	0	\$18,192	18,192	3.25%	49	18,241
6	APR	18,241	0	0	0	\$18,241	18,241	3.25%	49	18,290
7	MAY	18,290	(13,789)	0	0	\$4,501	11,396	3.25%	31	4,532
8	JUN	4,532	(6,047)	0	0	(\$1,515)	1,509	3.25%	4	(1,511)
9	JUL	(1,511)	(2,471)	0	0	(\$3,982)	(2,746)	3.25%	(7)	(3,989)
10	AUG	(3,989)	202	0	0	(\$3,787)	(3,888)	3.25%	(11)	(3,798)
11	SEP	(3,798)	994	0	0	(\$2,804)	(3,301)	3.25%	(9)	(2,813)
12	OCT	(2,813)	2,816	0	0	\$3	(1,405)	3.25%	(4)	(1)
13		, ,					, ,	-	•	
14								_	\$278	
								=		i
15	=	COL. 1, LINE 1			+	COL. 7, LINES	S 1 TO 6			
16	=	16,080			+	274	=	16,353	@ MAY 1, 20	22

(TRANSFER TO SCHEDULE B, LINE 13) (UNLESS ADJUSTMENTS UNDER COLUMN 3 LINES 1-6)

SCHEDULE G

						ERTY UTILITIES-KE							
				Actual	Normal								
	Actual			Calendar	Calendar		Actual Unit			Normalized	Actual	Unaccounted	Total
	Firm			Month	Month	Colder (Warmer)	Heat Load	Weather	Normal	Firm	Company	For	Firm
Period	Sendout	Base Use	Heat Use	Degree Days	Degree Days	Than Normal	Therm/DD	Adjustment	Heat Load	Sendout	Use	0.19%	Sendout
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
			(1) - (2)			(4) - (5)	(3) / (4)	(6) X (7)	(3) + (8)	(1) - (3) + (9)		(11 - 14) * 0.19%	(10) - (11) +(12)
May-21	70,282	46,620	23,662	346	301	45	68.39	(3,077)	20,585	67,205	2,566	128	64,766
Jun-21	47,998	46,620	1,378	80	102	(22)	17.23	379	1,757	48,377	1,880	92	46,589
Jul-21	47,069	46,620	449	79	27	52	5.68	(296)	153	46,773	1,884	89	44,978
Aug-21	46,171	46,620	0	25	43	(18)	0.00	0	0	46,171	1,701	88	44,558
Sep-21	50,096	46,620	3,476	201	195	6	17.29	(104)	3,372	49,992	1,834	95	48,253
Oct-21	70,902	46,620	24,282	464	537	(73)	52.33	3,820	28,102	74,722	2,265	142	72,599
Total	332,518	279,720	53,247	1,195	1,205	(10)		722	53,969	333,240	12,130	633	321,744

SCHEDULE H

						S–KEENE DIVISI Sales Rate Re					
Period	Calendar Customers	Calendar Sales	Base Load	Heating Load	Calendar Monthly Actual Degree Days	Calendar Monthly Normal Degree Days	Colder (Warmer) Than Normal	Actual Unit Heat Load Therm/DD	Weather Adjustment	Normal Heat Load	Normal Firm Sales Therms
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
				(1) - (2)			(4) - (5)	(3) / (4)	(6) X (7)	(3) + (8)	(1) - (3) + (9)
May-21	910	13,321	6,393	6,928	346	301	45	20.02	(901)	6,027	12,420
Jun-21	873	7,338	6,393	945	80	102	(22)	11.81	260	1,204	7,598
Jul-21	901	6,341	6,393	0	79	27	52		0	0	6,341
Aug-21	894	6,446	6,393	52	25	43	(18)	2.10	38	90	6,484
Sep-21	865	7,361	6,393	968	201	195	6	4.82	(29)	939	7,332
Oct-21	897	13,733	6,393	7,340	464	537	(73)	15.82	1,155	8,494	14,888
Total		54,540	38,360	16,233	1,195	1,205	(10)	52.24	522	16,755	55,063

						S–KEENE DIVISI Sales Rate Cor					
					Calendar	Calendar		Actual Unit			Normal Firm
Period	Calendar Customers	Calendar Sales	Base Load	Heating Load	Monthly Actual Degree Days	Monthly Normal Degree Days	Colder (Warmer) Than Normal	Heat Load Therm/DD	Weather Adjustment	Normal Heat Load	Sales Therms
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
				(1) - (2)			(4) - (5)	(3) / (4)	(6) X (7)	(3) + (8)	(1) - (3) + (9)
May-21	318	54,266	38,349	15,917	346	301	45	46.00	(2,070)	13,847	52,196
Jun-21	307	38,693	38,349	345	80	102	(22)	4.31	95	440	38,788
Jul-21	314	38,758	38,349	410	79	27	52		0	410	38,758
Aug-21	310	37,939	38,349	0	25	43	(18)	0.00	0	0	37,939
Sep-21	300	40,809	38,349	2,461	201	195	6	12.24	(73)	2,387	40,736
Oct-21	320	54,774	38,349	16,425	464	537	(73)	35.40	2,584	19,009	57,358
Total		265,239	230,091	35,558	1,195	1,205	(10)	53.53	535	36,093	265,775

Summary - Total Summer Season Sales

	Actual 2021	<u>Normalized</u>
May	67,587	64,616
June	46,031	46,386
July	45,099	45,099
August	44,385	44,423
September	48,170	48,068
October	68,507	72,246
Total	319,779	320.838

SCHEDULE I-1

LIBERTY UTILITIES-KEENE DIVISION

Typical Residential Heating Bill Forecasted 2022 Summer Period vs. Actual 2021 Summer Period

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
12 MONTHS ENDED 10/2021	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter Nov-Apr	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer May-Oct	Total Nov-Oct
Typical Usage - therms (1)	39 I	67	83	101	70	35	395	21	10	7	7	8	12	65	41
Winter Summer Summer Customer Charge \$15.50 \$15.50 \$15.39 Delivery Charge: \$15.50 \$15.39	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$93.00	\$15.50	\$15.50	\$15.50	\$15.39	\$15.39	\$15.39	\$92.67	\$185.
All therms @ \$0.5678 \$0.5678 \$0.5632	\$22.14	\$38.04	\$47.13	\$57.35	\$39.74	\$19.87	\$224.27	\$11.92	\$5.68	\$3.97	\$3.94	\$4.51	\$6.76	\$36.78	\$261.0
Base Delivery Revenue Total	\$37.64	\$53.54	\$62.63	\$72.85	\$55.24	\$35.37	\$317.27	\$27.42	\$21.18	\$19.47	\$19.33	\$19.90	\$22.15	\$129.45	\$446.7
Deferred Revenue Surcharge Rate	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000		\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000		
Deferred Revenue Surcharge Total	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.0
COG Rates	\$1.0253	\$1.0253	\$1.0277	\$0.9928	\$0.9928	\$1.2816	\$1.0345	\$1.1821	\$1.2665	\$1,4680	\$1.4680	\$1,3440	\$1.2389	\$1.2872	\$1.070
Cost of Gas Total	\$39.99	\$68.70	\$85.30	\$100.27	\$69.50	\$44.86	\$408.62	\$24.82	\$12.67	\$10.28	\$10.28	\$10.75	\$14.87	\$83.67	\$492.
LDAC Dete	© 0.0500	¢ 0.0500	¢ 0.0500	¢0 0500	© 0.0500	#0.0E00		© 0.0500	#0.0500	¢ 0.0500	¢0 0500	¢0 0500	© 0.0E00		
LDAC Rate	\$0.0589 \$2.30	\$0.0589 \$3.95	\$0.0589 \$4.89	\$0.0589 \$5.95	\$0.0589 \$4.12	\$0.0589 \$2.06	\$23.27	\$0.0589 \$1.24	\$0.0589 \$0.59	\$0.0589 \$0.41	\$0.0589 \$0.41	\$0.0589 \$0.47	\$0.0589 \$0.71	\$3.83	\$27.0
	,							,		•	•	,	'		
Total Bill	\$79.93	\$126.19	\$152.82	\$179.07	\$128.86	\$82.29	\$749.16	\$53.48	\$34.44	\$30.16	\$30.02	\$31.12	\$37.73	\$216.95	\$966.
12 MONTHS ENDED 10/2022	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	Winter Nov-Apr	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Summer May-Oct	Total Nov-Oct
Typical Usage - therms (1) Residential Heating R-3 Nov-21 - Apr-22 May-22 - Oct-22	39	67	83	101	70	35	395	21	10	7	7	8	12	65	4
Winter Summer	\$15.39	\$15.39	\$15.39	\$15.39	\$15.39	\$15.39	\$92.34	\$15.39	\$15.39	\$15.39	\$15.39	\$15.39	\$15.39	\$92.34	\$184.6
Delivery Charge: All therms @ \$0.5632 \$0.5632	\$21.96	\$37.73	\$46.75	\$56.88	\$39.42	\$19.71	\$222.45	\$11.83	\$5.63	\$3.94	\$3.94	\$4.51	\$6.76	\$36.61	\$259.0
<u> </u>	·						·	,							
Base Delivery Revenue Total	\$37.35	\$53.12	\$62.14	\$72.27	\$54.81	\$35.10	\$314.79	\$27.22	\$21.02	\$19.33	\$19.33	\$19.90	\$22.15	\$128.95	\$443.
Seasonal Base Delivery Difference from previous year Seasonal Percent Change from previous year							(\$2.48) -0.8%							(\$0.50) -0.4%	(\$2.9 -0.7
Seasonal Percent Change from previous year							-0.6%							-0.4%	-0.
Deferred Revenue Surcharge Rate	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000		\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000		
Deferred Revenue Surcharge Total	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.
COG Rates	\$1.9868	\$1.8972	\$1.5090	\$1.6493	\$2.4835	\$2.4835	\$1.9170	\$1.7865	\$1.7865	\$1.7865	\$1.7865	\$1.7865	\$1.7865	\$1.7868	\$1.89
Cost of Gas Total	\$77.49	\$127.11	\$125.25	\$166.58	\$173.85	\$86.92	\$757.20	\$37.52	\$17.87	\$12.51	\$12.51	\$14.29	\$21.44	\$116.14	\$873.
LDAC Rate	\$0.1397	\$0.1012	\$0.1154	\$0.1154	\$0.1318	\$0.1318		\$0.1318	\$0.1318	\$0.1318	\$0.1318	\$0.1318	\$0.1318		
LDAC Total	\$5.45	\$6.78	\$9.58	\$11.66	\$9.23	\$4.61	\$47.31	\$2.77	\$1.32	\$0.92	\$0.92	\$1.05	\$1.58	\$8.56	\$55.
0							#0.40.F2							600.47	0001
Seasonal COG Difference from previous year Seasonal Percent Change from previous year							\$348.58 85.3%							\$32.47 38.8%	\$381 77
Total Bill	\$120.29	\$187.01	\$196.97	\$250.51	\$237.89	\$126.63	\$1,119.30	\$67.51	\$40.21	\$32.76	\$32.76	\$35.24	\$45.17	\$253.65	\$1,372 \$406
Seasonal Total Bill Difference from previous year Seasonal Percent Change from previous year							\$370.14 49.4%							\$36.70 16.9%	\$406 42
Seasonal Percent Change resulting from Base Rates (incl. Def. Revenue Surch.)							-3.4%							-2.0%	-3
Seasonal Percent Change resulting from COG							46.5%							15.0%	39
Seasonal Percent Change resulting from LDAC							3.2%							2.2%	3

⁽¹⁾ Residential Heating Typical Usage: Single family detached home using gas for heat, hot water, and cooking.

SCHEDULE I-2

LIBERTY UTILITIES-KEENE DIVISION

Typical Commercial Heating Bill Forecasted 2022 Summer Period vs. Actual 2021 Summer Period

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
12 MONTHS ENDED 10/2021	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter Nov-Apr	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer May-Oct	Total Nov-O
Typical Usage - therms (1) <u>Commercial G-41</u> Nov-20 - Apr-21 May-21 - Jul-21 Aug-21 - Oct-2	153	276	327	404	251	140	1,551	67	30	22	20	27	40	206	1,
Customer Charge \$57.46 \$57.46 \$57.06 Delivery Charge:	\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$344.76	\$57.46	\$57.46	\$57.46	\$57.06	\$57.06	\$57.06	\$343.56	\$688
Summer 20 therms @ \$0.4711 \$0.4711 \$0.4688 Winter 100 \$0.3165 \$0.3165 \$0.3149	\$47.11 \$16.77	\$47.11 \$55.70	\$47.11 \$71.85	\$47.11 \$96.22	\$47.11 \$47.79	\$47.11 \$12.66	\$282.66 \$300.99	\$9.42 \$14.88	\$9.42 \$3.17	\$9.42 \$0.63	\$9.38 \$0.00	\$9.38 \$2.20	\$9.38 \$6.30	\$56.40 \$27.18	\$339 \$328
Base Delivery Revenue Total	\$121.34	\$160.27	\$176.42	\$200.79	\$152.36	\$117.23	\$928.41	\$81.76	\$70.05	\$67.51	\$66.44	\$68.64	\$72.74	\$427.14	\$1,355
Defend December Orchange Dete	#0.0000	#0.0000	#0.0000	#0.0000	#0.0000	60 0000		#0.0000	#0.0000	#0.0000	#0.0000	#0.0000	#0.0000		
Deferred Revenue Surcharge Rate Deferred Revenue Surcharge Total	\$0.0000 \$0.00	\$0.0000 \$0.00	\$0.0000 \$0.00	\$0.0000 \$0.00	\$0.0000 \$0.00	\$0.0000 \$0.00	\$0.00	\$0.0000 \$0.00	\$0.0000 \$0.00	\$0.0000 \$0.00	\$0.0000 \$0.00	\$0.0000 \$0.00	\$0.0000 \$0.00	\$0.00	\$(
	40.00	V 0.00	V 0.00	V 0.00	Ψ0.00	40.00	\ \(\tau_{0.00}\)	¥ 0.00	V 0.00	V 0.00					
COG Rates	1.0253	1.0253	0.9970	0.9928	0.9928	1.2816	1.0287	1.1821	1.2665	1.4680	1.4680	1.3440	1.2389	1.2850	1.0
Cost of Gas Total	\$156.87	\$282.98	\$326.02	\$401.09	\$249.19	\$179.42	\$1,595.57	\$79.20	\$38.00	\$32.30	\$29.36	\$36.29	\$49.56	\$264.71	\$1,86
LDAC Rate	\$0.0589	\$0.0589	\$0.0589	\$0.0589	\$0.0589	\$0.0589		\$0.0589	\$0.0589	\$0.0589	\$0.0589	\$0.0589	\$0.0589		
LDAC Total	\$9.01	\$16.26	\$19.26	\$23.80	\$14.78	\$8.25	\$91.35	\$3.95	\$1.77	\$1.30	\$1.18	\$1.59	\$2.36	\$12.13	\$10
Total Bill	\$287	\$460	\$522	\$626	\$416	\$305	\$2,615	\$165	\$110	\$101	\$97	\$107	\$125	\$704	\$3
Total Bill	\$207	ψ -1 00	4322	\$020	ψ - 10	ψυυυ	Ψ 2 ,013	\$105	Ψ110	φισι	401	Ψ107	ψ12J	\$104	Ψυ
40.100.100.100.100.100.100.100.100.100.1		5 04		F 1 00			Winter						0.400	Summer	Tot
12 MONTHS ENDED 10/2022	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	Nov-Apr	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	May-Oct	Nov-
Typical Usage - therms (1) <u>Commercial G-41</u> Nov-21 - Apr-22 Winter Summer	153	276	327	404	251	140	1,551	67	30	22	20	27	40	206	,
Customer Charge \$57.06 \$57.06	\$57.06	\$57.06	\$57.06	\$57.06	\$57.06	\$57.06	\$342.36	\$57.06	\$57.06	\$57.06	\$57.06	\$57.06	\$57.06	\$342.36	\$68
Delivery Charge: Summer 20 therms @ \$0.4688 \$0.4688	\$46.88	\$47.11	\$47.11	\$47.11	\$47.11	\$47.11	\$282.43	\$9.38	\$9.38	\$9.38	\$9.38	\$9.38	\$9.38	\$56.28	\$33
Winter 100 \$0.3149 \$0.3149	\$16.69	\$55.70	\$71.85	\$96.22	\$47.79	\$12.66	\$300.91	\$14.80	\$4.69	\$0.94	\$0.00	\$3.28	\$9.38	\$33.08	33
Base Delivery Revenue Total	\$120.63	\$159.87	\$176.02	\$200.39	\$151.96	\$116.83	\$925.70	\$81.24	\$71.13	\$67.38	\$66.44	\$69.72	\$75.82	\$431.72	\$1,35
Seasonal Base Delivery Difference from previous year Seasonal Percent Change from previous year							(\$2.71) -0.3%							\$4.59 1.1%	\$
ocasonal Feroent onlings from provious year							-0.070							1.170	
Deferred Revenue Surcharge Rate	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000		\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000		ļ
Deferred Revenue Surcharge Total	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$
COG Rates	\$1.9868	\$1.8972	\$1.5090	\$1.6493	\$2.4835	\$2.4835	\$1.9074	\$1.7865	\$1.7865	\$1.7865	\$1.7865	\$1.7865	\$1.7865	\$1.7866	\$1.8
Cost of Gas Total	\$303.98	\$523.63	\$493.44	\$666.32	\$623.36	\$347.69	\$2,958.42	\$119.70	\$53.60	\$39.30	\$35.73	\$48.24	\$71.46	\$368.03	\$3,32
LDAG D-tr	#0.0004	60.0740	60.0004	60.0004	en non4	00.0004		#0.0004	#0.0004	#0.0004	00.0004	#0.0004	#0.0004		
LDAC Rate LDAC Total	\$0.0831 \$12.71	\$0.0749 \$20.67	\$0.0891 \$29.14	\$0.0891 \$36.00	\$0.0991 \$24.87	\$0.0991 \$13.87	\$137.26	\$0.0991 \$6.64	\$0.0991 \$2.97	\$0.0991 \$2.18	\$0.0991 \$1.98	\$0.0991 \$2.68	\$0.0991 \$3.96	\$20.41	\$15
	¥. <u>-</u> .,	4-0.0 7	¥=V	+00.00		Ţ.U.U		, , , , , , , , , , , , , , , , , , , 	¥=.01		Ţ .	42.00	ŢJ.JU		
Seasonal COG Difference from previous year Seasonal Percent Change from previous year							\$1,362.85 85.4%							\$103.32 39.0%	\$1,46
Total Bill	\$437	\$704	\$699	\$903	\$800	\$478	\$4,021	\$208	\$128	\$109	\$104	\$121	\$151	\$820	\$4
Seasonal Total Bill Difference from previous year							\$1,406.04							\$116.18	\$1,52
Seasonal Percent Change from previous year							53.8%							16.5%	4
Seasonal Percent Change resulting from Base Rates (incl. Def. Revenue Surch.) Seasonal Percent Change resulting from COG							-3.6% 52.1%							-1.1% 14.7%	4
Seasonal Percent Change resulting from LDAC							1.8%	1						1.2%	4

REDACTED SCHEDULE J-1

LIBERTY UTILIT ES-KEENE DIVISION

BID PREMIUM FOR PRE-PURCHASED GALLONS - PRIOR YEAR

	Mt. Belvieu		Pipeline	Bro	oker + Suppl	ier					Keene Div.	Contract	Keene Div.	Fixed	Plan	Contract	Plan	Cost	Per Gallon
	Price		Rate		Fee		PERC		Trucking		Price	Volumes	Cost	Basis Bid	Price	Volumes	Cost	Premium	Premium
Apr-21	\$1.1296	+	\$0 2396	+	\$0.1000	+	\$0 0050	+	\$0.1065	=	\$1 5806	140,000	\$221,290			140,000			-\$0.0881
May-21	\$1.1433	+	\$0 2396	+	\$0.1000	+	\$0 0050	+	\$0.1065	=	\$1 5944	105,000	\$167,408			105,000			-\$0.0881
Jun-21	\$1 2753	+	\$0 2396	+	\$0.1000	+	\$0 0050	+	\$0.1065	=	\$1.7264	105,000	\$181,269			105,000			-\$0.0881
Jul-21	\$1 3962	+	\$0 2396	+	\$0.1000	+	\$0 0050	+	\$0.1065	=	\$1 8473	140,000	\$258,620			140,000			-\$0.0881
Aug-21	\$1 3925	+	\$0 2396	+	\$0.1000	+	\$0 0050	+	\$0.1065	=	\$1 8435	105,000	\$193,573			105,000			-\$0.0881
Sep-21	\$1 5172	+	\$0 2396	+	\$0.1000	+	\$0 0050	+	\$0.1065	=	\$1 9683	105 000	\$206 670			105 000			-\$0.0881
Total												700,000	\$1,228,829			700,000	\$1,167,176	(\$61,652)	-\$0.0881

THIS PAGE HAS BEEN REDACTED

COMPARISON OF CONTRACT COST TO HYPOTHETICAL SPOT COST WINTER SEASON 2021–2022 TO DATE

Delivery Month	Contract Price (1)	Contract Volumes (2)	Contract Cost (3)	Average Spot Price (4)	Contract Volumes (5)	Hypothetical Spot Cost (6)	Incremental Cost / (Savings) of Plan (7)
			(1) x (2)			(4) x (5)	(3) - (6)
Nov-21	\$1.3044	92,000	\$120,005	\$1.4921	92,000	\$137,273	(\$17,268)
Dec-21	\$1.3044	140,000	\$182,616	\$1.4259	140,000	\$199,626	(\$17,010)
Jan-22	\$1.3044	165,000	\$215,226	\$1.6340	165,000	\$269,610	(\$54,384)
Feb-22	\$1.3044	135,000	\$176,094	\$1.7619	135,000	\$237,857	(\$61,763)
Total			\$693,941			\$844,366	(\$150,425)

-17.8%

PROPANE PURCHASING STABILIZATION PLAN PRE-PURCHASES AND DELIVERY SCHEDULE

Delivery		Pre-Purchases (Gallons)										
Month	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Total					
Nov-22	18,400	13,800	13,800	18,400	13,800	13,800	92,000					
Dec-22	28,000	21,000	21,000	28,000	21,000	21,000	140,000					
Jan-23	33,000	24,750	24,750	33,000	24,750	24,750	165,000					
Feb-23	27,000	20,250	20,250	27,000	20,250	20,250	135,000					
Mar-23	21,000	15,750	15,750	21,000	15,750	15,750	105,000					
Apr-23	12,600	9,450	9,450	12,600	9,450	9,450	63,000					
Total	140,000	105,000	105,000	140,000	105,000	105,000	700,000					
Monthly %	20.0%	15.0%	15.0%	20.0%	15.0%	15.0%						

CALCULATION OF PURCHASED GAS COSTS SUMMER PERIOD 2022

LINE NO.		May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	TOTAL
1	TOTAL SENDOUT (therms)							
2	CHANGE TO ENDING NVENTORY BALANCE (therms)							
3	TOTAL REQUIRED PURCHASES (therms)	64,766	46,589	44,978	44,558	48,253	72,599	321,744
4	PROPANE PURCHASE STABILIZATION PLAN DELIVERIES							
5	Therms	-	-	-	-	-	-	-
6	RATES - from Schedule D							
7	Contract Price	\$0.0000	\$0 0000	\$0 0000	\$0.0000	\$0.0000	\$0.0000	
8	Broker Fee Pipeline Fee	incl.	incl.	incl.	incl.	incl.	incl.	
9 10	PERC Fee	incl. incl.	incl. incl.	incl. incl.	incl. incl.	incl. incl.	incl. incl.	
11	Trucking Fee	incl.	incl.	incl.	incl.	incl.	incl.	
12	COST PER GALLON	\$0.0000	\$0 0000	\$0 0000	\$0.0000	\$0.0000	\$0.0000	
13	TOTAL COST - Propane Purchase Stabilization Plan Deliveries	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14	AMHERST STORAGE PROPANE DELIVERIES							
15 16	Therms	-	-	-	-	-	-	-
16 17	RATES - from Schedule F WACOG Price	\$0.0000	\$0 0000	\$0 0000	\$0.0000	\$0.0000	\$0.0000	
18	Trucking Fee	\$0.0000	\$0 0000	\$0 0000	\$0.0000	\$0.0000	\$0.0000	
19	COST PER GALLON	\$0.0000	\$0 0000	\$0 0000	\$0.0000	\$0.0000	\$0.0000	
20	TOTAL COST - Amherst Storage Propane Deliveries	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	CNG DELIVERIES							
22	Therms							
23 24	RATE PRICE							
25	COST PER Therm							
26	COST - CNG							
27	DEMAND FIXED							
28	COST PER Therm							
29	TOTAL CNG							
30	SPOT PURCHASES							
31	Therms	51,125	35,729	34,738	34,858	36,952	58,108	251,510
32	RATES - from Schedule C							
33	Mont Belvieu							
34	Broker Fee							
35	Pipeline Fee							
36	PERC Fee							
37 38	Supplier Charge Trucking Fee							
39	COST PER GALLON - Market Quotes							
40	COST PER THERM - Market Quotes							
41	TOTAL COST - Spot Purchases							
42	OTHER ITEMS							
43	Storage - Winter Period 2019-2020	\$0	\$0	\$0	\$0	\$0	\$0	\$0
44	Refund of Deferred Revenue Surcharge over collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0
45	TOTAL OTHER ITEMS	\$0	\$0	\$0	\$0	\$0	\$0	\$0
46	TOTAL							
47	THERMS	64,766	46,589	44,978	44,558	48,253	72,599	321,744
48	SENDOUT THERMS	64,766	46,589	44,978	44,558	48,253	72,599	321,744
49	COST	\$122,552	\$86,049	\$82,262	\$81,219	\$86,091	\$129,003	\$587,177
50	COST PER THERM	\$1.8922	\$1 8470	\$1 8289	\$1.8228	\$1.7842	\$1.7769	\$1.8250

THIS PAGE HAS BEEN REDACTED

PROJECTED INCREMENTAL SAVINGS CNG VS. SPOT PROPANE SUMMER 2022

CNG PURCHASES	Projected May-22	Projected Jun-22		rojected Jul-22	Projected Aug-22	rojected Sep-22		Projected Oct-22		
CNG Volumes (Schedule K)										
CNG Costs (Schedule K)										
Total Cost per Actual CNG Costs (Schedule K)										
CNG Cost Per Therm Actual									I	
SPOT PROPANE PURCHASES Spot Propane Volumes (Schedule K)	51,125	35,729)	34,738	34,858	36,952		58,108		251,510
Total Costs Spot Propane	\$ 104,526	\$ 70,591	. \$	67,084	\$ 66,616	\$ 70,587	\$	110,223	\$	489,627
Total Cost Spot Propane	\$ 104,526	\$ 70,591	. \$	67,084	\$ 66,616	\$ 70,587	\$	110,223	\$	489,627
Spot Propane Cost Per Therm Actual	\$ 2.0445	\$ 1.9758	\$ \$	1.9311	\$ 1.9111	\$ 1.9102	\$	1.8969		
CNG Volumes										
Price difference CNG vs Spot Propane Adj. for rounding										\$0.0000
Incremental Costs Propane										(\$39,183)
							Al	Divided by 2 Ilowed Recoverable Costs		(19,592)

THIS PAGE HAS BEEN REDACTED

SCHEDULE M

CI	NG Incremental Cost/Sav	ing Risk Sharing - 50	% Sharehold	er/Customers		
	Incremental CNG Suppl	ly Costs/Savings - W	/inter 2019-W	inter 2021		
COG Period	Year	Actual / Estimate	Amount	Recovery	Deferred	(Refund)/Charge
Summer-Costs	2019	Actuals	\$5,048	\$2,524	\$0	-\$2,524
Summer-Costs	2020	Actuals	\$16,214	\$8,107	\$16,214	\$8,107
Total Costs			\$21,262	\$10,631	\$16,214	\$5,583
Summer-Savings	2021	Actuals	-\$13,026	\$9,434	\$0	\$9,434
Total Savings			-\$13,026	\$9,434	\$0	\$9,434

REDACTED SCHEDULE N

LIBERTY UTILITIES-KEENE DIVISION

INCREMENTAL SAVINGS CNG VS. SPOT PROPANE SUMMER 2021 ACTUALS

CNG PURCHASES	Actual May-21	Actual Jun-21	Actual Jul-21	Actual Aug-21	Actual Sep-21	Actual Oct-21	
CNG Volumes (Schedule K Reconciliation)							
CNG Costs (Schedule C Reconciliation) Total Cost per Actual CNG Costs (Schedule K Reconciliation)							
CNG Cost Per Therm Actual							
SPOT PROPANE PURCHASES							
Spot Propane Volumes (Schedule K Reconciliation)	61,089	27,477	52,962	27,462	27,473	60,516	256,979
Total Costs Spot Propane (Schedule K Reconciliation)	\$71,350	\$36,339	\$78,543	\$40,888	\$46,122	########	\$391,767
Total Cost Spot Propane	\$71,350	\$36,339	\$78,543	\$40,888	\$46,122	########	\$ 391,767
Spot Propane Cost Per Therm Actual	\$1.1680	\$1.3225	\$1.4830	\$1.4889	\$1.6788	\$1.9586	\$1.5245
CNG Volumes							
Price differebnce CNG vs Spot Propane							
Adj. for rounding							
Incremental Savings Propane							

Allowed Recoverable Costs \$ 9,434

LIBERTY UTILITIES-KEENE DIVISION ACTUAL INCREMENTAL COSTS CNG VS. SPOT PROPANE SUMMER 2020

CNG PURCHASES	Actual May-20	Actual Jun-20	Actual Jul-20	Actual Aug-20	Actual Sep-20	Actual Oct-20	
CNG Volumes (Schedule K Reconciliation)							
CNG Costs (Schedule K Reconciliation) Total Cost per Actual CNG Costs (Schedule K Reconciliation)							
CNG Cost Per Therm Actual							
SPOT PROPANE PURCHASES Spot Propane Volumes (Schedule K Reconciliation)	55,502	18,314	36,564	36,624	59,967	64,729	271,700
Total Costs Spot Propane	\$ 49,501	\$ 15,366		\$ 30,354			\$ 234,318
Total Cost Spot Propane	\$ 49,501	\$ 15,366	\$ 29,895	\$ 30,354	\$ 46,040	\$63,162	\$ 234,318
Spot Propane Cost Per Therm Actual	\$ 0.8919	\$ 0.8391	\$ 0.8176	\$ 0.8288	\$ 0.7678	\$0.9758	
CNG Volumes Price differebnce CNG vs Spot Propane							
Adj. for rounding							\$ -
Incremental Costs Propane	\$ 2,444	\$ 2,769	\$ 2,732	\$ 3,324	\$ 3,762	\$ 1,183	\$16,214
					D	ivided by 2	2

Divided by 2 2
Allowed Recoverable Costs \$ 8,107

LIBERTY UTILITIES—KEENE DIVISION ACTUAL INCREMENTAL COSTS CNG VS. SPOT PROPANE OCTOBER 2019 GO LIVE WITH CNG

	Actual	Actual	Actual	Actual	Actual	Actual	
CNG PURCHASES	MAY-19	JUN-19	JUL-19	AUG-19	SEP-19	OCT-19	
CNG Volumes (Schedule K Reconciliation)							
CNG Costs (Schedule K Reconciliation)							
Total Cost per Actual CNG Costs (Schedule K Reconciliation)							
CNG Cost Per Therm Actual							
SPOT PROPANE PURCHASES							
Spot Propane Volumes (Schedule K Reconciliation)						66,261	66,261
Total Costs Spot Propane						\$46,932	\$ 46,932
Total Cost Spot Propane	\$ -	\$ -	\$ -	\$ -	\$ -	\$46,932	\$ 46,932
Spot Propane Cost Per Therm Actual	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	\$0.7083	
CNG Volumes							
Price differebnce CNG vs Spot Propane							
Adj. for rounding							\$ -
Incremental Costs Propane	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,048	\$ 5,048
						nivided by 2	

Divided by 2 2
Allowed Recoverable Costs \$ 2,524

REVISED MONT BELVIEU PROPANE FUTURES - 3/2/2022 CLOSE

MONT BELVIEU LDH PROPANE (OPIS) FUTURES - SETTLEMENTS

TRADE DATE WEDNESDAY 02 MAR 2022 *

FINAL DATA 0

Last Updated 03 Mar 2022 11:45:00 AM CT

ESTIMATED VOLUME TOTALS 20, 281 PRIOR DAY OPEN INTEREST TOTALS

MONTH	OPEN	HIGH	LOW	LAST	CHANGE	SETTLE	EST. VOLUME
FEB 22	-	-	-	-	UNCH	1.31510	0
MAR 22	-	-	-	-	+.06620	1.52870	0
APR 22	-	-	-	-	+.06542	1.49417	4,574
MAY 22	-	-	-	-	+.06520	1.42208	3,623
JUN 22	-	-	-	-	+.05104	1.35917	2,111
JLY 22	-	-	-	-	+.04708	1.31833	1,676
AUG 22	-	-	-	-	+.04312	1.30000	1,391
SEP 22	-	-	-	-	+.03979	1.29292	1,136
OCT 22	-	-	-	-	+.03937	1.28750	1,086
NOV 22	-	-	-	-	+.03958	1.28083	961
DEC 22	-	-	-	-	+.03812	1.27000	1,422

ENTERPRISE TE PRODUCTS PIPELINE FERC TARIFF 54.64.0 - RATES EFFECTIVE 3/1/2022

RATES (In Cents-per-bbl.) [D] All rates are decreased.

ITEM NO. 135 Non-Incentive Rates for Propane								
		Origin						
Destination	Floreffe Junction (Allegheny Co., PA)	Mont Belvieu (Chambers Co., TX)	Tappan Lake (Harrison Co., OH), Todhunter (Butler Co., OH) & Follansbee (Brooke Co., West Virginia)					
Coshocton (Coshocton Co., OH)		732.29						
Dexter (Stoddard Co., MO)		347.95						
Du Bois (Clearfield Co., PA)	393.34 (1)(2)	812.96 (1)	393.34 (1)					
Fontaine (Green Co., AR)	••	326.89						
Greensburg (Westmoreland Co., PA)	393.34 (1)(2)	767.22 (1)	393.34 (1)					
Harford Mills (Cortland Co., NY)	552.68 (1)	867.09 (1)	575.40 (1)					
Lebanon (Boone Co., IN)		410.35 (4)						
Oneonta (Otsego Co., NY)	598.28	936.93 (1)	617.58 (1)					
Princeton (Gibson Co., IN)		446.68						
Schaefferstown (Lebanon Co., PA)	579.94 (2)	876.41	572.26					
Selkirk (Albany Co., NY)	649.12	996.22 (1)	650.81 (1)					
Seymour (Jackson Co., IN)		389.93						
Sinking Spring (Berks Co., PA)	579.94 (2)	876.41	572.26					
Todhunter Truck Terminal (Butler Co., OH)		656.17						
Twin Oaks(Delaware Co., PA)	713.74 (2) (3)		713.74 (3)					
Watkins Glen (Schuyler Co., NY)	531.97 (1)	822.75 (1)	556.14 (1)					
West Memphis (Crittenden Co., AR)		347.95 (4)						
Monee (Will Co., IL)		1476.04 (7)						

APPENDIX 3A

Northern Gas Transport, Inc. Box 106 Lyndonville, VT 05851-0106 1-800-648-1075 FAX: 802-626-5039

March 1, 2022

To: All Customers

Re: Fuel Surcharge Notice

As of Monday February 28, 2022, the Department of Energy New England average price per gallon of diesel fuel was \$4.158. All deliveries invoiced from Sunday, March 6, 2022 through Saturday, March 12, 2022 will be line item assessed at 19.5% fuel surcharge. Thank you and should you have any questions, please contact Susan Noyes at 1-800-648-1075 extension 223.

Best Regards,

APPENDIX 3B

Northern Gas Transport Inc. - Selkirk to Keene

Northern Gas Transport Inc Selkirk to Keene						
Gallons	BaseRate	BaseCharge	Fuel Surcharge Rat		TotalCharge	Total Rate Per Gallon
9,200	\$0.0891	\$819.72	1.00%	\$8.20	\$827.92	\$0.0900
9,200	\$0.0891	\$819.72	2.00%	\$16.39	\$836.11	\$0.0909
9,200	\$0.0891	\$819.72	3.00%	\$24.59	\$844.31	\$0.0918
9,200	\$0.0891	\$819.72	3.50%	\$28.69	\$848.41	\$0.0922
9,200	\$0.0891	\$819.72	4.00%	\$32.79	\$852.51	\$0.0927
9,200	\$0.0891	\$819.72	4.50%	\$36.89	\$856.61	\$0.0931
9,200	\$0.0891 \$0.0891	\$819.72 \$819.72	5.00% 5.50%	\$40.99 \$45.08	\$860.71 \$864.80	\$0.0936 \$0.0940
9,200 9,200	\$0.0891	\$819.72 \$819.72	5.50% 6.00%	\$45.08 \$49.18	\$864.80 \$868.90	\$0.0940 \$0.0944
9,200	\$0.0891	\$819.72	6.50%	\$53.28	\$873.00	\$0.0944
9,200	\$0.0891	\$819.72	7.00%	\$57.38	\$877.10	\$0.0949
9,200	\$0.0891	\$819.72	7.50%	\$61.48	\$881.20	\$0.0958
9,200	\$0.0891	\$819.72	8.00%	\$65.58	\$885.30	\$0.0962
9,200	\$0.0891	\$819.72	8.50%	\$69.68	\$889.40	\$0.0967
9,200	\$0.0891	\$819.72	9.00%	\$73.77	\$893.49	\$0.0971
9,200	\$0.0891	\$819.72	9.50%	\$77.87	\$897.59	\$0.0976
9.200	\$0.0891	\$819.72	10.00%	\$81.97	\$901.69	\$0.0980
9,200	\$0.0891	\$819.72	10.50%	\$86.07	\$905.79	\$0.0985
9,200	\$0.0891	\$819.72	11.00%	\$90.17	\$909.89	\$0.0989
9,200	\$0.0891	\$819.72	11.50%	\$94.27	\$913.99	\$0.0993
9,200	\$0.0891	\$819.72	12.00%	\$98.37	\$918.09	\$0.0998
9,200	\$0.0891	\$819.72	12.50%	\$102.47	\$922.19	\$0.1002
9,200	\$0.0891	\$819.72	13.00%	\$106.56	\$926.28	\$0.1007
9,200	\$0.0891	\$819.72	13.50%	\$110.66	\$930.38	\$0.1011
9,200	\$0.0891	\$819.72	14.50%	\$118.86	\$938.58	\$0.1020
9,200	\$0.0891	\$819.72	15.00%	\$122.96	\$942.68	\$0.1025
9,200	\$0.0891	\$819.72	15.50%	\$127.06	\$946.78	\$0.1029
9,200	\$0.0891	\$819.72	16.00%	\$131.16	\$950.88	\$0.1034
9,200	\$0.0891	\$819.72	16.50%	\$135.25	\$954.97	\$0.1038
9,200	\$0.0891	\$819.72	17.00%	\$139.35	\$959.07	\$0.1042
9,200	\$0.0891	\$819.72	17.50%	\$143.45	\$963.17	\$0.1047
9,200	\$0.0891	\$819.72	18.00%	\$147.55	\$967.27	\$0.1051
9,200	\$0.0891	\$819.72	18.50%	\$151.65	\$971.37	\$0.1056
9,200	\$0.0891	\$819.72	19.00%	\$155.75	\$975.47	\$0.1060
9,200	\$0.0891	\$819.72	19.50%	\$159.85	\$979.57	\$0.1065
9,200	\$0.0891	\$819.72	20.00%	\$163.94	\$983.66	\$0.1069
9,200	\$0.0891	\$819.72	20.50%	\$168.04	\$987.76	\$0.1074
9,200	\$0.0891	\$819.72	21.00%	\$172.14	\$991.86	\$0.1078
9,200	\$0.0891	\$819.72	21.50%	\$176.24	\$995.96	\$0.1083
9,200	\$0.0891	\$819.72	22.00%	\$180.34	\$1,000.06	\$0.1087
9,200	\$0.0891	\$819.72	22.50%	\$184.44	\$1,004.16	\$0.1091
9,200	\$0.0891	\$819.72	23.00%	\$188.54	\$1,008.26	\$0.1096
9,200	\$0.0891	\$819.72	23.50%	\$192.63	\$1,012.35	\$0.1100
9,200	\$0.0891	\$819.72	24.00%	\$196.73	\$1,016.45	\$0.1105
9,200	\$0.0891	\$819.72	24.50%	\$200.83	\$1,020.55	\$0.1109
9,200	\$0.0891	\$819.72	25.00%	\$204.93	\$1,024.65	\$0.1114
9,200	\$0.0891	\$819.72	25.50%	\$209.03	\$1,028.75	\$0.1118
9,200	\$0.0891	\$819.72	26.00%	\$213.13	\$1,032.85	\$0.1123
9,200	\$0.0891	\$819.72	26.50%	\$217.23	\$1,036.95	\$0.1127
9,200	\$0.0891	\$819.72	27.00%	\$221.32	\$1,041.04	\$0.1132
9,200 9,200	\$0.0891	\$819.72 \$819.72	27.50%	\$225.42	\$1,045.14	\$0.1136 \$0.1140
	\$0.0891		28.00%	\$229.52	\$1,049.24	
9,200 9,200	\$0.0891 \$0.0891	\$819.72 \$819.72	28.50% 29.00%	\$233.62 \$237.72	\$1,053.34 \$1,057.44	\$0.1145 \$0.1149
9,200	\$0.0891	\$819.72	29.50%	\$237.72 \$241.82	\$1,057.44 \$1,061.54	\$0.1149 \$0.1154
9,200	\$0.0891	\$819.72 \$819.72	30.00%	\$241.82 \$245.92	\$1,061.54	\$0.1154 \$0.1158
9,200	\$0.0891	\$819.72	30.50%	\$250.01	\$1,069.73	\$0.1163
9,200	\$0.0891	\$819.72	31.00%	\$250.01	\$1,073.83	\$0.1167
9,200	\$0.0891	\$819.72	31.50%	\$258.21	\$1,077.93	\$0.1172
9,200	\$0.0891	\$819.72	32.00%	\$262.31	\$1,082.03	\$0.1176
9,200	\$0.0891	\$819.72	32.50%	\$266.41	\$1,086.13	\$0.1181
9,200	\$0.0891	\$819.72	33.00%	\$270.51	\$1,090.23	\$0.1185
9,200	\$0.0891	\$819.72	33.50%	\$274.61	\$1,094.33	\$0.1189
9,200	\$0.0891	\$819.72	34.00%	\$278.70	\$1,098.42	\$0.1194
9,200	\$0.0891	\$819.72	34.50%	\$282.80	\$1,102.52	\$0.1198
9,200	\$0.0891	\$819.72	35.00%	\$286.90	\$1,106.62	\$0.1203
9,200	\$0.0891	\$819.72	35.50%	\$291.00	\$1,110.72	\$0.1207
9,200	\$0.0891	\$819.72	36.00%	\$295.10	\$1,114.82	\$0.1212
9,200	\$0.0891	\$819.72	36.50%	\$299.20	\$1,118.92	\$0.1216
9,200	\$0.0891	\$819.72	37.00%	\$303.30	\$1,123.02	\$0.1221
9,200	\$0.0891	\$819.72	37.50%	\$307.40	\$1,127.12	\$0.1225
9,200	\$0.0891	\$819.72	38.00%	\$311.49	\$1,131.21	\$0.1230
9,200	\$0.0891	\$819.72	38.50%	\$315.59	\$1,135.31	\$0.1234
9,200	\$0.0891	\$819.72	39.00%	\$319.69	\$1,139.41	\$0.1238
9,200	\$0.0891	\$819.72	39.50%	\$323.79	\$1,143.51	\$0.1243
9,200	\$0.0891	\$819.72	40.00%	\$327.89	\$1,147.61	\$0.1247
9,200	\$0.0891	\$819.72	41.00%	\$336.09	\$1,155.81	\$0.1256
9,200	\$0.0891	\$819.72	41.50%	\$340.18	\$1,159.90	\$0.1261

0.0515 Prior to 4/5/05 0.0649 Prior to 5/2/06 0.0516 Prior to 5/1/07 0.0558 Prior to 5/1/08 0.0575 5/1/2008

Difference 0.0375