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STATE OF NEW HAMPSHIRE BEFORE THE PUBLIC UTILITIES COMMISSION

Docket No. DG 21-xxx

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

Summer 2021 Cost of Gas

DIRECT TESTIMONY

OF

DEBORAH GILBERTSON

AND

CATHERINE MCNAMARA

March 15, 2021



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Liberty Utilities (EnergyNorth Natural Gas) Corp.

d/b/a Liberty – Keene Division

Docket No. DG 21-xxx

Direct Testimony of Deborah Gilbertson and Catherine McNamara

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1 I. <u>INTRODUCTION</u>

- 2 Q. Please state your full names, business addresses, and positions.
- 3 A. (DG) My name is Deborah 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 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. ("Liberty" or "the Company").
- 11 Q. Please describe your educational background and your business and professional
- 12 experience.
- 13 A. (DG) 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 as an
- Operations Analyst. From 2000 to 2003, I was employed by Smart 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 Grid from 2008
- through 2011 as a Lead Analyst in the Project Management Office. In 2011, I was hired
- by LUSC as a Natural Gas Scheduler and was promoted to Manager of Retail Choice in

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1		2012. In October 2016, I was promoted to Senior Manager of Energy Procurement. In
2		this capacity, I provide gas procurement services to Liberty.
3		(CM) I graduated from the University of Massachusetts, Boston, in 1993 with a Bachelor
4		of Science in Management with a concentration in Accounting. In November 2017, I
5		joined Liberty as an Analyst in Rates and Regulatory Affairs. Prior to my employment at
6		LUSC, I was employed by Eversource as a Senior Analyst in Investment Planning from
7		2015 to 2017. From 2008 to 2015, I was a Supervisor within the Plant Accounting
8		department. Prior to my position in Plant Accounting, I was a Financial Analyst/General
9		Ledger System Administrator from 2000 to 2008.
10	Q.	Have you previously testified in regulatory proceedings before the New Hampshire
11		Public Utilities Commission (the "Commission")?
12	A.	(DG) Yes, I have previously testified before the Commission.
13		(CM) Yes, I have previously testified before the Commission.
14	Q.	What is the purpose of your testimony?
15	A.	The purpose of our testimony is to explain the Company's proposed cost of gas rates for
16		its Keene Division for the 2021 Summer ("Off Peak") Period to be effective beginning
17		May 1, 2021.

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II. COST OF GAS FACTOR

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- 2 Q. What is the proposed 2021 summer firm cost of gas rate?
- 3 A. The Company proposes a firm cost of gas rate of \$1.2165 per therm for the Keene
- 4 Division as shown on proposed Fourteenth Revised Page 90.
- 5 Q. Please explain Fourteenth Revised Page 90.
- 6 A. Fourteenth Revised Page 90 contains the calculation of the Summer 2021 COG rate and
- 7 summarizes the Company's forecast of gas sales and gas costs. The total anticipated cost
- of sendout from May 1 through October 31, 2021, is \$386,104. To derive the Total
- Anticipated Cost of \$386,104, the prior period over-collection of (\$7,009) and the interest
- of \$150 are subtracted from the anticipated cost of sendout. The Cost of Gas Rate of
- \$1.2165 per therm is derived by dividing the Total Anticipated Cost of \$379,205 by the
- projected firm sales volumes of 311,740 therms.
- Q. What are the components of the adjustments to the cost of sendout?
- 14 A. The adjustments to gas costs listed on Fourteenth Revised Page 90 are as follows:
- 1. Prior Period (Over)/Under Collection (\$7,009)
- 16 2. Interest \$150
- Total Adjustments (\$6,859)
 - Q. How was the cost of spot propane purchases determined in Schedule C?
- 19 A. In the off-peak period, spot prices are estimated using market quotes from local suppliers
- as well as looking at Mt. Belvieu index pricing and making some assumptions on supplier
- 21 adders. Schedule C serves as a guide to illustrate the components of the quoted price.

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- Column 1 shows the Mont Belvieu propane futures quotations as of February 26, 2021.

 Subsequent columns show projected broker fees, pipeline fees, Propane Education &

 Research Council (PERC) fees, supplier charges and trucking charges, which, when
- How does the proposed average cost of gas rate in this filing compare to the initial cost of gas rate approved by the Commission for the 2020 Summer Period?

added to the futures price, estimate the likely components of the quoted price.

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- 7 A. The cost of gas rate proposed in this filing is \$0.5839 per therm higher than the initial rate approved by the Commission for the 2020 Summer Period (\$1.2165 vs. \$0.6326).
- 9 Q. Why is the average cost of gas rate in this filing \$0.5839 per therm higher than the initial rate approved by the Commission for the 2020 Summer Period?
 - A. There are two main drivers for the \$0.5839 per therm increase. The first is related to the prior period over-collection that went from \$81,848 in the 2020 filing to only a \$6,859 over-collection in this filing. This over-collection reduction accounts for \$0.2405 per therm of the increase. The second is that the propane commodity cost has increased substantially in comparison to last year at this time. As is customary for summer pricing, the company polled a couple of the local suppliers for their view on where prices will likely fall for the upcoming summer. The consensus is that the propane market is very confusing at this time. Due to the extreme cold in Texas and the Mid-West, last month there was a run up in values at Mt. Belvieu. Although values have come down considerably, they are still much higher than last year. Last summer Mt. Belvieu was averaging 37 cents per gallon as opposed to this upcoming summer which shows Mt.

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1	Belvieu at 79 cents per gallon.	This is more than double the price.	Schedule C itemizes
2	the forecasted cost of procuring	g propane for delivery to Keene.	

- 3 Q. What was the actual weighted average firm sales cost of gas rate for the 2020 Summer
- 4 Period?

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- 5 A. The weighted average cost of gas rate for the 2020 Summer Period was approximately
 6 \$0.7049 per therm. This was determined by applying the actual monthly cost of gas rates
 7 for May through October 2020 to the monthly therm usage of an average residential
 8 heating customer using 87 therms for the six summer period months (see Schedule I-1 or
- 10 Q. Are current CNG demand charges included in this filing?

Schedule I-2, for more details).

- Yes, CNG demand charges are included in Schedule B on line 10. Schedule B, Line 10 11 A. includes 20% of the 2021 demand charges. These charges are \$ per month for May 12 and June 2021. The Company recently signed a new, multi-year contract, which contract 13 governs the period July-October 2021. The annual demand charge in the new contract is 14 This demand contract is allocated 80/20 between winter and summer as 15 X 20% = divided by 6 months is \$ follows: \$ 16 month for July-October 2021. Total demand charges included in this filing are \$ 17
- Q. Are any past CNG demand charges that were incurred from August 2017 through 2019 included in this filing?
- 20 A. No.

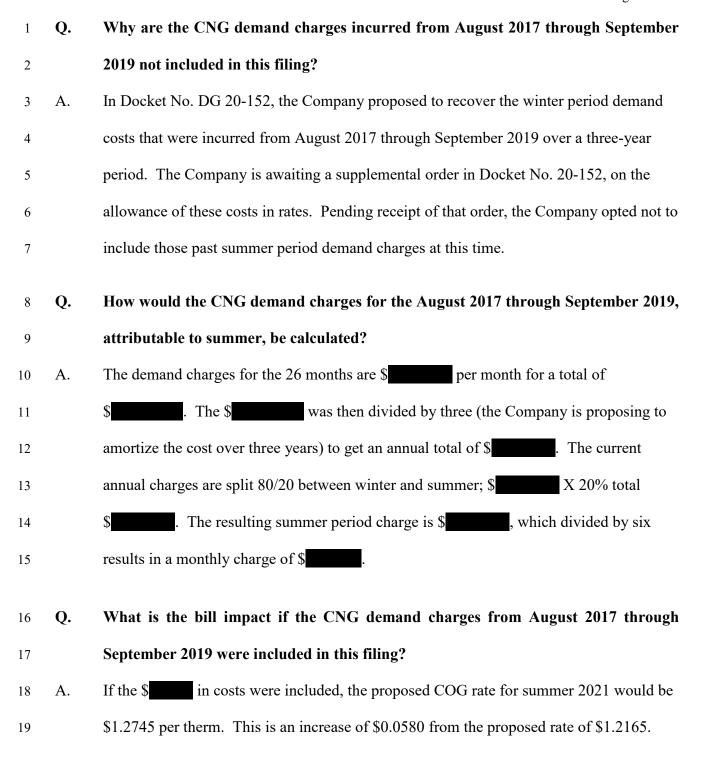
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III.	PRIOR	PERIOD	RECO	ONCIL	IATION
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- 2 Q. Has the Company filed its reconciliation of the Summer 2020 Cost of Gas in Docket
- 3 **No. DG 20-041?**
- 4 A. Yes. The Company filed its reconciliation of the Summer 2020 Cost of Gas on
- 5 December 15, 2020. As of the date of this filing, Audit Staff has not yet concluded the
- 6 audit.

- 7 Q. Did the Company include any adjustments in this filing to account for known findings
- **8 by Audit Staff?**
- 9 A. Yes, the Company has one known adjustment at this time. There were \$30,255 of costs
- booked to the summer deferral account in 2020 that should have been booked to the
- winter deferral account. These charges are the result of the settlement of the marketer's
- basis charge dispute with XNG. When the settlement was paid, the entire payment was
- booked to the summer deferral account in error; \$30,255 of the total should have been
- booked to the winter season.
- 15 Q. Has the Company included any production costs in this filing?
- 16 A. No.
- 17 IV. <u>CUSTOMER BILL IMPACTS</u>
- 18 Q. What is the estimated impact of the proposed firm sales cost of gas rate on an average
- customer's seasonal bill as compared to the rates in effect last year?
- 20 A. The bill impact analysis is presented in Schedules I-1 and Schedule I-2 of this filing. The
- 21 total bill impact for an average residential customer, for the off-peak season, is an

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increase of approximately \$45.08, or 21.6% (see Schedule I-2, column 14, rows 54 and 55, respectively) as compared to the total bill for the 2020 Off-Peak season.

3 Q. What does the Company plan to do to inform customers about the rate changes?

A. On April 1, 2021, the Company will be posting information regarding this filing on its
website. Once the rates are approved, they will be posted on the website by May 1, 2020.

The May bills will include on-bill messaging along with a bill insert reminding customers
of the new rates, and directing them to the website for more information.

8 V. PROPANE PURCHASING STABILIZATION PLAN

- 9 Q. What is the Propane Purchasing Stabilization Plan?
- 10 A. The Propane Purchasing Stabilization Plan is a strategy the Company undertakes to
 11 provide more stability in the winter COG rate and to facilitate the offering of a Fixed
 12 Price Option. Under this strategy, the Company systematically purchases supply over a
 13 predetermined period. The strategy is intended to provide more price stability rather than
 14 to secure lower prices. The Company believes this strategy should continue.
- 15 Q. Has the Company performed any analysis regarding its Propane Purchasing
 16 Stabilization Plan ("Plan")?
- 17 A. Yes. The Company performed two analyses. In Schedule J-1, the Company evaluated
 18 the premium/discount associated with securing the pre-purchased volumes for delivery in
 19 the winter of 2020–2021 relative to securing a floating price at Mont Belvieu. The
 20 comparison reflects the net premium/discount results of the Company's competitive RFP
 21 process. In Schedule J-2, the Company performed a comparison of propane purchase

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1		costs under the contract versus representative spot prices had the Company not
2		implemented the Plan. The analysis shows that the cost of the pre-purchased gallons was
3		34.6% lower than the average representative spot purchase cost for the first four months
4		of the current winter period, reflecting an increase in spot propane prices.
5	Q.	Has the Company issued a Request for Proposals ("RFP") to potential suppliers for
6		the 2020–2021 Plan?
7	A.	Yes. The Company issued the RFP for the 2021–2022 Plan on March 2, 2021. The RFP
8		process was the same as the process used last summer. The RFP was sent to twelve
9		suppliers. Once a winning bidder has been selected, they will be notified.
10	Q.	Is the Company proposing any changes to the 2020–2021 Plan?
11	A.	No. The Plan structure specified in the RFP, as detailed on Schedule J-3, has not
12		changed from the design that was used for the previous winter. The Company will
13		purchase 700,000 gallons to maintain a consistent ratio of hedged volumes to expected
14		sales.
15	VI.	COMPRESSED NATURAL GAS ("CNG")
16	Q.	When does the current CNG contract expire?
17	A.	The current contract expires on June 30, 2021.
18	Q.	Has the Company conducted a solicitation process to replace the contract, which will
19		expire in mid-summer?
20	A.	Yes, the Company sent an RFP to several suppliers in July 2020. The Company received
21		responses from suppliers. An internal review of the responses was performed and

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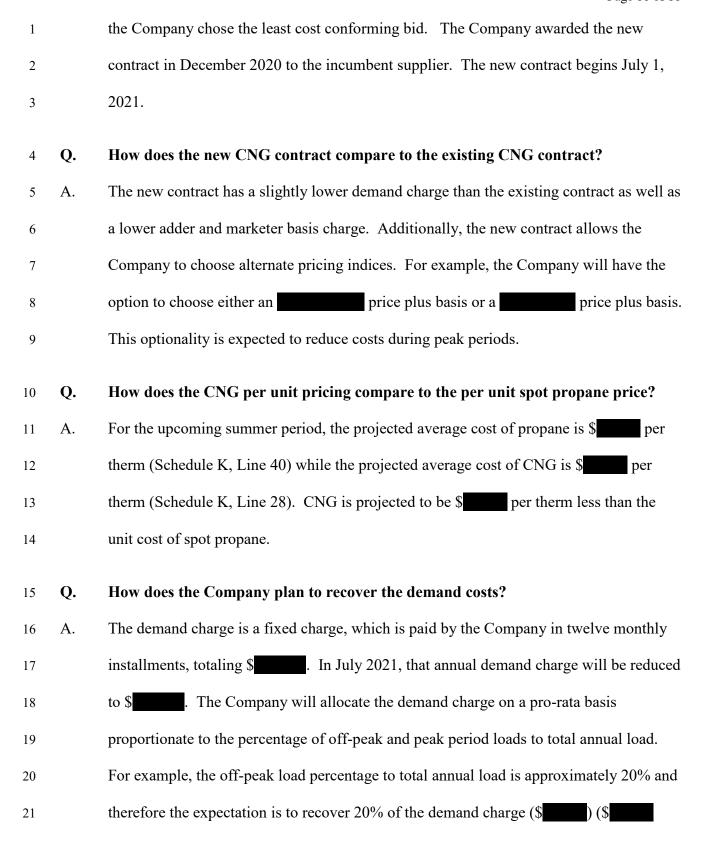
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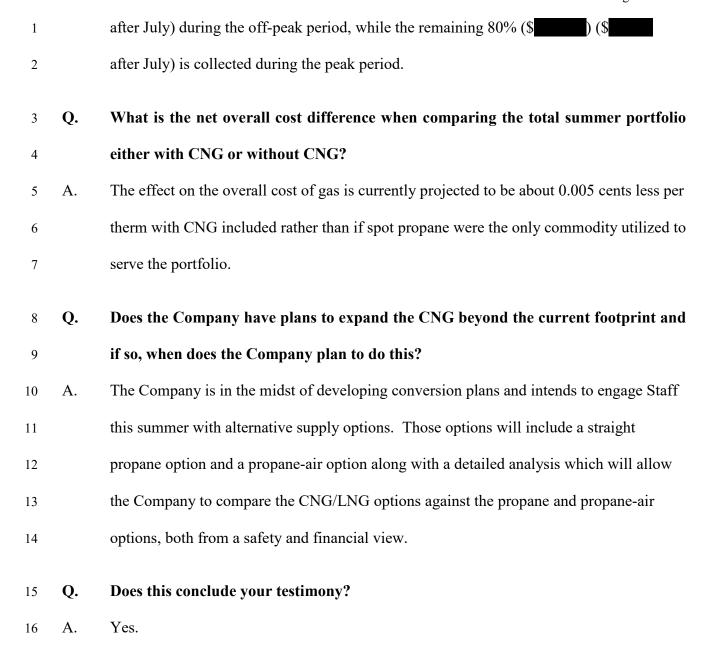
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LIBERTY UTILITIES - KEENE DIVISION COST OF GAS RATE FILING - DG 21-xxx SUMMER PERIOD 2021 ORIGINAL FILING

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NHPUC No.10 GAS LIBERTY UT LIT ES Proposed Thirtieth Revised Page 85 Twenty ninth Revised Page 85 Superseding Twenty-ninth Page 85 Superseding Twenty-eighth Page 85

Rates Effective April 1, 2020 April 30, 2020 Rates Effective February 1, 2021 - April 30, 2021 Winter Period Period Rates Effective July 1, 2020 October 31, 2020 Rates Effective May 1, 2021 - October 31, 2021 Summer Period

	Delivery	Cost of Gas Rate	LDAC	Total	Delivery	Cost of Gas Rate	LDAC	Total
	Charge	Page 93	Page 97	Rate	Charge	Page 90	Page 97	Rate
Residential Non Heating - R-1	\$15-20			\$15.20	\$15.50			\$15.50
Customer Charge per Month per Meter	\$15 50	#0.0000	00.0500	\$15.50	\$15.50	#4.040 5	00.0500	\$15.50
All therms	\$0 3860 \$0 3786	\$0.9928	\$0.0589	\$1.4377 \$0.8504	\$0.3860 \$0.3860	\$1.2165 \$0.7908	\$0.0589 \$0.0310	\$1.6614 \$1.2078
	\$U 3780	\$0.4408	\$0.0310	\$U.85U4	\$U.386U	\$0.7908	\$U.U31U	\$1.2078
Residential Heating - R-3	\$15 <u>20</u>			\$15.20	\$15.50			\$15.50
Customer Charge per Month per Meter	\$15 50	#0.0000	00.0500	\$15.50	\$15.50	#4.040 5	00.0500	\$15.50
All therms over the first block per month at	\$0 5678	\$0.9928	\$0.0589	\$1.6195	\$0.5678	\$1.2165	\$0.0589	\$1.8432
	\$0 5569	\$0.4408	\$0.0310	\$1.0287	\$0.5678	\$0.790 8	\$0.0310	\$1.3896
Residential Heating - R-4 Customer Charge per Month per Meter	\$6 08 \$8 53			\$6.08 \$8.53	\$6.20 \$8.53			\$6.20 \$8.53
All therms over the first block per month at	\$0 3123	\$0.5460	\$0.0589	\$0.9172	\$0.3123	\$1.2165	\$0.0589	\$1.5877
All thornes over the first block per month at	\$0.2228	\$0.4408	\$0.0310	\$0.6946	\$0.2272	\$0.7908	\$0.0303 \$0.0310	\$1.0490
Commercial/Industrial - G-41	\$56-36			\$56-36	\$57-46			\$57.46
Customer Charge per Month per Meter	\$57.46			\$57.46	\$57.46			\$57.46
Size of the first block	100 therms			******	20 therms			******
Therms in the first block per month at	\$0.4711	\$0.9928	\$0.0555	\$1.5194	\$0.4711	\$1.2165	\$0.0555	\$1.7431
	\$0.4621	\$0.4408	\$0.0478	\$0.9507	\$0.4711	\$0.7908	\$0.0478	\$1.30 9 7
All therms over the first block per month at	\$0 3165	\$0.9928	\$0.0555	\$1.3648	\$0.3165	\$1.2165	\$0.0555	\$1.5885
	\$0.3104	\$0.4408	\$0.0478	\$0.7990	\$0.3165	\$0.7908	\$0.0478	\$1.1551
Commercial/Industrial - G-42	\$169.09			\$169.09	\$172.39			\$172.39
Customer Charge per Month per Meter	\$172 39			\$172.39	\$172.39			\$172.39
Size of the first block	1000 therms				400 therms			
Therms in the first block per month at	\$0.4284	\$0.9928	\$0.0555	\$1.4767	\$0.4284	\$1.2165	\$0.0555	\$1.7004
	\$0.4202	\$0.4408	\$0.0478	\$0.9088	\$0.4284	\$0.7908	\$0.0478	\$1.2670
All therms over the first block per month at	\$0 2855 \$0 2800	\$0.9928 \$0.4408	\$0.0555 \$0.0478	\$1.3338 \$0.7686	\$0.2855 \$0.2855	\$1.2165 \$0.7908	\$0.0555 \$0.0478	\$1.5575 \$1.1241
	\$0 2000	90.4400	90.047 0	\$0.7000	\$0.2033	\$0.7500	\$0.0470	♥1.1241
Commercial/Industrial - G-43	\$725-66			\$725 66	\$739 83			\$739 83
Customer Charge per Month per Meter	\$739 83			\$739.83	\$739.83			\$739.83
All therms over the first block per month at	\$0 2633	\$0.9928	\$0.0555	\$1.3116	\$0.1204	\$1.2165	\$0.0555	\$1.3924
	\$0 2583	\$0 4408	\$0 0478	\$0.7469	\$0 1204	\$0 7908	\$0.0478	\$0 9590
Commercial/Industrial - G-51	\$56-36			\$56.36	\$57.46			\$57.46
Customer Charge per Month per Meter	\$57.46			\$57.46	\$57.46			\$57.46
Size of the first block	100 therms				100 therms			
Therms in the first block per month at	\$0 2839	\$0.9928	\$0.0555	\$1.3322	\$0.2839	\$1.2165	\$0.0555	\$1.5559
All therms over the first block per month at	\$0 2785 \$0.1846	\$0.4408 \$0.9928	\$0.0478 \$0.0555	\$0.7671 \$1.2329	\$0.2839 \$0.1846	\$0.7908 \$1.2165	\$0.0478 \$0.0555	\$1 1225 \$1.4566
All therms over the first block per month at	\$0.1811	\$0.4408	\$0.0333	\$0.6697	\$0.1846	\$0.7908	\$0.0333 \$0.0478	\$1.0232
Commercial/Industrial - G-52	\$169.09			\$169.09	\$172.39			\$172.39
Customer Charge per Month per Meter	\$172 39			\$172.39	\$172.39			\$172.39
Size of the first block	1000 therms			ψ172.00	1000 therms			Ψ112.00
Therms in the first block per month at	\$0 2439	\$0.9928	\$0.0555	\$1.2922	\$0.1767	\$1.2165	\$0.0555	\$1.4487
•	\$0.2392	\$0.4408	\$0.0478	\$0.7278	\$0.1767	\$0.7908	\$0.0478	\$1.0153
All therms over the first block per month at	\$0.1624	\$0.9928	\$0.0555	\$1.2107	\$0.1004	\$1.2165	\$0.0555	\$1.3724
	\$0.1593	\$0.4408	\$0.0478	\$0.6479	\$0.1004	\$0.7908	\$0.0478	\$0.9390
Commercial/Industrial - G-53	\$746-81			\$746.81	\$761.39			\$761.39
Customer Charge per Month per Meter	\$761 39			\$761.39	\$761.39			\$761.39
All therms over the first block per month at	\$0.1705	\$0.9928	\$0.0555	\$1.2188	\$0.0818	\$1.2165	\$0.0555	\$1.3538
	\$0.1672	\$0.4408	\$0.0478	\$0.6558	\$0.0818	\$0.7908	\$0.0478	\$0.9204
Commercial/Industrial - G-54	\$746-81			\$746.81	\$761.39			\$761.39
Customer Charge per Month per Meter	\$761 39			\$761.39	\$761.39			\$761.39
All therms over the first block per month at	\$0 0650	\$0.9928	\$0.0555	\$1.1133	\$0.0353	\$1.2165	\$0.0555	\$1.3073
	\$0 0638	\$0.4408	\$0.0478	\$0.5524	\$0.0353	\$0.7908	\$0.0478	\$0.8739

DATED: April XX, 2021 DATED: January 22, 2021 EFFECTIVE: May 01, 2021 EFFECTIVE: February 01, 2021

ISSUED BY: <u>/s/Susan L. Fleck</u>
Susan L. Fleck
TITLE: President

Authorized by NHPUC Order No. xx,xxx dated April xx, 2021, in Docket No. DG 21-xxx Authorized by NHPUC Order No. 26,351 dated April 30, 2020, in Docket No. DG 20 041

NHPUC NO. 1 - GAS DELIVERY LIBERTY UTILITIES - KEENE DIVISION

Period Covered:

Fourteenth Revised Page 90
Thirteenth Revised Page 90
Superseding Thirteenth Revised Page 90
Superseding Twelfth Revised Page 90

CALCULATION OF THE SUMMER COST OF GAS RATE

Summer Period May 1, 2020, hrough October 31, 2020

Summer Period May 1, 2021, through October 31, 2021 Projected Gas Sales - therms 283,614 311,740 Total Anticipated Cost of Sendout \$252,874 \$386,104 Add: Prior Period Deficiency Uncollected \$0 \$0 Interest \$0 \$0 Deduct: Prior Period Excess Collected (\$80,938)(\$7,009)Interest (\$742)\$150 Prior Period Adjustments and Interest (\$81,848)(\$6,859)Deduct COVID19 reductions deferred until Summer 2021 \$8,391 **Total Anticipated Cost** \$179,417 \$379,245 Cost of Gas Rate - Beginning Period (per therm) \$0.6326 \$1.2165 Mid Period Adjustment - May 1, 2020 \$0.0000 Mid Period Adjustment - June 1, 2020 \$0.0490 Mid Period Adjustment - July 1, 2020 \$0.1092 Mid Period Adjustment - August 1, 2020 \$0.0000

Pursuant to tariff section 16 2(D), the Company may adjust the approvec cost of gas rate upward on a monthly basis to the following rate

Revised Cost of Gas Rate - Effective October 1, 2019 (per therm)

Mid Period Adjustment - September 1, 2020

Mid Period Adjustment - October 1, 2020

Maximum Cost of Gas Rate (per herm) \$0.7908 \$1.5206

Dated: April XX, 2021
Dated: June 24, 2020
Effective: May 1, 2021
Effective: July 1, 2020

Issued By: /s/ Susan L. Fleck
Issued By: /s/ Susan L. Fleck
Susan L. Fleck
Susan L. Fleck

\$0.0000

\$0.0000

\$0.7908

Authorized by NHPUC Order No. xx,xxx dated April xx, 2021, in Docket No. DG 21-xxx Authorized by NHPUC Order No. 26,351 dated April 30, 2020, in Docket No. DG 20-041, see complete revised order 26,351 (05/01/20)

REDACTED SCHEDULE A

LIBERTY UTILITIES - KEENE DIVISION

CONVERSION OF COSTS - GALLONS TO THERMS SUMMER PERIOD 2021

	(1)	(2)	(3)	(4)		(5)	(6)
			VOLU	JMES		UNIT	COST
	<u>UNIT</u>	CONVERSION FACTOR	<u>GALLONS</u>	THERMS		PER ALLON	PER <u>THERM</u>
GAS FROM INVENTORY	GALLONS	0.91502			5	\$1.1005	\$1.2027
GAS FROM CNG	THERMS	N/A	N/A			N/A	

REDACTED SCHEDULE B

LIBERTY UTILITIES - KEENE DIVISION

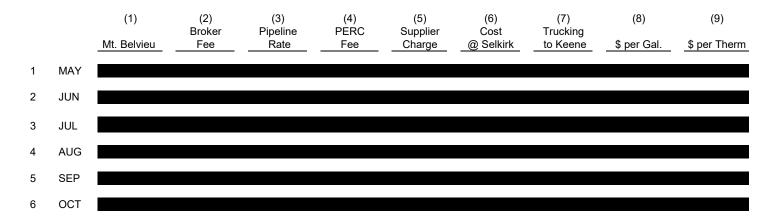
CALCULATION OF COST OF GAS RATE SUPPLY / DEMAND BALANCE SUMMER PERIOD 2021

		(1) PRIOR	(2) May-21	(3) Jun-21	(4) Jul-21	(5) Aug-21	(6) Sep-21	(7) Oct-21	(8) TOTAL
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	_	\$1.0098 \$53,740 \$0 \$53,740	\$1.0882 \$35,787 \$0 \$35,787	\$1.1287 \$48,253 \$0 \$48,253	\$1.1493 \$38,916 \$0 \$38,916	\$1.1646 \$48,838 \$0 \$48,838	\$1.1770 \$84,345 \$0 \$84,345	\$309,879 \$0 \$309,879
7	CNG COSTS CNG SENDOUT (therms)								
8 9 10 11 12	COST PER THERM (WACOG) TOTAL CALCULATED COST OF CNG CNG DEMAND CHARGES CNG ADJUSTMENTS - Demand Charges Aug 2017 - Sep 2019 included in Col. 1, line 31 TOTAL CNG COSTS								
13	ACCOUNTING ADJUSTMENT		\$0	\$0	\$0	\$0	\$0	\$0	\$0
14	FPO PREMIUM		\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
15	TOTAL COSTS OF GAS								
16	RETURN ON INVENTORY		\$0	\$0	\$0	\$0	\$0	\$0	\$0
	REVENUES								
17 18	BILLED FPO SALES (therms) COG FPO RATE	_	0 \$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	\$0
19 20	BILLED NON-FPO SALES PRIOR MONTH (therms) COG NON-FPO RATE PRIOR MONTH	_	0 \$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	\$0
21 22	BILLED NON-FPO SALES CURRENT MONTH (therms) COG NON-FPO RATE CURRENT MONTH	_	58,849 \$1.2165 \$71,592	40,214 \$1.2165 \$48,922	42,759 \$1.2165 \$52,018	40,487 \$1.2165 \$49,254	48,422 \$1.2165 \$58,907	81,009 \$1.2165 \$98,551	311,740 \$379,245
23 24	BILLED SALES OTHER PRIOR PERIODS COG OTHER PRIOR PERIODS BLENDED RATE	_	0 \$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	\$0
25	TOTAL SALES		58,849	40,214	42,759	40,487	48,422	81,009	311,740
26	TOTAL BILLED REVENUES		\$71,592	\$48,922	\$52,018	\$49,254	\$58,907	\$98,551	\$379,245
27	UNBILLED REVENUES (NET)		\$0	\$0	\$0	\$0	\$0	\$0	\$0
28	TOTAL REVENUES	_	\$71,592	\$48,922	\$52,018	\$49,254	\$58,907	\$98,551	\$379,245
29	(OVER)/UNDER COLLECTION		(\$5,740)	\$195	\$9,306	\$1,581	\$1,472	\$137	\$6,948
30	INTEREST AMOUNT		(\$26)	(\$34)	(\$21)	(\$6)	(\$2)	\$0	(\$89)
31	FINAL (OVER)/UNDER COLLECTION	(\$6,859)	(\$5,766)	\$161	\$9,285	\$1,575	\$1,470	\$137	\$2

REDACTED SCHEDULE C

LIBERTY UTILITIES - KEENE DIVISION

PROPANE SPOT MARKET PURCHASE COST ANALYSIS SUMMER PERIOD 2021



NOTE: Summer spot purchases are based on market quotes from local suppliers. The above schedule provides a breakdown of the quote

- 1. Propane futures market quotations (cmegroup.com) on 2/26/2021 close. See Appendix 1.
- 2. A generally accepted standard broker fee
- 3. Summer prices are quoted on a delivered basis with pipeline charges embedded in delivered price
- 4. Propane Education Research Council (propanecouncel.org)
- 5. 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

REDACTED SCHEDULE D

LIBERTY UTILITIES - KEENE DIVISION

PROPANE INVENTORY & WEIGHTED AVERAGE COST OF PROPANE CALCULATION SUMMER PERIOD 2021

LINE NO.										
1	May 2021 (forecasted)	(1) <u>Therms</u>	(2) <u>Cost</u>	(3) <u>Therm</u>	(4) <u>Gal.</u>	(5) CNG therms	(6) <u>Cost</u>	(7) <u>Total Sendout</u> (1)+(5)	(8) <u>Total Cost</u> (2)+(6)	(9) Therm Rate (8)/(7)
2	Beginning Balance	56,067	\$57,600	\$1 0273	\$0.9400					
3	Purchases Received	50,000	\$49,501	\$1 2480	\$1.1420					
4	Total Available	106,067	\$107,101	\$1 0097	\$0.9239					
5	Less Sendout	50,602	\$51,096	\$1 0098	\$0.9239					
6	Ending Balance	55,465	\$56,005	\$1 0097	\$0.9239					
7	June 2021 (forecasted)	Therms	Cost	Therm	Gal.					
8	Beginning Balance	55,465	\$56,005	\$1 0097	\$0.9239					
9	Purchases Received	35,000	\$42,438	\$1 2125	\$1.1095					
10	Total Available	90,465	\$98,443	\$1 0882	\$0.9957					
11	Less Sendout	30,268	\$32,938	\$1 0882	\$0.9957					
12	Ending Balance	60,197	\$65,505	\$1 0882	\$0.9957					
13	July 2021 (forecasted)	<u>Therms</u>	Cost	Therm	Gal.					
14	Beginning Balance	60,197	\$65,505	\$1 0882	\$0.9957					
15	Purchases Received	40,000	\$47,590	\$1.1898	\$1.0886					
16	Total Available	100,197	\$113,095	\$1.1287	\$1.0328					
17	Less Sendout	40,132	\$45,298	\$1.1287	\$1.0328					
18	Ending Balance	60,065	\$67,797	\$1.1287	\$1.0328					
19	August 2021 (forecasted)	<u>Therms</u>	Cost	<u>Therm</u>	Gal.					
20	Beginning Balance	60,065	\$67,797	\$1.1287	\$1.0328					
21	Purchases Received	32,000	\$38,014	\$1.1879	\$1.0870					
22	Total Available	92,065	\$105,811	\$1.1493	\$1.0516					
23	Less Sendout	31,242	\$35,907	\$1.1493	\$1.0516					
24	Ending Balance	60,822	\$69,904	\$1.1493	\$1.0516					
25	September 2021 (forecasted)	<u>Therms</u>	Cost	<u>Therm</u>	Gal.					
26	Beginning Balance	60,822	\$69,904	\$1.1493	\$1.0516					
27	Purchases Received	40,000	\$47,517	\$1.1879	\$1.0870					
28	Total Available	100,822	\$117,421	\$1.1646	\$1.0657					
29	Less Sendout	39.316	\$45,789	\$1.1646	\$1.0657					
30	Ending Balance	61,506	\$71,632	\$1.1646	\$1.0657					
31	October 2021 (forecasted)	<u>Therms</u>	Cost	Therm	Gal.					
32	Beginning Balance	61,506	\$71,632	\$1.1646	\$1.0657					
33	Purchases Received	70,000	\$83,155	\$1.1879	\$1.0870					
34	Total Available	131,506	\$154,787	\$1.1770	\$1.0070					
35	Less Sendout	69.041	\$81,264	\$1.1770	\$1.0770					
36	Ending Balance	62,465	\$73,523	\$1.1770	\$1.0770					
37	A	VERAGE SUM	MER RATE -	SENDOUT						

REDACTED SCHEDULE E

LIBERTY UTILITIES - KEENE DIVISION

CALCULATION OF COST OF GAS RATE SUPPLY / DEMAND BALANCE SUMMER PERIOD 2020

		PRIOR	Actual May-20	Actual Jun-20	Actual Jul-20	Actual Aug-20	Actual Sep-20	Actual Oct-20	TOTAL
1 2 3	PROPANE COSTS PROPANE FIRM SENDOUT (therms) COMPANY USE (therms) TOTAL PROPANE SENDOUT (therms) (line 1 + line 2)								
4 5	COST PER THERM (WACOG) TOTAL CALCULATED COST OF PROPANE (line 3 * line 4)								
6 7	PROPANE ADJUSTMENTS TOTAL COST OF PROPANE (line 5 + line 6)	-	\$0 \$51,013	\$0 \$29,746	\$0 \$28,316	\$0 \$26,183	\$0 \$33,048	\$0 \$62,249	\$0 \$230,555
8 9 10	CNG COSTS CNG SENDOUT (therms) COST PER THERM (WACOG) TOTAL CALCULATED COST OF CNG (line 8 * line 9) CNG ADJUSTMENTS								
12	TOTAL COST OF CNG (line 10 + line 11)								
13	ACCOUNTING ADJUSTMENT	_	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14	TOTAL COSTS OF GAS (line 7 + line 12 + line 13)								
15	FPO PREMIUM		\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
16	RETURN ON INVENTORY		\$0	\$0	\$0	\$0	\$0	\$0	\$0
	REVENUES								
17 18 19	BILLED FPO SALES (therms) COG FPO RATE BILLED FPO SALES (line 17 * line 18)	_	0 \$0.0000 \$0	0 \$0.0000 \$0	\$0.0000 \$0	\$0.0000 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	\$0
20 21 22	BILLED NON-FPO SALES PRIOR MONTH (therms) COG NON-FPO RATE PRIOR MONTH BILLED NON-FPO SALES PRIOR MONTH (line 20 * line 21)	_	0 \$0.0000 \$0	52,944 \$0.6326 \$33,492	26,148 \$0.6816 \$17,822	0 \$0.7908 \$0	0 \$0.0000 \$0	0 \$0.0000 \$0	\$51,315
23 24 25	BILLED NON-FPO SALES CURRENT MONTH (therms) COG NON-FPO RATE CURRENT MONTH BILLED NON-FPO SALES CURRENT MONTH (line 23 * line 24)	_	11,545 \$0.6326 \$7,303	14,977 \$0.6816 \$10,208	32,217 \$0.7908 \$25,477	40,730 \$0.7908 \$32,209	53,526 \$0.7908 \$42,328	59,572 \$0.7908 \$47,110	212,567 \$164,636
26 27 28	BILLED SALES OTHER PRIOR PERIODS COG OTHER PRIOR PERIODS BLENDED RATE BILLED SALES OTHER PRIOR PERIODS (line 26 * ine 27)	_	(18,478) \$0.4843 (\$8,949)	\$0.0000 \$0	140 \$0.6326 \$89	260 \$0.6761 \$176	2,926 \$0.6612 \$1,935	(2,751) \$0.6613 (\$1,819)	(\$8,569)
29	TOTAL SALES (line 17 + line 20 + line 23 + line 26)		(6,933)	67,921	58,505	40,990	56,452	56,821	273,756
30	TOTAL BILLED REVENUES (line 19 + line 22 + line 25 + line 28)		(\$1,646)	\$43,701	\$43,388	\$32,385	\$44,263	\$45,290	\$207,381
31	UNBILLED REVENUES (NET)		\$30,643	(\$16,733)	(\$5,380)	(\$110)	\$3,766	\$18,071	\$30,257
32	TOTAL REVENUES (line 30 + line 31)	_	\$28,997	\$26,968	\$38,008	\$32,275	\$48,029	\$63,361	\$237,638
33	(OVER)/UNDER COLLECTION (ine 14 + Line 15 + line 16 - line 32)		\$31,040	\$10,511	\$166	\$38,695	(\$5,115)	\$11,496	\$86,794
34	INTEREST AMOUNT	_	(\$111)	(\$52)	(\$82)	(\$29)	\$17	\$26	(\$232)
35	FINAL (OVER)/UNDER COLLECTION (line 33 + line 34)	(\$71,214)	\$30,929	\$10,459	\$85	\$38,666	(\$5,098)	\$11,522	\$15,349

SCHEDULE F

LIBERTY UTILITIES - KEENE DIVISION

INTEREST CALCULATION SUMMER PERIOD 2021

LINE NO.	MONTH	(1) BEG. OF MONTH BALANCE	(2) (OVER) UNDER COLLECT	(3)	(4) END OF MONTH BALANCE (COL.1+2+3)	(5) AVERAGE BALANCE COL. (COL. [1+4]/2)	(6) ANNUAL INTEREST RATE	(7) INTEREST AMOUNT	(8) MONTH END BAL. WITH INTEREST (COL. 4+7)
1	NOV 2020	15,349	\$5,178	\$0	\$20,527	\$17,938	3.25%	48	\$20,575
2	DEC	20,575	636	0	21,211	20,893	3.25%	56	21,267
3	JAN 2021	21,267	2,083	0	23,349	22,308	3.25%	61	23,411
4	FEB	23,411	(30,255)	0	(6,844)	8,283	3.25%	22	(6,822)
5	MAR	(6,822)) O	0	(6,822)	(6,822)	3.25%	(18)	(6,840)
6	APR	(6,840)	0	0	(6,840)	(6,840)	3.25%	(19)	(6,859)
7	MAY	(6,859)	(5,740)	0	(12,599)	(9,729)	3.25%	(26)	(12,625)
8	JUN	(12,625)	195	0	(12,430)	(12,527)	3.25%	(34)	(12,464)
9	JUL	(12,464)	9,306	0	(3,158)	(7,811)	3.25%	(21)	(3,179)
10	AUG	(3,179)	1,581	0	(1,598)	(2,389)	3.25%	(6)	(1,604)
11	SEP	(1,604)	1,472	0	(133)	(868)	3.25%	(2)	(135)
12	OCT	(135)	137	0	2	(66)	3.25%	0	2
13								•••	
14							:	\$61	=
15	=	COL. 1, LINE 1		+	COL. 7, LINES	S 1 TO 6			
16	=	(7,009)		+	150	= =	(6,859)	@ MAY 1, 20 (TRANSFER	21 TO SCHEDULE B

(TRANSFER TO SCHEDULE B, LINE 13) (UNLESS ADJUSTMENTS UNDER COLUMN 2 LINES 1-6)

SCHEDULE G

	LIBERTY UTILITIES - KEENE DIVISION Wea her Normalization - Firm Sendout												
				Actual	Normal	Wod nor Hon	TIGIIZATION TI	THI CONGOUL					
	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	0.56%	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) * 0.56%	(10) - (11) +(12)
May-20	66,515	43,883	22,632	370	299	71	61.17	(4,343)	18,289	62,172	2,618	348	59,902
Jun-20	42,195	43,883	0	84	104	(20)	0.00	0	0	42,195	1,663	236	40,768
Jul-20	45,001	43,883	1,118	3	24	(21)	372.67	7,826	8,944	52,827	1,591	296	51,532
Aug-20	42,765	43,883	0	61	44	17	0.00	0	0	42,765	1,662	239	41,342
Sep-20	52,189	43,883	8,306	229	195	34	36.27	(1,233)	7,073	50,956	1,825	285	49,416
Oct-20	88,003	43,883	44,120	582	541	41	75.81	(3,108)	41,012	84,895	2,729	475	82,641
Total	336,668	263,298	76,176	1,329	1,207	122		(858)	75,318	335,810	12,088	1,881	325,602

SCHEDULE H

	LIBERTY UTILITIES - KEENE DIVISION Weather Normalization - Sales Rate Residential												
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-20	924	16,034	6,520	9,514	370	299	71	25.71	(1,826)	7,688	14,208		
Jun-20	892	7,739	6,520	1,219	84	104	(20)	14.51	290	1,509	8,029		
Jul-20	919	6,841	6,520	321	3	24	(21)		0	321	6,841		
Aug-20	912	6,199	6,520	0	61	44	17	0.00	0	0	6,199		
Sep-20	887	9,016	6,520	2,496	229	195	34	10.90	(371)	2,126	8,645		
Oct-20	927	18,797	6,520	12,278	582	541	41	21.10	(865)	11,413	17,932		
Total		64,625	39,118	25,828	1,329	1,207	122	22.71	(2,771)	23,057	61,854		

	LIBERTY UTILITIES - KEENE DIVISION Weather Normalization - Sales Rate Commercial												
					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-20	331	46,906	35,103	11,803	370	299	71	31.90	(2,265)	9,538	44,641		
Jun-20	318	32,185	35,103	0	84	104	(20)	0.00	0	0	32,185		
Jul-20	328	35,918	35,103	815	3	24	(21)		0	815	35,918		
Aug-20	330	34,288	35,103	0	61	44	17	0.00	0	0	34,288		
Sep-20	319	40,593	35,103	5,490	229	195	34	23.97	(815)	4,675	39,777		
Oct-20	334	65,197	35,103	30,094	582	541	41	51.71	(2,120)	27,974	63,077		
Total		255,086	210,618	48,201	1,329	1,207	122	42.62	(5,200)	43,001	249,886		

Summary - Total Summer Season Sales

	Actual 2020	Normalized
May	62,940	58,849
June	39,924	40,214
July	42,759	42,759
August	40,486	40,487
September	49,609	48,422
October	83,994	81,009
Total	319,711	311,740

SCHEDULE I-1

LIBERTY UTILITIES - KEENE DIVISION Typical Residential Heating Bill - Fixed Price Option Program Forecasted 2021 Summer Period vs. Actual 2020 Summer Period

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1 12 MONTHS ENDED 10/2020	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	Winter Nov-Apr	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Summer May-Oct	Total Nov-Oct
3 4 Typical Usage - therms (1) 5 Residential Heating R-3 Nov-19 - Apr-20 May-20 - Jun-20 Jul-20 - Oct-20	39	69	81	103	89	66	447	35	18	9	7	7	11	87	534
6 <u>Winter Summer Summer</u> 7 Customer Charge \$15.20 \$15.20 \$15.50 8 Delivery Charge:	\$15.20	\$15.20	\$15.20	\$15.20	\$15.20	\$15.20	\$91.20	\$15.20	\$15.20	\$15.50	\$15.50	\$15.50	\$15.50	\$92.40	\$183.60
All therms @ \$0.5569 \$0.5569 \$0.5678	\$21.48	\$38.51	\$45.03	\$57.47	\$49.58	\$36.86	\$248.93	\$19.43	\$9.96	\$5.22	\$3.80	\$4.08	\$6.35	\$48.84	\$297.77
11 Base Delivery Revenue Total	\$36.68	\$53.71	\$60.23	\$72.67	\$64.78	\$52.06	\$340.13	\$34.63	\$25.16	\$20.72	\$19.30	\$19.58	\$21.85	\$141.24	\$481.37
12 13 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		
14 Deferred Revenue Surcharge Total 15	\$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	\$0.00
16 COG Rates	\$0.9692	\$0.9692	\$0.9692	\$0.9692	\$0.9692	\$0.9692	\$0.9692	\$0.6326	\$0.6816	\$0.7908	\$0.7908	\$0.7908	\$0.7908	\$0.7049	\$0.9261
17 Cost of Gas Total	\$37.38	\$67.03	\$78.36	\$100.01	\$86.29	\$64.15	\$433.22	\$22.08	\$12.19	\$7.26	\$5.29	\$5.68	\$8.85	\$61.35	\$494.57
19 LDAC Rate	\$0.0660	\$0.0660	\$0.0660	\$0.0660	\$0.0660	\$0.0660		\$0.0660	\$0.0660	\$0.0660	\$0.0660	\$0.0660	\$0.0660		
20 LDAC Total	\$2.55	\$4.56	\$5.34	\$6.81	\$5.88	\$4.37	\$29.50	\$2.30	\$1.18	\$0.61	\$0.44	\$0.47	\$0.74	\$5.74	\$35.25
Total Bill	\$76.61	\$125.30	\$143.93	\$179.49	\$156.95	\$120.58	\$802.85	\$59.01	\$38.53	\$28.59	\$25.03	\$25.73	\$31.44	\$208.33	\$1,011.19
24 25 26							Winter							Summer	Total
27 12 MONTHS ENDED 10/2021	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Nov-Apr	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	May-Oct	Nov-Oct
28 Typical Usage - therms (1) 29 Residential Heating Nov-20 - Apr-21 May-21 - Oct-21 31 Winter Summer	39	69	81	103	89	66	447	35	18	9	7	7	11	87	534
32 Customer Charge \$15.50 \$15.50 3 Delivery Charge:	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$93.00	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$93.00	\$186.00
34 All therms @ \$0.5678 \$0.5678 35	\$21.90	\$39.27	\$45.91	\$58.59	\$50.55	\$37.58	\$253.80	\$19.81	\$10.16	\$5.22	\$3.80	\$4.08	\$6.35	\$49.42	\$303.22
36 Base Delivery Revenue Total	\$37.40	\$54.77	\$61.41	\$74.09	\$66.05	\$53.08	\$346.80	\$35.31	\$25.66	\$20.72	\$19.30	\$19.58	\$21.85	\$142.42	\$489.22
37 38 Seasonal Base Delivery Difference from previous year 39 Seasonal Percent Change from previous year 40							\$6.67 2.0%							\$1.18 0.8%	\$7.85 1.6%
41 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		
42 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	\$0.00
44 COG Rates	\$1.2300	\$1.0277	\$1.0277	\$1.0277	\$1.0277	\$1.0277	\$1.0452	\$1.2165	\$1.2165	\$1.2165	\$1.2165	\$1.2165	\$1.2165	\$1.2164	\$1.0731
45 Cost of Gas Total	\$47.44	\$71.07	\$83.09	\$106.05	\$91.50	\$68.03	\$467.18	\$42.45	\$21.76	\$11.17	\$8.14	\$8.74	\$13.61	\$105.87	\$573.05
47 LDAC Rate	\$0.0589 \$2.27	\$0.0589 \$4.07	\$0.0589 \$4.76	\$0.0589 \$6.08	\$0.0589 \$5.24	\$0.0589 \$3.90	\$26.32	\$0.0589 \$2.06	\$0.0589 \$1.05	\$0.0589 \$0.54	\$0.0589 \$0.39	\$0.0589 \$0.42	\$0.0589 \$0.66	\$5.12	\$31.44
49	\$2.27	\$4.U <i>1</i>	\$4.76	80.08	\$5.24	\$3.9U		\$∠. 06	\$1.05	\$0.54	\$0.39	\$U.42	\$U.06		•
50 Seasonal COG Difference from previous year 51 Seasonal Percent Change from previous year 52							\$33.96 7.8%							\$44.52 72.6%	\$78.48 15.9%
53 Total Bill	\$87.11	\$129.91	\$149.26	\$186.22	\$162.79	\$125.01	\$840.30	\$79.82	\$48.47	\$32.43	\$27.83	\$28.74	\$36.12	\$253.41	\$1,093.71
54 Seasonal Total Bill Difference from previous year 55 Seasonal Percent Change from previous year							\$37.45 4.7%							\$45.08 21.6%	\$82.52 8.2%
56 Seasonal Percent Change resulting from Base Rates (incl. Def. Revenue Surch.) 57 Seasonal Percent Change resulting from COG							-2.8% 4.2%							-2.2% 21.4%	-2.7% 7.8%
58 Seasonal Percent Change resulting from LDAC							-0.4%							-0.3%	-0.4%

(1) Residential Heating Typical Usage: Single family detached home using gas for heat, hot water and cooking.
(2) LDAC was included in Keene distribution rates beginning on 05/01/18, as authorized by NHPUC Order No. 26,122 dated April 27, 2018, in Docket No. DG 17-048

SCHEDULE I-2

LIBERTY UTILITIES - KEENE DIVISION Typical Residential Heating Bill - Non-Fixed Price Option Program Forecasted 2021 Summer Period vs. Actual 2020 Summer Period

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
12 MONTHS ENDED 10/2020	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	Winter Nov-Apr	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Summer May-Oct	Tota Nov-C
Typical Usage - therms (1) Residential Heating Nov-19 - Apr-20 May-20 - Jun-20 Jul-20 - Oct-2(39	69	81	103	89	66	447	35	18	9	7	7	11	87	
Winter Summer Summer Customer Charge \$15.20 \$15.20 \$15.50 Delivery Charge: \$15.20 \$15.20 \$15.20	\$15.20	\$15.20	\$15.20	\$15.20	\$15.20	\$15.20	\$91.20	\$15.20	\$15.20	\$15.50	\$15.50	\$15.50	\$15.50	\$92.40	\$183
All therms @ \$0.5569 \$0.5569 \$0.5678	\$21.48	\$38.51	\$45.03	\$57.47	\$49.58	\$36.86	\$248.93	\$19.43	\$9.96	\$5.22	\$3.80	\$4.08	\$6.35	\$48.84	\$29
Base Delivery Revenue Total	\$36.68	\$53.71	\$60.23	\$72.67	\$64.78	\$52.06	\$340.13	\$34.63	\$25.16	\$20.72	\$19.30	\$19.58	\$21.85	\$141.24	\$48
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	\$
COG Rates	0.9492	0.9492	0.9686	0.9352	0.6906	0.4408	0.8227	0.6326	0.6816	0.7908	0.7908	0.7908	0.7908	0.7049	0.
Cost of Gas Total	\$36.61	\$65.64	\$78.31	\$96.50	\$61.48	\$29.18	\$367.72	\$22.08	\$12.19	\$7.26	\$5.29	\$5.68	\$8.85	\$61.35	\$42
LDAC Rate	\$0.0660	\$0.0660	\$0.0660	\$0.0660	\$0.0660	\$0.0660		\$0.0660	\$0.0660	\$0.0660	\$0.0660	\$0.0660	\$0.0660		
LDAC Total	\$2.55	\$4.56	\$5.34	\$6.81	\$5.88	\$4.37	\$29.50	\$2.30	\$1.18	\$0.61	\$0.44	\$0.47	\$0.74	\$5.74	\$3
Total Bill	\$76	\$124	\$144	\$176	\$132	\$86	\$737	\$59	\$39	\$29	\$25	\$26	\$31	\$208	
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	To
Typical Usage - therms (1)	39	Dec-20 69	Jan-21 81	103	Mar-21 89	Apr-21	Nov-Apr 447	мау-21	Jun-21 18	Jul-21 9	Aug-21 7	Sep-21 7	OCt-21	May-Oct 87	
Residential Heating Nov-20 - Apr-21 May-21 - Oct-21 Winter Summer															
Customer Charge \$15.50 \$15.50 Delivery Charge: All therms @ \$0.5678 \$0.5678	\$15.50 \$21.90	\$15.50 \$39.27	\$15.50 \$45.91	\$15.50 \$58.59	\$15.50 \$50.55	\$15.50 \$37.58	\$93.00 \$253.80	\$15.50 \$19.81	\$15.50 \$10.16	\$15.50 \$5.22	\$15.50 \$3.80	\$15.50 \$4.08	\$15.50 \$6.35	\$93.00 \$49.42	\$18 \$30
							,	,							
Base Delivery Revenue Total	\$37.40	\$54.77	\$61.41	\$74.09	\$66.05	\$53.08	\$346.80	\$35.31	\$25.66	\$20.72	\$19.30	\$19.58	\$21.85	\$142.42	\$4
Seasonal Base Delivery Difference from previous year Seasonal Percent Change from previous year							\$6.67 2.0%							\$1.18 0.8%	
• • •							2.076							0.076	
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	
•		•		•	•				•					,	
COG Rates Cost of Gas Total	\$1.0253 \$39.54	\$1.0253 \$70.90	\$0.9970 \$80.61	\$0.9928 \$102.45	\$0.9928 \$88.39	\$0.9928 \$65.72	\$1.0014 \$447.61	\$1.2165 \$42.45	\$1.2165 \$21.76	\$1.2165 \$11.17	\$1.2165 \$8.14	\$1.2165 \$8.74	\$1.2165 \$13.61	\$1.2164 \$105.87	\$1 \$5
							*******							7	,,,
LDAC Rate LDAC Total	\$0.0589 \$2.27	\$0.0589 \$4.07	\$0.0589 \$4.76	\$0.0589 \$6.08	\$0.0589 \$5.24	\$0.0589 \$3.90	\$26.32	\$0.0589 \$2.06	\$0.0589 \$1.05	\$0.0589 \$0.54	\$0.0589 \$0.39	\$0.0589 \$0.42	\$0.0589 \$0.66	\$5.12	5
		•							•						
Seasonal COG Difference from previous year Seasonal Percent Change from previous year							\$79.89 21.7%							\$44.52 72.6%	\$1
Total Bill	\$79	\$130	\$147	\$183	\$160	\$123	\$821	\$80	\$48	\$32	\$28	\$29	\$36	\$253	:
Seasonal Total Bill Difference from previous year Seasonal Percent Change from previous year							\$83.38 11.3%							\$45.08 21.6%	\$
Seasonal Percent Change from previous year Seasonal Percent Change resulting from Base Rates (incl. Def. Revenue Surch.)							-3.1%							-2.2%	
Seasonal Percent Change resulting from COG							10.8% -0.4%							21.4% -0.3%	·l

⁽¹⁾ Residential Heating Typical Usage: Single family detached home using gas for heat, hot water and cooking.
(2) LDAC was included in Keene distribution rates beginning on 05/01/18, as authorized by NHPUC Order No. 26,122 dated April 27, 2018, in Docket No. DG 17-048

REDACTED SCHEDULE J-1

LIBERTY UT LITIES - KEENE DIVISION

B D PREMIUM FOR PRE-PURCHASED GALLONS - PRIOR YEAR

	Mt. Belvieu		Pipeline	Bro	oker + Suppli	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-20	0.7699	+	\$0.2410	+	\$0.1000	+	\$0 0045	+	\$0.0858	=	\$1.2012	140,000	\$168,170			140,000			-\$0.0863
May-20	0.8032	+	\$0.2410	+	\$0.1000	+	\$0 0045	+	\$0.0858	=	\$1.2345	105,000	\$129,619			105,000			-\$0.0863
Jun-20	0.8627	+	\$0.2410	+	\$0.1000	+	\$0 0045	+	\$0.0858	=	\$1.2940	105,000	\$135,870			105,000			-\$0.0863
Jul-20	0.8440	+	\$0.2410	+	\$0.1000	+	\$0 0045	+	\$0.0858	=	\$1.2753	140,000	\$178,545			140,000			-\$0.0863
Aug-20	0.8538	+	\$0.2410	+	\$0.1000	+	\$0 0045	+	\$0.0858	=	\$1.2851	105,000	\$134,933			105,000			-\$0.0863
Sep-20	0.8253	+	\$0.2410	+	\$0.1000	+	\$0 0045	+	\$0.0858	=	\$1.2566	105,000	\$131,943			105,000			-\$0.0863
Total												700,000	\$879,081			700,000	\$818,685	(\$60,397)	-\$0.0863

SCHEDULE J-2

LIBERTY UTILITIES - KEENE DIVISION

COMPARISON OF CONTRACT COST TO HYPOTHETICAL SPOT COST WINTER SEASON 2020-2021 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-20	\$0.8245	92,000	\$75,854	\$0.9154	92,000	\$84,217	(\$8,363)
Dec-20	\$0.8245	140,000	\$115,430	\$1.1208	140,000	\$156,912	(\$41,482)
Jan-21	\$0.8245	165,000	\$136,043	\$1.3220	165,000	\$218,130	(\$82,088)
Feb-21	\$0.8245	135,000	\$111,308	\$1.5669	135,000	\$211,532	(\$100,224)
Total			\$438,634			\$670,790	(\$232,156)

-34.6%

SCHEDULE J-3

LIBERTY UTILITIES - KEENE DIVISION

PROPANE PURCHASING STABILIZATION PLAN PRE-PURCHASES AND DELIVERY SCHEDULE

Delivery			Pre-P	urchases (Ga	llons)		
Month	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Total
Nov-21	18,400	13,800	13,800	18,400	13,800	13,800	92,000
Dec-21	28,000	21,000	21,000	28,000	21,000	21,000	140,000
Jan-22	33,000	24,750	24,750	33,000	24,750	24,750	165,000
Feb-22	27,000	20,250	20,250	27,000	20,250	20,250	135,000
Mar-22	21,000	15,750	15,750	21,000	15,750	15,750	105,000
Apr-22	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%	

REDACTED SCHEDULE K

LIBERTY UT LITIES - KEENE DIVISION

CALCULATION OF PURCHASED GAS COSTS SUMMER PERIOD 2021

L NE NO.		May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	TOTAL
1	TOTAL SENDOUT (therms)	may 2.	oun 21	04.21	, rag 2 ·	50p 2.	00(2)	101/12
2	CHANGE TO ENDING INVENTORY BALANCE (therms)	-	-	-	-	-	-	-
3	TOTAL REQUIRED PURCHASES (therms)	59,902	40,768	51,532	41,342	49,416	82,641	325,602
4 5	PROPANE PURCHASE STABILIZATION PLAN DELIVERIES Therms	_	_	_	_	_	_	
6	RATES - from Schedule D							
7	Contract Price	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
8	Broker Fee	incl.	incl.	incl.	incl.	incl.	incl.	
9 10	Pipeline Fee 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 15	AMHERST STORAGE PROPANE DELIVERIES Therms			_		_	_	
16	RATES - from Schedule F	-	-	-	-	-	-	-
17	WACOG Price	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
18 19	Trucking Fee COST PER GALLON	\$0.0000 \$0.0000	\$0.0000 \$0.0000	\$0.0000	\$0.0000 \$0.0000	\$0.0000 \$0.0000	\$0.0000	
20	TOTAL COST - Amherst Storage Propane Deliveries	\$0.0000	\$0.0000	\$0.0000 \$0	\$0.0000	\$0.0000	\$0.0000 \$0	\$0
21	CNG DELIVERIES							05.000
22 23	Therms RATE							65,000
24	PRICE							
25	COST PER Therm							
26 27	COST - CNG DEMAND FIXED							
28	COST PER Therm							
29	TOTAL CNG							
30 31	SPOT PURCHASES Therms	50,602	30,268	40,132	31,242	39,316	69,041	260,602
32	RATES - from Schedule C	30,002	30,200	40,132	31,242	33,310	03,041	200,002
33	Mont Belvieu							
34	Broker Fee							
35	Pipeline Fee							
36 37	PERC Fee Supplier Charge							
38	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							
46	THERMS	59,902	40,768	51,532	41,342	49,416	82,641	325,602
48	SENDOUT THERMS	59,902	40,768	51,532	41,342	49,416	82,641	325,602
49	COST	\$75,266	\$50,031	\$60,817	\$49,033	\$58,246	\$96,358	\$389,751
50	COST PER THERM	\$1.2565	\$1.2272	\$1.1802	\$1.1860	\$1.1787	\$1.1660	\$1.1970

APPENDIX 1

REVISED MONT BELVIEU PROPANE FUTURES - 02/26/20 CLOSE

Trade Date: Friday, 26 Feb 2021 (Final)

All market data contained within the CME Group website should be considered as a reference only and should data feeds. Settlement prices on instruments without open interest or volume are provided for web users on based on market activity.

монтн	OPEN	HIGH	LOW	LAST	CHANGE	SETTLE
FEB 21	-	-	-	-	00043	.91339
MAR 21	-	-	-	-	00875	.94375
APR 21	-	-	-	-	00625	.88375
MAY 21	-	-	-	-	00563	.83125
JUN 21	-	-	-	-	00563	.79875
JLY 21	-	-	-	-	00583	.77792
AUG 21	-	-	-	-	00625	.77625
SEP 21	-	-	-	-	00583	.77625
OCT 21	-	-	-	-	00542	.77625

APPENDIX 2

ENTERPRISE TE PRODUCTS PIPELINE FERC TARIFF 54.58.0 - RATES EFFECTIVE 1/1/2021

RATES (In Cents-per-bbl.) [U] All rates are unchanged.

		Ori	gin	
Destination	Arcadia (Bienville Parish, LA)	Floreffe Junction (Allegheny Co., PA)	Mont Belvieu (Chambers Co., TX)	Tappan Lake (Harrison Co., OH), Todhunter (Butler Co., OH) & Follansbee (Brooke Co., West Virginia)
Arcadia (Bienville Parish, LA)	-	-	243.71	-
Coshocton (Coshocton Co., OH)	696.43		743.98	-
Dexter (Stoddard Co., MO)			353.50	
Du Bois (Clearfield Co., PA)	779.47 (1)	399.62 (1)(2)	825.94 (1)	399.62 (1)
Fontaine (Green Co., AR)	-		332.11	-
Greensburg (Westmoreland Co., PA)	732.98 (1)	399.62 (1)(2)	779.47 (1)	399.62 (1)
Harford Mills (Cortland Co., NY)		561.50 (1)	880.93 (1)	584.58 (1)
Lebanon (Boone Co., IN)			416.90 (4)	
Oneonta (Otsego Co., NY)	-	607.83	951.89 (1)	627.44 (1)
Princeton (Gibson Co., IN)	419.57		453.81	
Schaefferstown (Lebanon Co., PA)		589.20 (2)	890.40	581.39
Selkirk (Albany Co., NY)		659.48	1012.12 (1)	661.20 (1)
Seymour (Jackson Co., IN)			396.15	-
Sinking Spring (Berks Co., PA)	-	589.20 (2)	890.40	581.39
Todhunter Truck Terminal (Butler Co., OH)	619.09		666.64	
Twin Oaks(Delaware Co., PA)	-	725.13 (2) (3)		725.13 (3)
Watkins Glen (Schuyler Co., NY)	789.18 (1)	540.46 (1)	835.88 (1)	565.02 (1)
West Memphis (Crittenden Co., AR)			353.50 (4)	_

APPENDIX 3A

Northern Gas Transport, Inc. Box 106 Lyndonville, VT 05851-0106 1-800-648-1075

FAX: 802-626-5039

February 23, 2021

To: All Customers

Re: Fuel Surcharge Notice

As of Monday, February 22, 2021 the Department of Energy New England average price gallon of diesel fuel was \$2.962. All deliveries invoiced from Sunday, February 28, 2021 through Saturday, March 6, 2021 will be line item assessed at 8.0% fuel surcharge. Than and should you have any questions, please contact Susan Noyes at 1-800-648-1075 exten 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	Surcharge	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	\$819.72	5.00%	\$40.99	\$860.71	\$0.0936
9,200	\$0.0891	\$819.72	5.50%	\$45.08	\$864.80	\$0.0940
9,200	\$0.0891	\$819.72	6.00%	\$49.18	\$868.90	\$0.0944
9,200	\$0.0891	\$819.72	6.50%	\$53.28	\$873.00	\$0.0949
9,200	\$0.0891	\$819.72	7.00%	\$57.38	\$877.10	\$0.0953
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