



**STATE OF NEW HAMPSHIRE  
BEFORE THE  
PUBLIC UTILITIES COMMISSION**

Docket No. DE 20-XXX

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities  
Annual Retail Rate Filing

**DIRECT TESTIMONY**

**OF**

**JOHN D. WARSHAW**

March 27, 2020

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1 **I. INTRODUCTION AND QUALIFICATIONS**

2 **Q. Please state your full name and business address.**

3 A. My name is John D. Warshaw, and my business address is 15 Buttrick Road,  
4 Londonderry, New Hampshire.

5 **Q. By whom are you employed and in what capacity?**

6 A. I am the Manager, Electric Supply for Liberty Utilities Service Corp., which provides  
7 services to Liberty Utilities (Granite State Electric) Corp. (“Granite State” or “the  
8 Company”). I oversee the procurement of power for Energy Service for Granite State as  
9 well as the procurement of renewable energy certificates (“RECs”). I am also responsible  
10 for monitoring costs and activities relative to transmission service provided to the  
11 Company.

12 **Q. Please describe your educational background.**

13 A. I graduated from the State University of New York Maritime College in 1977 with a  
14 Bachelor of Science in Nuclear Science. I received a Master’s in Business  
15 Administration from Northeastern University in 1986. In 1992, I earned a Master of Arts  
16 in Energy and Environmental Management from Boston University.

17 **Q. What is your professional background?**

18 A. In November of 2011, I joined the Company as Manager, Electric Supply. Prior to my  
19 employment at Liberty Utilities Service Corp., I was employed by National Grid USA  
20 Service Company (“National Grid”) as a Principal Analyst in Energy Supply – New  
21 England from 2000 to 2010. In that position I conducted a number of solicitations for

1 wholesale power to meet the needs of National Grid's New England distribution  
2 companies. I also administered both short-term and long-term power purchase  
3 agreements for National Grid's New England distribution companies. Prior to my  
4 employment at National Grid, I was employed at COM/Energy (now NSTAR) from 1992  
5 to 2000. From 1992 to 1997, I was a Rate Analyst in Regulatory Affairs at COM/Energy  
6 responsible for supporting state and federal rate filings. In 1997, I transferred to  
7 COM/Electric to work in Power Supply Administration.

8 **Q. Have you previously testified before the New Hampshire Public Utilities**  
9 **Commission ("Commission")?**

10 A. Yes. I most recently provided written and oral testimony before the Commission in  
11 Docket No. DE 19-059 on December 18, 2019.

12 **Q. Have you testified before any other state regulatory agencies?**

13 A. Yes. I have testified before both the Massachusetts Department of Public Utilities and  
14 the Rhode Island Public Utilities Commission regarding electric supply and renewable  
15 portfolio procurement activities.

16 **II. PURPOSE OF TESTIMONY**

17 **Q. What is the purpose of your testimony?**

18 A. My testimony addresses the estimated 2020 transmission expenses for Granite State.  
19 First, I will summarize the various transmission services provided to Granite State and  
20 describe how Granite State pays for such services. Second, I will provide testimony  
21 supporting the forecast of transmission expenses that Granite State expects to incur in

1 2020. As described more fully in Section IV of my testimony, the Company forecasts an  
2 increase of \$1,055,238 in prospective transmission expenses for calendar year 2020 as  
3 compared to the forecast provided for calendar year 2019 in Docket No. DE 19-062.

4 **III. SUMMARY OF TRANSMISSION SERVICES PROVIDED TO GRANITE STATE**

5 **Q. Please summarize what transmission services Granite State receives from ISO New**  
6 **England Inc. (the “ISO” or “ISO-NE”) under rate schedules approved by the**  
7 **Federal Energy Regulatory Commission (“FERC”).**

8 A. Granite State receives transmission services under the ISO New England Inc.  
9 Transmission, Markets and Services Tariff (“ISO Tariff”) as follows:

- 10 1. Section II (Schedules 1, 2, 9 and 16) of the ISO Tariff provides for Regional  
11 Network Service (“RNS”);
- 12 2. Section IV.A – ISO Funding Mechanisms provides for the recovery of ISO’s  
13 Administrative Services; and
- 14 3. Section II, Schedule 21 of the ISO Tariff provides for Local Network Service  
15 (“LNS”) from the New England Power Company (“NEP”).

16 **Q. Please describe further the types of transmission services that are billed to Granite**  
17 **State under the ISO Tariff.**

18 A. New England’s transmission rates utilize a highway/local pricing structure. That is,  
19 Granite State receives regional transmission service over “highway” transmission  
20 facilities under Section II of the ISO Tariff (also known as RNS), and receives local  
21 transmission service over local transmission facilities under Schedule 21 of the ISO

1 Tariff (also known as LNS). Additionally, a number of administrative services are  
2 provided by ISO-NE under Section IV.A of the ISO Tariff.

3 **A. Explanation of ISO Tariff Services, Rates & Charges**

4 **Q. Please explain the services provided to Granite State under the ISO Tariff.**

5 A. Section II of the ISO Tariff provides access over New England’s looped transmission  
6 facilities, more commonly known as Pool Transmission Facilities (“PTF”) or bulk  
7 transmission facilities. In addition, the ISO Tariff provides for Ancillary Services (Black  
8 Start, Reactive Power, and Scheduling, System Control and Dispatch Services) as  
9 described more fully later in this testimony.

10 **Q. How are the costs for RNS recovered?**

11 A. The ISO Tariff RNS Rate (“RNS Rate”) (Section II - Schedule 9 of the ISO Tariff)  
12 recovers the RNS costs, and is determined annually based on an aggregation of the  
13 transmission revenue requirements of each of the Participating Transmission Owners  
14 (“PTO”) in New England, calculated in accordance with a FERC-approved formula in a  
15 single, “postage stamp” rate in New England. Granite State is currently participating in  
16 FERC Docket EL 16-19-002 to investigate the reasonableness of the formula rate  
17 protocols used to develop both RNS and LNS rates. A number of parties in that docket  
18 had reached a settlement that was filed with FERC on August 17, 2018. The settlement  
19 was opposed by a number of parties and was rejected by FERC. While the docket was  
20 assigned to a FERC judge for the purpose of hearings and creating a procedural schedule,  
21 the schedule has been suspended pending updates from the parties to determine re-

1 establishing a procedural schedule. Any refunds that may result from that investigation  
2 will be included in the applicable retail rate filing for transmission service.

3 **Q. Please describe the ISO-NE System Restoration and Planning Service, Reactive**  
4 **Supply and Voltage Control, and Scheduling, System Control, and Dispatch**  
5 **Services that are included in the ISO Tariff.**

6 A. ISO-NE System Restoration and Planning Service (Section II - Schedule 16 of the ISO  
7 Tariff), also known as Black Start Service, is necessary to ensure the continued reliable  
8 operation of the New England transmission system. This service allows for the payment  
9 to generators who have the capability of supplying load and the ability to re-start without  
10 an outside electrical supply to re-energize the transmission system following a system-  
11 wide blackout.

12 Reactive Supply and Voltage Control (Section II - Schedule 2 of the ISO Tariff), also  
13 known as Reactive Power Service, is necessary to maintain transmission voltages within  
14 acceptable limits on the ISO-NE transmission system and allows for the payment to  
15 generators or other facilities that have the capability to produce or absorb reactive power.

16 Lastly, Scheduling, System Control, and Dispatch Service (“Scheduling & Dispatch  
17 Service”) consists of the services required to schedule the movement of power through,  
18 out of, within, or into the ISO-NE Control Area over the PTF and to maintain System  
19 Control. Scheduling & Dispatch Service also provides for the recovery of certain charges  
20 that reflect expenses incurred in the operation of satellite dispatch centers.

1 **Q. How are the ISO-NE charges for Black Start and Reactive Power assessed to**  
2 **Granite State?**

3 A. ISO-NE assesses charges for Black Start and Reactive Power Services to Granite State  
4 each month based on Granite State's proportionate share of its network load to ISO-NE's  
5 total network load.

6 **Q. How are the charges for Scheduling & Dispatch Service assessed to Granite State?**

7 A. Charges for Scheduling & Dispatch Service are assessed to Granite State through three  
8 separately charged tariffed services.

9 The first charge is for the expenses incurred by ISO-NE in providing these services and is  
10 recovered under Schedule 1 of Section IV.A of the ISO Tariff. These costs are allocated  
11 to Granite State each month based on an annually filed FERC-approved fixed rate times  
12 Granite State's monthly Network Load.

13 The second charge is for the costs incurred by the individual transmission owners in  
14 providing Scheduling & Dispatch Service over PTF facilities, including the costs of  
15 operating local control centers, and are recovered under Section II, Schedule 1 of the ISO  
16 Tariff. These costs are allocated to Granite State each month based on a formula rate that  
17 is determined each year based on the prior year's costs incurred times Granite State's  
18 monthly Network Load.

19 The final charge is for the cost of Scheduling & Dispatch Service for transmission service  
20 over transmission facilities other than PTF that are charged under Schedule 21 of the ISO



1           Tariff. Thus, the three types of Scheduling & Dispatch costs are similar, but are charged  
2           to Granite State through three different tariff mechanisms.

3   **Q.    What additional administrative services and/or charges flow through to Granite**  
4   **State under Section IV.A of the ISO Tariff?**

5   A.    Granite State also incurs charges pursuant to Section IV.A, Schedule 5 of the ISO Tariff.  
6        Schedule 5 provides for the collection of the New England States Committee on  
7        Electricity's ("NESCOE") annual budget.

8   **Q.    How are the ISO Tariff Administrative Services charges assessed?**

9   A.    ISO-NE assesses the charges in Section IV.A based upon stated rates pursuant to the ISO  
10        Tariff. These stated rates are adjusted annually when ISO-NE files a revised budget and  
11        cost allocation proposal to become effective January 1 each year. Granite State is  
12        charged the stated rate for these services as part of ISO-NE's monthly billing process,  
13        based on its Network Load for Section IV.A Schedule 1 and Schedule 5 charges.

14           **B. Explanation of Schedule 21 NEP Tariff Services, Charges and Credits**

15   **Q.    What services are provided to Granite State under Schedule 21 of the ISO Tariff?**

16   A.    Schedule 21 provides service over NEP's local, non-highway transmission facilities,  
17        considered non-PTF facilities ("Non-PTF"). The service provided over the Non-PTF is  
18        referred to as LNS. NEP also provides metering, transformation and certain ancillary  
19        services to Granite State to the extent such services are required by Granite State and not  
20        otherwise provided under the ISO Tariff.

1 **Q. Please explain the metering and transformation services provided by NEP.**

2 A. NEP separately surcharges the appropriate customers for these services. NEP provides  
3 metering service when a customer uses NEP-owned meter equipment to measure the  
4 delivery of transmission service. NEP provides transformation service when a customer  
5 uses NEP-owned transformation facilities to step down voltages from 69 kV or greater to  
6 a distribution voltage.

7 **Q. Are there any other transmission services for which NEP assesses charges to**  
8 **Granite State?**

9 A. Yes. Granite State relies upon the specific distribution facilities of NEP's affiliate,  
10 Massachusetts Electric Company ("Mass Electric"), which provides for NEP's use of  
11 such facilities pursuant to the Integrated Facilities provision of NEP's FERC Electric  
12 Tariff No. 1 service agreement with Mass Electric. NEP, in turn, uses these specific  
13 distribution facilities to provide transmission service to Granite State. Therefore, Granite  
14 State is also subject to a Specific Distribution Surcharge for its use of these facilities.

15 **Q. What is the credit in Schedule 21 charges that NEP provides to Granite State in its**  
16 **monthly invoice?**

17 A. As a result of the sale of Granite State to Liberty Utilities, NEP uses certain distribution  
18 facilities of Granite State to provide service to generation customers of NEP. An  
19 Integrated Facilities Supplement to Schedule 21 of the ISO Tariff provides Granite State  
20 with a credit in exchange for the continued use by NEP of Granite State's facilities to  
21 serve NEP's generation customers.

1 **IV. ESTIMATE OF GRANITE STATE'S TRANSMISSION EXPENSES**

2 **Q. Was the forecast for Granite State's transmission and ISO expenses for 2020**  
3 **prepared by you or under your supervision?**

4 A. Yes. Granite State estimates the total transmission and ISO-NE expenses (including  
5 certain ancillary services) for 2020 to be approximately \$23,231,692, as shown in  
6 Schedule JDW-1, page 1 of 2. This equates to an increase of \$1,055,238 as compared to  
7 the forecast for 2019 provided in Docket No. DE 19-062, as shown on Schedule JDW-1,  
8 page 2 of 2.

9 **Q. How have the ISO Tariff charges for RNS shown on line 3 of Schedule JDW-1 been**  
10 **forecasted?**

11 A. The Company has applied an estimated rate increase to the total RNS rate currently in  
12 effect to reflect the forecast of PTF plant additions across New England, as estimated by  
13 the New England transmission owners, to be included in the annual formula rate effective  
14 June 1, 2020. The estimated rate increase was provided in the PTO Rates Working  
15 Group presentation during the 2019 NEPOOL Reliability and Transmission Committees'  
16 Summer Meeting. The estimated increase of approximately \$8 per kW-year in 2020 to  
17 the RNS rate is added to the current \$111.94 per kW-year RNS rate to get an estimated  
18 rate of \$120 per kW-year effective June 1, 2020. The current rate of \$111.94 per kW-  
19 year that was effective beginning June 1, 2019, is lower than the \$117.00 per kW-year  
20 estimated in Docket No. DE 19-062. The combination of that lower current rate with the  
21 forecasted increase effective June 1, 2020, have resulted in an estimated decrease of  
22 \$319,404 as shown in column 3, line 3 of Schedule JDW-1, page 2 of 2. The main reason

1 for the estimated decrease in costs for 2020 as compared to what was filed in 2019 is that  
2 the actual RNS rates effective June 1, 2019, were lower than the forecasted rates  
3 available at the time of filing.

4 **Q. Schedule JDW-1 also includes estimated ISO-NE charges for Black Start, Reactive**  
5 **Power, and Scheduling and Dispatch. How were these costs forecasted?**

6 A. In estimating the expected costs of the ISO-NE charges, the company used the same  
7 approach it has used in previous filings. The Black Start costs shown on line 5 of  
8 Schedule JDW-1 were derived in two steps. First, as shown in Section II of Schedule  
9 JDW-3, the Company estimated the cost for Black Start Service by, as a starting point,  
10 summing Granite State's actual monthly ISO-NE Black Start expenses for 2019 (Line 5).  
11 This estimate was divided by Granite State's 2019 Peak Load to calculate an estimated  
12 annual rate, as shown on line 7. Granite State then calculated a monthly rate (annual rate  
13 divided by 12), as shown on line 8. To obtain the estimate of Black Start costs that would  
14 be charged to Granite State, as shown in column 4 of Schedule JDW-2, page 1, the  
15 Company multiplied the monthly rate by Granite State's monthly network load, as shown  
16 for each month in column 1 of Schedule JDW-2, page 1. Using this methodology, the  
17 Company estimated an allocation of \$129,941 for 2020.

18 **Q. How have you estimated Reactive Power costs for Granite State?**

19 A. The estimated Reactive Power costs for Granite State were calculated by using actual  
20 Granite State costs for 2019 as shown in Section I of Schedule JDW-3. The annual rate  
21 was determined by dividing the total Reactive Power costs charged to Granite State (Line  
22 1) by Granite State's peak 2019 Network Load. The monthly rate (annual rate divided by

1 12) was then multiplied by Granite State's monthly network load, as shown in column 1  
2 of Schedule JDW-2, page 1, to determine the estimated charges for Reactive Power  
3 Service shown in column 5 of that same schedule. Using this methodology, the Company  
4 estimated an allocation of \$124,694 for 2020.

5 **Q. How did you forecast the Scheduling and Dispatch costs shown on line 4 of Schedule**  
6 **JDW-1, page 1?**

7 A. My estimate is shown in column (3) of Schedule JDW-2, page 1. This amount was  
8 derived by using the currently effective OATT Schedule 1 rate of \$1.59341 per kW-year,  
9 divided by 12, and further multiplied by Granite State's monthly network loads for 2019  
10 as shown in column (1) of Schedule JDW-2, page 1.

11 **Q. Have you included any Reliability Must Run ("RMR") contract charges to Granite**  
12 **State for 2020?**

13 A. No. Reliability Must Run Agreements guarantee payments to generators that are needed  
14 to ensure reliability. To obtain an agreement, a generator must receive verification from  
15 ISO-NE that it is needed for reliability and must demonstrate that it is unable to cover its  
16 operating costs with revenue from other sources. Granite State has not incurred any  
17 RMR contract charges as there have been no RMR contracts for the New Hampshire  
18 reliability region over the past year. Therefore, the Company has not forecasted any  
19 RMR contract costs for 2020.

1 **Q. Can you please explain the forecast of the ISO-NE Administrative Charges shown**  
2 **on lines 7 and 8 of Schedule JDW-1 page 1?**

3 A. Yes. Lines 7 and 8 include ISO-NE Administrative charges for Scheduling & Dispatch  
4 and NESCOE respectively, and are derived on Schedule JDW-2 page 2. Line 7 on  
5 Schedule JDW-1 page 1 shows the 2020 forecast of charges to Granite State under  
6 Schedule 1, Scheduling and Load Dispatch Administrative schedules through Section  
7 IV.A of the ISO Tariff. The estimate is based on the ISO Schedule 1 rate of \$0.17626 per  
8 kW-month effective January 1, 2020, and multiplied by Granite State's forecasted  
9 monthly network load as shown in column 1 of Schedule JDW-2, page 2.

10 Line 8 on page 1 of Schedule JDW-1 shows the estimated 2020 NESCOE charges under  
11 Schedule 5 of Section IV.A of the ISO Tariff. This amount was derived by using the ISO  
12 Schedule 5 rate of \$0.00882 per kW-month effective January 1, 2020, and multiplied by  
13 Granite State's forecasted monthly network load as shown in column 1 of Schedule  
14 JDW-2, page 2.

15 **Q. What is the sub-total of transmission expenses attributable to charges from the ISO-**  
16 **NE?**

17 A. The sub-total of ISO-NE charges is \$17,845,604, which is the sum of lines 3 through 8 on  
18 Schedule JDW-1 page 1.

1 **Q. Have you estimated the charges to Granite State under Schedule 21 of the ISO**  
2 **Tariff?**

3 A. Yes. Lines 1 and 2 of Schedule JDW-1 show the amount of forecasted charges from  
4 NEP pursuant to the Local Network Service (“LNS”) tariff. The total amount of  
5 expenses is \$5,386,088 which represents an increase of \$1,343,089 in the total NEP  
6 expenses to be incurred by Granite State in 2020 (see Schedule JDW-1, page 2, lines 1  
7 and 2) as compared to 2019. Granite State estimated the PTF and non-PTF Demand  
8 expenses based on the average of NEP’s actual PTF and non-PTF Demand charges in  
9 2019 with no adjustment. Metering, transformation, specific distribution, and ancillary  
10 service charges are based on current rates and are assessed to Granite State based on a per  
11 meter and peak load basis, respectively. A maintenance service credit, as discussed  
12 previously, was also included in the estimate.

13 **V. EXPLANATION OF PRIMARY CHANGE FROM LAST YEAR’S FORECASTED**  
14 **EXPENSES**

15 **Q. What is the primary cause of the estimated increase in Granite State’s 2020**  
16 **transmission expenses?**

17 A. The estimated 2020 Granite State transmission and ISO-NE expenses of \$23,231,692  
18 represent an increase of \$1,265,398 from the 2019 forecast of transmission expenses for  
19 Granite State. The increase is mainly attributed to the increased cost of Schedule 21 LNS  
20 costs.

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1 VI. **CONCLUSION**

2 Q. **Does this conclude your testimony?**

3 A. Yes.



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Witness: Warshaw

## **Schedules**

Schedule JDW-1	Summary of Transmission Expenses Estimated for 2020
Schedule JDW-2	Summary of ISO Tariff Section II Charges Estimated for 2020
Schedule JDW-3	Summary of System Restoration and Reactive Supply Charges Estimated for 2020
Schedule JDW-4	Summary of New England Power Schedule No. 21 Charges Estimated for 2020

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Schedule JDW-1  
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**Summary of Transmission Expenses  
Estimated For the Year 2020**

<b>ISO-NE Tariff Schedule 21 NEP LNS Tariff Charges</b>		
1	Local Network Service (Monthly Demand Charges)	\$4,184,278
2	Other NEP Charges	<u>1,201,811</u>
	<b>Subtotal NEP Charges</b>	<u>\$5,386,088</u>
<b>ISO-NE OATT Tariff Section II Charges</b>		
3	OATT Schedule 9 - Regional Network Service Charges	\$17,035,068
4	OATT Schedule 1 - Scheduling, System Control & Dispatch	232,222
5	OATT Schedule 16 - System Restoration and Planning Service	129,941
6	OATT Schedule 2 - Reactive Supply and Voltage Control Service	<u>124,694</u>
	<b>Subtotal ISO-NE Tariff Section II Charges</b>	<u>\$17,521,924</u>
<b>ISO-NE Tariff Section IV.A - Administrative Charges</b>		
7	ISO-NE Schedule 1 - Scheduling & Dispatch Service	\$308,255
8	ISO-NE Schedule 5 - NESCOE Budget	<u>15,425</u>
	<b>Subtotal ISO-NE Tariff Section IV.A Charges</b>	<u>\$323,680</u>
9	<b>Subtotal of ISO-NE Tariff Charges</b>	<u>\$17,845,604</u>
10	<b>Total Estimated Expenses Flowing Through Current Rates</b>	\$23,231,692

Line 1 = JDW-4: Column (1), Line 13  
 Line 2 = JDW-4: Sum of Column (2) thru (6), Line 13  
 Line 3 = JDW-2, page 1: Column (2), Line 13  
 Line 4 = JDW-2, page 1: Column (3), Line 13  
 Line 5 = JDW-2, page 1: Column (5), Line 13  
 Line 6 = JDW-2, page 1: Column (6), Line 13  
 Line 7 = JDW-2, page 2: Column (2), Line 13  
 Line 8 = JDW-2, page 2: Column (3), Line 13  
 Line 9 = Sum of Line 3 thru Line 8  
 Line 10 = Sum of Line 1 thru Line 8

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**Summary of Estimated Transmission Expenses  
2019 vs. 2020 Filing Years**

	1 2019 Retail Filing	2 2020 Estimate	3 Yr/Yr Incr/(Decr)	
<b>ISO-NE Tariff Schedule 21 NEP LNS Tariff Charges</b>				
1	Local Network Service (Monthly Demand Charges)	\$ 3,021,353	\$ 4,184,278	\$ 1,162,924
2	Other NEP Charges	1,021,646	1,201,811	180,165
	<b>Subtotal</b>	<b>\$ 4,042,999</b>	<b>\$ 5,386,088</b>	<b>\$ 1,343,089</b>
<b>ISO-NE OATT Tariff Section II Charges</b>				
3	OATT Schedule 9 - Regional Network Service Charges	\$ 17,354,472	\$ 17,035,068	\$ (319,404)
4	OATT Schedule 1 - Scheduling, System Control & Dispatch	240,628	232,222	(8,407)
5	OATT Schedule 16 - System Restoration and Planning Service	88,738	129,941	41,203
6	OATT Schedule 2 - Reactive Supply and Voltage Control Service	122,378	124,694	2,316
	<b>Subtotal</b>	<b>\$ 17,806,216</b>	<b>\$ 17,521,924</b>	<b>\$ (284,292)</b>
<b>ISO-NE Tariff Section IV.A - Administrative Charges</b>				
7	ISO-NE Schedule 1 - Scheduling & Dispatch Service	\$ 314,310	\$ 308,255	\$ (6,055)
8	ISO-NE Schedule 5 - NESCOE Budget	12,929	15,425	2,496
	<b>Subtotal</b>	<b>\$ 327,238</b>	<b>\$ 323,680</b>	<b>\$ (3,558)</b>
9	<b>Subtotal of ISO-NE Tariff Charges</b>	<b>\$ 18,133,455</b>	<b>\$ 17,845,604</b>	<b>\$ (287,851)</b>
10	<b>Total Estimated Expenses</b>	<b>\$ 22,176,454</b>	<b>\$ 23,231,692</b>	<b>\$ 1,055,238</b>

**Summary of ISO-NE Tariff Section II Charges  
Estimated For the Year 2020**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Monthly PTF kW Load	OATT Schedule 9 - Regional Network Service Charges	OATT Schedule 1 - Scheduling, System Control & Dispatch	OATT Schedule 16 - System Restoration and Planning Service	OATT Schedule 2 - Reactive Supply and Voltage Control Service	ISO-NE OATT Tariff Section II Charges	ISO-NE Schedule 1 - Scheduling & Dispatch Service	ISO-NE Schedule 5 - NESCOE Budget	Total ISO-NE Transmission Charges
1 January	152,467	1,422,246	20,245	11,328	10,871	1,464,691	26,874	1,345	1,492,909
2 February	135,924	1,267,929	18,049	10,099	9,691	1,305,769	23,958	1,199	1,330,925
3 March	135,529	1,264,245	17,996	10,070	9,663	1,301,974	23,888	1,195	1,327,058
4 April	119,726	1,116,831	15,898	8,896	8,536	1,150,161	21,103	1,056	1,172,320
5 May	131,552	1,227,146	17,468	9,774	9,380	1,263,768	23,187	1,160	1,288,116
6 June	161,645	1,616,450	21,464	12,010	11,525	1,661,449	28,492	1,426	1,691,367
7 July	188,300	1,883,000	25,003	13,991	13,426	1,935,420	33,190	1,661	1,970,270
8 August	184,624	1,846,240	24,515	13,718	13,164	1,897,636	32,542	1,628	1,931,807
9 September	147,737	1,477,370	19,617	10,977	10,534	1,518,498	26,040	1,303	1,545,841
10 October	112,715	1,127,150	14,967	8,375	8,037	1,158,528	19,867	994	1,179,389
11 November	135,261	1,352,610	17,961	10,050	9,644	1,390,265	23,841	1,193	1,415,299
12 December	143,385	1,433,850	19,039	10,654	10,223	1,473,766	25,273	1,265	1,500,304
<b>13 12-Mo Total</b>		<b>\$17,035,068</b>	<b>\$232,222</b>	<b>\$129,941</b>	<b>\$124,694</b>	<b>\$17,521,924</b>	<b>\$308,255</b>	<b>\$15,425</b>	<b>\$17,845,604</b>

Line 1-12: Column (1) = 2019 Monthly Coincident Network Load of LU

Line 1-5: Column (2) = June 1, 2019 OATT Schedule 9 RNS Rate \* Column (1) / 12

2019 RNS Rate= \$ 111.94 /kW-YR

Line 6-12: Column (2) = Estimated June 1, 2019 RNS Rate \* Column (1) / 12

2020 RNS Rate= \$ 120.00 /kW-YR

Line 1-12: Column (3) = Current OATT Schedule 1 Rate \* Column (1) / 12

Rate = \$ 1.59341 /kW-YR

Line 1-12: Column (4) = 0 [No Reliability Must Run Contracts are currently in effect for New Hampshire]

Line 1-12: Column (4) = JDW-3, Line 8 \* Column (1)

Rate = \$ 0.07430 /kW-Month

Line 1-12: Column (5) = JDW-3, Line 4 \* Column (1)

Rate = \$ 0.07130 /kW-Month

Line 1-12: Column (6) = Sum of Columns (2) thru (5)

Line 1-12: Column (7) = JDW-2 Column (2)

Rate = \$ 0.17626 kW-month

Line 1-12: Column (8) = JDW-2 Column (3)

Rate = \$ 0.00882 kW-month

Line 1-12: Column (9) = Sum of Columns (6) thru (8)

Line 13 = Sum of Line 1 thru Line 12

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities  
Docket DE 20-\_\_\_\_\_  
Schedule JDW-2  
page 2 of 2

**Summary of ISO Tariff Section IV.A Administrative Charges  
Estimated For the Year 2020**

Period	(1) Monthly Regional Network Load	(2) ISO-NE Schedule 1 - Scheduling & Dispatch Service	(3) ISO-NE Schedule 5 - NESCOE Budget	(4) ISO-NE Tariff Section IV.A - Administrative
1 January	152,467	\$26,874	\$1,345	\$28,219
2 February	135,924	23,958	1,199	25,157
3 March	135,529	23,888	1,195	25,084
4 April	119,726	21,103	1,056	22,159
5 May	131,552	23,187	1,160	24,348
6 June	161,645	28,492	1,426	29,917
7 July	188,300	33,190	1,661	34,851
8 August	184,624	32,542	1,628	34,170
9 September	147,737	26,040	1,303	27,343
10 October	112,715	19,867	994	20,861
11 November	135,261	23,841	1,193	25,034
12 December	143,385	25,273	1,265	26,538
13	<b>Totals</b>	<b>\$308,255</b>	<b>\$15,425</b>	<b>\$323,680</b>

Column (1) = 2019 Monthly Coincident Network Load of LU

Column (2) = Column (1) \* \$0.17626 per kW-month per ISO 2020 Capital Budget Filing \$ 0.17626

Column (3) = Column (1) \* \$0.00882 per kW-month per NESCOE 2020 Budget Filing \$ 0.00882

Column (4) = Column (2) + Column (3)

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities

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Schedule JDW-3

page 1 of 1

## Summary of Reactive Power & Black Start Costs Estimated For the Year 2020

### Section I: Development of ISO-NE Schedule 2 Costs

1	Granite Total ISO-NE Schedule 2 Costs	\$161,063
2	2019 Granite Peak Load (KW)	188,300
		<hr/>
3	Estimated Rate / KW-Yr	\$0.8554
		<hr/>
4	Estimated Rate / KW-Mo	\$0.0713

### Section II: Development of ISO-NE Schedule 16 Costs

5	Granite Total ISO-NE Schedule 16 Settlement Costs	\$167,782
6	2019 Granite Peak Load (KW)	188,300
		<hr/>
7	Estimated Rate / KW-Yr	\$0.8910
		<hr/>
8	Estimated Rate / KW-Mo	\$0.0743

Line 1 = Granite ISO-NE Schedule 2 costs for the 12 months ending December 2019

Line 2 = Granite Peak Load in 2019

Line 3 = Line 1 / Line 2

Line 4 = Line 3 / 12

Line 5 = ISO Schedule 16 Settlement Reports for the 12 months ending December 2019

Line 6 = Line 5

Line 7 = Line 5 / Line 6

Line 8 = Line 7 / 12

**Summary of New England Power - Schedule No. 21 Charges  
Estimated For the Year 2020**

Period	(1) Net Monthly Demand Charge	(2) Load Dispatch Charge	(3) Specific Distribution	(4) Transformer Surcharge	(5) Meter Surcharge	(6) Maintenance Service Credit	(7) Total NEP Costs
1 January	348,690	4,368	26,466	70,301	1,097	(2,081)	448,841
2 February	348,690	4,368	26,466	70,301	1,097	(2,081)	448,841
3 March	348,690	4,368	26,466	70,301	1,097	(2,081)	448,841
4 April	348,690	4,368	26,466	70,301	1,097	(2,081)	448,841
5 May	348,690	4,368	26,466	70,301	1,097	(2,081)	448,841
6 June	348,690	4,368	26,466	70,301	1,097	(2,081)	448,841
7 July	348,690	4,368	26,466	70,301	1,097	(2,081)	448,841
8 August	348,690	4,368	26,466	70,301	1,097	(2,081)	448,841
9 September	348,690	4,368	26,466	70,301	1,097	(2,081)	448,841
10 October	348,690	4,368	26,466	70,301	1,097	(2,081)	448,841
11 November	348,690	4,368	26,466	70,301	1,097	(2,081)	448,841
12 December	348,690	4,368	26,466	70,301	1,097	(2,081)	448,841
<b>13 12- Mo Total</b>	<b>\$4,184,278</b>	<b>\$52,419</b>	<b>\$317,587</b>	<b>\$843,608</b>	<b>\$13,168</b>	<b>-\$24,972</b>	<b>\$5,386,088</b>

Column (1) = Monthly Average of the PTF & Non-PTF Monthly Demand Charges for the 12 month period ending December 2019

Column (2) = Monthly Average of the Load Dispatch Charge for the 12 month period ending December 2019

Column (3) = 37,808 kW & \$0.70 per NEP Tariff as of June 1, 2019

Column (4) = 200,859 kW & \$0.35 per NEP Tariff as of June 1, 2019

Column (5) = 17 meters \* \$64.55 per meter per NEP Tariff as of June 1, 2019

Column (6) Per the Integrated Facilities Supplement dated July 3, 2012 between NEP and Granite State

Column (7) = Sum of Columns (1) through (6)

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities

Docket DE 20-\_\_\_\_\_

Schedule JDW-4

page 2 of 2

**Comparison of Actual LNS Transmission Expenses  
For the Years 2017 and 2018**

NEP Schedule 21 Actual Expenses						
						(1)
	Coincident Network Load - PTF	NEP Monthly Demand Charge - PTF	NEP Monthly Demand Charge - NON-PTF	Load Dispatch Charge	Sum of Other NEP LNS Charges	Non-PTF Sch 21-NEP
January-2018	156,411	(175,792)	322,969	2,066	72,847	\$222,090
February-2018	137,545	(119,614)	353,493	2,202	85,790	\$321,870
March-2018	129,308	18,596	358,045	(1,290)	84,031	\$459,382
April-2018	119,856	34,887	341,845	4,852	84,084	\$465,668
May-2018	141,427	209,001	412,307	1,307	84,083	\$706,699
June-2018	165,030	(151,498)	291,006	1,506	81,446	\$222,460
July-2018	189,659	(217,242)	317,137	(90)	78,160	\$177,965
August-2018	191,271	(168,588)	353,546	(2,796)	81,446	\$263,608
September-2018	174,034	(335,804)	297,434	(2,603)	78,190	\$37,217
October-2018	139,458	(260,168)	362,781	64,926	81,447	\$248,985
November-2018	133,152	10,207	372,992	1,520	81,446	\$466,165
December-2018	141,244	15,830	377,984	(27,304)	81,446	\$447,956
			<b>3,021,353</b>	<b>\$44,294</b>	<b>\$974,416</b>	<b>\$4,040,063</b>
January-2019	152,467	28,718	380,791	(222)	83,623	\$492,909
February-2019	135,924	(134,556)	356,600	(2,028)	82,505	\$302,521
March-2019	135,529	(44,499)	371,670	3,512	83,642	\$414,324
April-2019	119,726	36,375	402,859	2,455	86,648	\$528,337
May-2019	131,552	132,703	419,292	1,984	123,786	\$677,766
June-2019	161,645	116,843	410,126	3,563	95,777	\$626,309
July-2019	188,300	(92,989)	366,364	(211)	95,782	\$368,946
August-2019	184,624	(257,527)	395,462	(8,008)	94,586	\$224,513
September-2019	147,737	(259,231)	375,267	(5,164)	96,007	\$206,879
October-2019	112,715	(8,805)	374,654	57,400	95,613	\$518,861
November-2019	135,261	30,053	354,726	310	96,772	\$481,861
December-2019	143,385	43,514	385,870	(1,172)	96,427	\$524,639
			<b>4,184,278</b>	<b>\$52,419</b>	<b>\$1,131,168</b>	<b>\$5,367,865</b>
% increase in NEP Expenses from previous year						33%





**STATE OF NEW HAMPSHIRE  
BEFORE THE  
PUBLIC UTILITIES COMMISSION**

Docket No. DE 20-XXX

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities  
Annual Retail Rate Filing

**DIRECT TESTIMONY**

**OF**

**DAVID B. SIMEK**

**AND**

**ADAM M. HALL**

March 27, 2020

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1 **I. INTRODUCTION AND QUALIFICATIONS**

2 **Q. Please state your full name and business address.**

3 A. (DS) My name is David B. Simek. My business address is 15 Buttrick Road,  
4 Londonderry, New Hampshire.

5 (AH) My name is Adam M. Hall. My business address is 15 Buttrick Road,  
6 Londonderry, New Hampshire.

7 **Q. Please state by whom you are employed.**

8 A. We are employed by Liberty Utilities Service Corp. (“Liberty”), which provides service  
9 to Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities (“Granite State”  
10 or “the Company”).

11 **Q. Please describe your educational and professional background.**

12 A. (DS) I graduated from Ferris State University in 1993 with a Bachelor of Science in  
13 Finance. I received a Master’s of Science in Finance from Walsh College in 2000. I also  
14 received a Master’s of Business Administration from Walsh College in 2001. In 2006,  
15 earned a Graduate Certificate in Power Systems Management from Worcester  
16 Polytechnic Institute. In August 2013, I joined Liberty as a Utility Analyst and I was  
17 promoted to Manager, Rates and Regulatory Affairs in August 2017. Prior to my  
18 employment at Liberty, I was employed by NSTAR Electric & Gas (“NSTAR”) as a  
19 Senior Analyst in Energy Supply from 2008 to 2012. Prior to my position in Energy  
20 Supply at NSTAR, I was a Senior Financial Analyst with the NSTAR Investment  
21 Planning group from 2004 to 2008.

1 (AH) I graduated from Siena College in 2014 with a Bachelor of Science in Finance. I  
2 also received a Master's of Business Administration from Franklin Pierce University in  
3 2016. I joined Liberty Utilities as an Analyst, Rates and Regulatory Affairs in January  
4 2019. Prior to this, I was employed by Southern New Hampshire University.

5 **Q. Have you previously testified in regulatory proceedings before the New Hampshire**  
6 **Public Utilities Commission (the "Commission")?**

7 A. (DS) Yes, I have testified on numerous occasions before the Commission.

8 (AH) No, I have not, although on March 13, 2020, I submitted joint testimony with Mr.  
9 Simek in support of the Company's Reliability Enhancement Plan and Vegetation  
10 Management Plan Report and Reconciliation filing.

11 **II. PURPOSE OF TESTIMONY**

12 **Q. What is the purpose of your testimony?**

13 A. The purpose of our testimony is to present Granite State's proposed rate adjustments for  
14 2020 in accordance with the Company's reconciliation and adjustment provisions of its  
15 tariff, and the Company's Amended Restructuring Settlement Agreement approved in  
16 Docket No. DR 98-012 ("Amended Settlement Agreement"). The reconciliations and  
17 adjustments described in our testimony relate to the Stranded Cost Charge and  
18 Transmission Charge.

19 The purpose of the reconciliation analyses is to determine the difference between  
20 revenues collected under each charge and the Company's actual expenses. For each of  
21 the charges, the Company calculates an adjustment factor based on the result of each

1 reconciliation, which is used to determine whether a refund to or recovery from  
2 customers is necessary.

3 **Q. Did you perform your analyses consistent with processes and procedures for similar**  
4 **filings in previous years?**

5 A. Yes. We have performed our analyses consistent with past methods and practices. The  
6 actual revenues and costs tie to the Company's books. Prior to DE 19-062, when the  
7 Company first tied the Annual Retail Rate Filing beginning balances to the books, the  
8 ending balances from the prior year reconciliations were used as the next years beginning  
9 balances.

10 **Q. Are there months in the schedules that do not have actual expenses and revenues?**

11 A. Yes. To address the fact that the filing is made two months prior to rates going into  
12 effect, and, thus, actual expenses and revenues are not available as of the filing date, we  
13 have included projected revenues and expenses for the months of March and April 2020.

14 **Q. Please summarize the results of the adjustments and reconciliations which Granite**  
15 **State proposes to implement in 2020.**

16 A. The Company proposes to implement the following adjustments to its rates beginning  
17 May 1, 2020, for usage on and after that date. The table below illustrates the current and  
18 proposed rates:

<u>Average charge (\$ / kWh)</u>	<u>Current</u>	<u>Proposed</u>	<u>Increase (Decrease)</u>
Stranded Cost Charge	\$(0.00070)	\$(0.00070)	\$ -
Stranded Cost Adjustment Factor	\$(0.00035)	\$(0.00002)	\$ 0.00033
Transmission Service Charge	\$ 0.02414	\$ 0.02545	\$ 0.00131
Transmission Service Cost Adjustment	\$ 0.00162	\$(0.00023)	\$(0.00185)
RGGI Auction Proceeds Refund	\$(0.00174)	\$(0.00152)	\$ 0.00022

1

2

Schedule DBS/AMH-1 presents the proposed stranded cost and the transmission rates.

3

**III. STRANDED COST CHARGE AND THE STRANDED COST ADJUSTMENT**

4

**FACTOR**

5

**Q. Please discuss, in general terms, the Company’s proposed adjustment and reconciliation of its Stranded Cost Charge.**

6

7

A. Granite State’s Stranded Cost Charge is the sum of two components. The first is a uniform charge per kilowatt-hour (“kWh”) that the Company charges all customers, which reflects the Contract Termination Charge (“CTC”) assessed by New England Power Company (“NEP”) for 2020. The second component is the Stranded Cost Adjustment Factor (“SCAF”), which is specific to each rate class. Both of these components are in accordance with the Company’s Stranded Cost Charge described on pages 19–20 of the Company’s tariff.

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**Q. What changes are the Company proposing to the components of the Stranded Cost Charge?**

15

16

A. Granite State is proposing to keep the uniform charge per kWh related to the CTC assessed by NEP as a credit of (\$0.00070) per kWh for the period beginning May 1, 2020. With respect to the SCAF, Granite State is proposing to change the load weighted-

17

18

1 average from a credit of (\$0.00035) per kWh to a load-weighted average credit of  
2 (\$0.00002) per kWh.

3 **Q. Please describe the purpose of the CTC assessed by NEP.**

4 A. In 1996, the New Hampshire Legislature enacted RSA 374-F, a statute which directed the  
5 Commission to develop a restructuring plan to implement electric retail choice for all  
6 customers (“Restructuring”). Prior to Restructuring, Granite State customers were served  
7 by generation assets owned by the Company’s then affiliate, NEP. During the  
8 Restructuring process, Granite State, NEP, and other parties agreed to a divestiture of  
9 NEP’s generation assets. As part of its Electric Utility Restructuring Offer of Settlement  
10 in Docket No. DR 98-012 (“Restructuring Settlement”), the CTC was established to  
11 recover stranded costs associated with this divestiture, with such recovery terminating in  
12 2020.

13 **Q. Please describe the changes to the Stranded Cost Charge resulting from the changes**  
14 **in the CTC assessed by NEP for 2020.**

15 A. In the 2020 CTC Reconciliation Report filed in Docket No. DE 19-025, NEP provided  
16 the reconciliation report to the Commission and the signatories to the Amended  
17 Settlement Agreement in accordance with Section 3.5 of the Wholesale Settlement  
18 approved by the Federal Energy Regulatory Commission. In that filing, NEP calculated  
19 the revised CTC rate for 2020 to be a credit of (\$0.00070) per kWh as compared to the  
20 2019 CTC, which was also (\$0.00070). The Company’s rate proposal with respect to the  
21 uniform per kWh component of the Stranded Cost Charge is simply the CTC rate filed by  
22 NEP.

1 **Q. Please describe the Stranded Cost adjustment factors and the reconciliation used to**  
2 **determine those factors for each rate class.**

3 A. The Company performs an annual reconciliation of its revenues from the Stranded Cost  
4 Charge billed to customers and recorded in its general ledger with the CTC expenses paid  
5 to NEP to arrive at adjustment factors for each rate class. Details for the reconciliation  
6 for the period May 2019 through April 2020 are in Schedule DBS/AMH-2.

7 **Q. Has the Company prepared a reconciliation analysis for Stranded Cost revenues**  
8 **and expenses?**

9 A. Yes. Schedule DBS/AMH-2, page 2 of 4, presents a reconciliation of actual stranded  
10 cost revenues and expenses for the period May 2019 through February 2020 and  
11 forecasted stranded cost revenues and expenses for the period March 2020 through April  
12 2020. Pages 3 and 4 of Schedule DBS/AMH-2 allocate the reconciliation to the various  
13 rate classes.

14 **Q. Has the Company calculated proposed SCAFs for 2020?**

15 A. Yes. Schedule DBS/AMH-2, page 1 of 4, calculates a SCAF per kWh, specific to each  
16 rate class, to be applied to all retail delivery service customers' bills for the period May 1,  
17 2020, through April 30, 2021.



1 **IV. TRANSMISSION SERVICE COST ADJUSTMENT CHARGE**

2 **Q. Please describe the Company's Transmission Service Cost Adjustment ("TSCA")**  
3 **charge.**

4 A. The Company recovers its transmission-related expenses pursuant to the TSCA, which  
5 allows the Company to recover costs billed to it by ISO-New England and NEP through  
6 the ISO-New England Inc. Transmission, Markets, and Services Tariff ("ISO Tariff").  
7 The TSCA charge is comprised of two components: a component for base transmission  
8 costs for the prospective period plus a component for the reconciliation of transmission  
9 revenue and expense for the previous period.

10 **Q. What is the transmission charge that the Company is proposing for effect on May 1,**  
11 **2020?**

12 A. The Company is proposing an average transmission charge of \$0.02522 per kWh for  
13 effect May 1, 2020, and is comprised of the base cost component of \$0.02545 per kWh  
14 and the reconciliation component of (\$0.00023) per kWh. This average transmission  
15 charge is a decrease of \$0.00054 from the average charge that is currently in effect.

16 **Q. Please describe the reconciliation analysis for transmission revenues and expenses**  
17 **for the previous period.**

18 A. Schedule DBS/AMH-3, page 3, presents a reconciliation of actual transmission revenues  
19 and expenses for the period May 2019 through February 2020 and forecasted  
20 transmission revenues and expenses for the period March 2020 through April 2020.

1 **Q. How was the reconciliation component of the TSCA charge derived?**

2 A. The reconciliation component of the TSCA recovers under-recoveries of transmission  
3 costs or refunds over-recoveries of transmission costs, along with associated interest at  
4 the prime rate. This component of the TSCA charge was calculated by adding the  
5 projected over-collection of transmission expense as of April 30, 2020, from Schedule  
6 DBS/AMH-3, page 3, of (\$193,793), plus the working capital of (\$14,579) calculated on  
7 DBS/AMH-3, page 5.

8 **Q. How will the reconciliation component of the TSCA charge be implemented?**

9 A. The reconciliation component of the TSCA charge will become effective for usage on  
10 and after May 1, 2020. This proposed component will be applied to bills of all customers  
11 taking delivery service.

12 **Q. Why is the Company proposing new base transmission rates at this time?**

13 A. The TSCA portion of the Company's tariff states that the base transmission rates shall be  
14 calculated annually based on a forecast of transmission costs to be incurred by the  
15 Company for the prospective period to provide transmission service to its retail delivery  
16 service customers. The rate at which these costs are collected is calculated separately for  
17 each of the Company's rate classes based on an allocation of transmission costs to each  
18 class using each class' contribution to coincident peak.

19 **Q. What is the forecast of 2020 transmission costs?**

20 A. As discussed in the testimony of John D. Warshaw included in this filing, the Company's  
21 transmission costs are estimated to be \$23,231,692 in 2020. This forecast of transmission

1 expense yields an average rate of \$0.02545 per kWh, as compared to the currently  
2 effective average transmission rate of \$0.02414 per kWh exclusive of the reconciliation  
3 component. Based on these estimates, the Company is proposing new base transmission  
4 rates effective May 1, 2020, to recover the projected transmission costs to be incurred in  
5 the prospective period.

6 **Q. Please describe the working capital calculation included in the filing.**

7 A. The settlement agreement in Docket No. DE 16-383 provided, in part, that the Company  
8 may recover cash working capital on transmission costs through the transmission cost  
9 adjustment mechanism included in the Company's Annual Retail Rate Adjustment filing.  
10 In accordance with that settlement, the Company has included a transmission cash  
11 working capital amount in the calculation of its proposed transmission rates.

12 **Q. What is the total amount of transmission working capital included in this filing?**

13 A. The total working capital included in the TSCA charge is (\$14,579) as shown on  
14 Schedule DBS/AMH-3, page 5. The detailed calculation of the expense lag is shown on  
15 Schedule DBS/AMH-3, page 6. The detailed calculation of the revenue lag is shown on  
16 Schedule DBS/AMH-3, page 7.

17 **Q. How does the Company propose to design the base transmission rates effective May**  
18 **1, 2020?**

19 A. Since base transmission rates are unique by rate class, the first step in designing the  
20 proposed base transmission rates is to allocate forecasted transmission costs to each rate  
21 class. The Company implemented the same allocation methodology accepted by the

1 Commission in previous Annual Retail Rate Adjustment filings, which is to allocate  
2 based on each rate class's contribution to system peak. The contribution to system peak  
3 by class is presented on Schedule DBS/AMH-3 on page 2, and the allocation of  
4 transmission cost to each class is shown on Schedule DBS/AMH-3, page 1.

5 **V. RGGI AUCTION PROCEEDS**

6 **Q. How does the Company propose to refund RGGI auction proceeds to delivery  
7 service customers?**

8 A. Consistent with Commission Order No. 25,664 in Docket No. DE 14-048, the Company  
9 will credit the RGGI rebate amount it receives from the allocation on a per kWh basis  
10 through its retail rate reconciliation mechanism that is adjusted on an annual basis. The  
11 Company has included a credit of (\$0.00152) per kWh for RGGI auction proceeds in its  
12 transmission service charge for 2020, as shown on Schedule DBS/AMH-4. The credit of  
13 (\$0.001524) per kWh is comprised of the estimated RGGI auction proceeds for May  
14 2020 through April 2021 of (\$860,964) and the reconciliation component through April  
15 2020 of (\$523,282). The total of (\$1,384,246) is then divided by the estimated sales of  
16 912,773,764 kWh to calculate the RGGI credit of (\$0.00152) per kWh. In previous  
17 filings, the RGGI credit only included the reconciliation component.

18 **VI. EFFECTIVE DATE AND RATE IMPACTS**

19 **Q. How and when is the Company proposing that these rate changes be implemented?**

20 A. Consistent with the Commission's rules on the implementation of rate changes, the  
21 Company is proposing that all of the above rate changes be made effective for usage on  
22 and after May 1, 2020.

1 **Q. Has the Company proposed a rate change for any other bill components to be**  
2 **effective on that same date?**

3 A. Yes. On March 13, 2020, the Company filed its annual REP/VMP Reconciliation in  
4 which it requested a rate increase to its distribution rates for capital expenditures and  
5 vegetation management expenses from calendar year 2019. The Company also expects  
6 to have base distribution rate adjustments on May 1, 2020 related to Docket No. DE 19-  
7 064.

8 **Q. Has the Company determined the impact of the transmission and stranded cost rate**  
9 **changes on customers' bills?**

10 A. Yes. A bill comparison for an Energy Service residential customer with an average kWh  
11 usage of 650 has also been included in this filing in Schedule DBS/AMH-5. The net total  
12 bill impact of the rates proposed in this filing, as compared to rates in effect today, is a  
13 monthly bill decrease of \$0.25, or 0.22%.

14 **VII. CONCLUSION**

15 **Q. Does this conclude your testimony?**

16 A. Yes, it does.

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**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities  
Summary of Proposed Rates For Stranded Cost and Transmission**

Rate Class	Stranded Cost Charge	Stranded Cost Adjustment Factor	Net Stranded Cost Charge	Transmission Charge	Transmission Service Cost Adjustment	RGGI Auction Proceeds Refund	Net Transmission Charge
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	DE 20-016	DBS/AMH-2 P1	(a) + (b)	DBS/AMH-3 P1	DBS/AMH-3 P4	DBS/AMH-4	(d) + (e) + (f)
<b>D</b>	(\$0.00070)	(\$0.00002)	<b>(\$0.00072)</b>	\$0.02834	(\$0.00023)	(\$0.00152)	<b>\$0.02660</b>
<b>D-10</b>	(\$0.00070)	(\$0.00002)	<b>(\$0.00072)</b>	\$0.02443	(\$0.00023)	(\$0.00152)	<b>\$0.02269</b>
<b>G-1</b>	(\$0.00070)	(\$0.00002)	<b>(\$0.00072)</b>	\$0.02239	(\$0.00023)	(\$0.00152)	<b>\$0.02065</b>
<b>G-2</b>	(\$0.00070)	(\$0.00002)	<b>(\$0.00072)</b>	\$0.02727	(\$0.00023)	(\$0.00152)	<b>\$0.02553</b>
<b>G-3</b>	(\$0.00070)	(\$0.00002)	<b>(\$0.00072)</b>	\$0.02724	(\$0.00023)	(\$0.00152)	<b>\$0.02550</b>
<b>Streetlights</b>	(\$0.00070)	(\$0.00002)	<b>(\$0.00072)</b>	\$0.01694	(\$0.00023)	(\$0.00152)	<b>\$0.01520</b>
<b>T</b>	(\$0.00070)	(\$0.00003)	<b>(\$0.00073)</b>	\$0.02794	(\$0.00023)	(\$0.00152)	<b>\$0.02620</b>
<b>V</b>	(\$0.00070)	(\$0.00002)	<b>(\$0.00072)</b>	\$0.02675	(\$0.00023)	(\$0.00152)	<b>\$0.02501</b>

\*May not sum due to rounding

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities  
Docket No. DE 20-\_\_\_\_  
DBS/AMH-2  
Page 1 of 4

**Liberty Utilities (Granite State Electric) d/b/a Liberty Utilities  
Calculation of Stranded Cost Adjustment Factor  
Effective May 1, 2020 - April 30, 2021**

<b>Rate Class</b>	<b>Total (Over)/Under Collection</b>	<b>Total 2020 Forecasted kWh</b>	<b>2020 Stranded Cost Adj. Factor</b>
	(a)	(b)	(c)
<b>D</b>	\$ (6,630)	268,702,066	\$ (0.00002)
<b>D-10</b>	\$ (128)	5,266,936	\$ (0.00002)
<b>T</b>	\$ (338)	13,306,074	\$ (0.00003)
<b>G-1</b>	\$ (9,434)	389,374,739	\$ (0.00002)
<b>G-2</b>	\$ (3,515)	144,526,523	\$ (0.00002)
<b>G-3</b>	\$ (2,110)	87,177,837	\$ (0.00002)
<b>V</b>	\$ (8)	326,060	\$ (0.00002)
<b>M- Streetlights</b>	\$ (99)	4,093,528	\$ (0.00002)
	\$ (22,261)	912,773,764	\$ (0.00002)



**Liberty Utilities (Granite State Electric) d/b/a Liberty Utilities  
Stranded Cost Reconciliation Summary  
All Rate Classes  
May 2019 - April 2020**

Month	(Over)/Under Beginning Balance	Stranded Cost Revenue (Refund)	CTC Expense (Credit)	Monthly (Over)/Under	(Over)/Under Ending Balance	Balance Subject to Interest	Interest Rate	Interest	Cumulative Interest
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
May-19	(\$321,547)	(\$67,648)	(\$48,813)	\$18,835	(\$302,713)	(\$312,130)	5.50%	(\$1,431)	(\$1,431)
Jun-19	(\$304,143)	(\$73,315)	(\$48,092)	\$25,223	(\$278,921)	(\$291,532)	5.50%	(\$1,336)	(\$2,767)
Jul-19	(\$280,257)	(\$90,464)	(\$49,117)	\$41,347	(\$238,910)	(\$259,583)	5.50%	(\$1,190)	(\$3,957)
Aug-19	(\$240,100)	(\$95,677)	(\$60,452)	\$35,224	(\$204,876)	(\$222,488)	5.25%	(\$973)	(\$4,930)
Sep-19	(\$205,849)	(\$79,421)	(\$63,904)	\$15,516	(\$190,333)	(\$198,091)	5.25%	(\$867)	(\$5,797)
Oct-19	(\$191,199)	(\$69,651)	(\$53,069)	\$16,582	(\$174,617)	(\$182,908)	5.00%	(\$762)	(\$6,559)
Nov-19	(\$175,379)	(\$68,554)	(\$46,551)	\$22,003	(\$153,377)	(\$164,378)	4.75%	(\$651)	(\$7,209)
Dec-19	(\$154,027)	(\$79,624)	(\$45,790)	\$33,834	(\$120,193)	(\$137,110)	4.75%	(\$543)	(\$7,752)
Jan-20	(\$120,736)	(\$84,641)	(\$53,136)	\$31,504	(\$89,232)	(\$104,984)	4.75%	(\$416)	(\$8,168)
Feb-20	(\$89,647)	(\$76,330)	(\$56,523)	\$19,808	(\$69,840)	(\$79,743)	4.75%	(\$316)	(\$8,483)
* Mar-20	(\$70,155)	(\$51,370)	(\$26,419)	\$24,951	(\$45,204)	(\$57,680)	4.75%	(\$228)	(\$8,712)
* Apr-20	(\$45,432)	(\$47,980)	(\$24,676)	\$23,305	(\$22,128)	(\$33,780)	4.75%	(\$134)	(\$8,845)
		(\$884,674)	(\$576,543)						

**Projected Cumulative (Over)/Under Collection of Stranded Cost Charge: (\$22,261)**

- (a) May-19 ties to the deferral account balance, all other months are Prior Month Column (e) + Prior Month Column (h)
- (b) Company financials
- (c) Company financials
- (d) Column (c) - Column (b)
- (e) Column (a) + Column (d)
- (f) [Column (a) + Column (e)] ÷ 2
- (g) Interest rate on customer deposits
- (h) Column (f) x [Column (g) ÷ 12]
- (i) Column (h) + Prior Month Column (i)
- \* Projected

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities  
Stranded Cost Reconciliation  
May 2019 - April 2020

Rate D	(Over)/ Under Beginning Balance	Stranded Cost Revenue (Refund)	CTC Expense (Credit)	Monthly (Over)/ Under	(Over)/ Under Ending Balance	Balance Subject to Interest	Interest Rate	Interest	Total Interest
Month	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
May-19	\$ (95,763)	\$ (20,147)	\$ (14,538)	\$ 5,609	\$ (90,154)	\$ (92,958)	5.50%	\$ (426)	\$ (426)
Jun-19	\$ (90,580)	\$ (21,835)	\$ (14,323)	\$ 7,512	\$ (83,068)	\$ (86,824)	5.50%	\$ (398)	\$ (824)
Jul-19	\$ (83,466)	\$ (26,942)	\$ (14,628)	\$ 12,314	\$ (71,152)	\$ (77,309)	5.50%	\$ (354)	\$ (1,178)
Aug-19	\$ (71,506)	\$ (28,494)	\$ (18,004)	\$ 10,490	\$ (61,016)	\$ (66,261)	5.25%	\$ (290)	\$ (1,468)
Sep-19	\$ (61,306)	\$ (23,653)	\$ (19,032)	\$ 4,621	\$ (56,685)	\$ (58,995)	5.25%	\$ (258)	\$ (1,726)
Oct-19	\$ (56,943)	\$ (20,743)	\$ (15,805)	\$ 4,938	\$ (52,004)	\$ (54,474)	5.00%	\$ (227)	\$ (1,953)
Nov-19	\$ (52,231)	\$ (20,417)	\$ (13,864)	\$ 6,553	\$ (45,679)	\$ (48,955)	4.75%	\$ (194)	\$ (2,147)
Dec-19	\$ (45,872)	\$ (23,714)	\$ (13,637)	\$ 10,076	\$ (35,796)	\$ (40,834)	4.75%	\$ (162)	\$ (2,309)
Jan-20	\$ (35,957)	\$ (25,208)	\$ (15,825)	\$ 9,383	\$ (26,575)	\$ (31,266)	4.75%	\$ (124)	\$ (2,432)
Feb-20	\$ (26,699)	\$ (22,733)	\$ (16,834)	\$ 5,899	\$ (20,800)	\$ (23,749)	4.75%	\$ (94)	\$ (2,526)
Mar-20	\$ (20,894)	\$ (15,299)	\$ (7,868)	\$ 7,431	\$ (13,463)	\$ (17,178)	4.75%	\$ (68)	\$ (2,594)
Apr-20	\$ (13,531)	\$ (14,289)	\$ (7,349)	\$ 6,941	\$ (6,590)	\$ (10,060)	4.75%	\$ (40)	\$ (2,634)

Cumulative (Over)/Under Collection of Stranded Cost \$ (6,630)

Rate D-10	(Over)/ Under Beginning Balance	Stranded Cost Revenue (Refund)	CTC Expense (Credit)	Monthly (Over)/ Under	(Over)/ Under Ending Balance	Balance Subject to Interest	Interest Rate	Interest	Total Interest
Month	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
May-19	\$ (1,854)	\$ (390)	\$ (282)	\$ 109	\$ (1,746)	\$ (1,800)	5.50%	\$ (8)	\$ (8)
Jun-19	\$ (1,754)	\$ (423)	\$ (277)	\$ 145	\$ (1,609)	\$ (1,681)	5.50%	\$ (8)	\$ (16)
Jul-19	\$ (1,616)	\$ (522)	\$ (283)	\$ 238	\$ (1,378)	\$ (1,497)	5.50%	\$ (7)	\$ (23)
Aug-19	\$ (1,385)	\$ (552)	\$ (349)	\$ 203	\$ (1,182)	\$ (1,283)	5.25%	\$ (6)	\$ (28)
Sep-19	\$ (1,187)	\$ (458)	\$ (369)	\$ 89	\$ (1,098)	\$ (1,142)	5.25%	\$ (5)	\$ (33)
Oct-19	\$ (1,103)	\$ (402)	\$ (306)	\$ 96	\$ (1,007)	\$ (1,055)	5.00%	\$ (4)	\$ (38)
Nov-19	\$ (1,011)	\$ (395)	\$ (268)	\$ 127	\$ (885)	\$ (948)	4.75%	\$ (4)	\$ (42)
Dec-19	\$ (888)	\$ (459)	\$ (264)	\$ 195	\$ (693)	\$ (791)	4.75%	\$ (3)	\$ (45)
Jan-20	\$ (696)	\$ (488)	\$ (306)	\$ 182	\$ (515)	\$ (605)	4.75%	\$ (2)	\$ (47)
Feb-20	\$ (517)	\$ (440)	\$ (326)	\$ 114	\$ (403)	\$ (460)	4.75%	\$ (2)	\$ (49)
Mar-20	\$ (405)	\$ (296)	\$ (152)	\$ 144	\$ (261)	\$ (333)	4.75%	\$ (1)	\$ (50)
Apr-20	\$ (262)	\$ (277)	\$ (142)	\$ 134	\$ (128)	\$ (195)	4.75%	\$ (1)	\$ (51)

Cumulative (Over)/Under Collection of Stranded Cost \$ (128)

- (a) May-19 ties to the deferral account balance, all other months are Prior Month Column (e) + Prior Month Column (h)
- (b) Company billing system report; Includes adjustment factor
- (c) Per Dockets DE 19-025 (May 19 - Dec 19) and DE 20-016 (Jan 20 - April 20)
- (d) Expense (Column c) - Revenue (Column b)
- (e) Column (a) + Column (d)
- (f) [Column (a) + Column (e)] ÷ 2
- (g) Interest rate
- (h) Column (f) x [Column (g) ÷ 12]
- (i) Column (h) + Prior Month Column (i)

Rate T	(Over)/ Under Beginning Balance	Stranded Cost Revenue (Refund)	CTC Expense (Credit)	Monthly (Over)/ Under	(Over)/ Under Ending Balance	Balance Subject to Interest	Interest Rate	Interest	Total Interest
Month	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
May-19	\$ (4,886)	\$ (1,028)	\$ (742)	\$ 286	\$ (4,600)	\$ (4,743)	5.50%	\$ (22)	\$ (22)
Jun-19	\$ (4,622)	\$ (1,114)	\$ (731)	\$ 383	\$ (4,239)	\$ (4,430)	5.50%	\$ (20)	\$ (42)
Jul-19	\$ (4,259)	\$ (1,375)	\$ (746)	\$ 628	\$ (3,631)	\$ (3,945)	5.50%	\$ (18)	\$ (60)
Aug-19	\$ (3,649)	\$ (1,454)	\$ (919)	\$ 535	\$ (3,113)	\$ (3,381)	5.25%	\$ (15)	\$ (75)
Sep-19	\$ (3,128)	\$ (1,207)	\$ (971)	\$ 236	\$ (2,892)	\$ (3,010)	5.25%	\$ (13)	\$ (88)
Oct-19	\$ (2,906)	\$ (1,058)	\$ (806)	\$ 252	\$ (2,654)	\$ (2,780)	5.00%	\$ (12)	\$ (100)
Nov-19	\$ (2,665)	\$ (1,042)	\$ (707)	\$ 334	\$ (2,331)	\$ (2,498)	4.75%	\$ (10)	\$ (110)
Dec-19	\$ (2,341)	\$ (1,210)	\$ (696)	\$ 514	\$ (1,827)	\$ (2,084)	4.75%	\$ (8)	\$ (118)
Jan-20	\$ (1,835)	\$ (1,286)	\$ (807)	\$ 479	\$ (1,356)	\$ (1,595)	4.75%	\$ (6)	\$ (124)
Feb-20	\$ (1,362)	\$ (1,160)	\$ (859)	\$ 301	\$ (1,061)	\$ (1,212)	4.75%	\$ (5)	\$ (129)
Mar-20	\$ (1,066)	\$ (781)	\$ (401)	\$ 379	\$ (687)	\$ (877)	4.75%	\$ (3)	\$ (132)
Apr-20	\$ (690)	\$ (729)	\$ (375)	\$ 354	\$ (336)	\$ (513)	4.75%	\$ (2)	\$ (134)

Cumulative (Over)/Under Collection of Stranded Cost \$ (338)

Rate M Streetlights	(Over)/ Under Beginning Balance	Stranded Cost Revenue (Refund)	CTC Expense (Credit)	Monthly (Over)/ Under	(Over)/ Under Ending Balance	Balance Subject to Interest	Interest Rate	Interest	Total Interest
Month	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
May-19	\$ (1,430)	\$ (301)	\$ (217)	\$ 84	\$ (1,346)	\$ (1,388)	5.50%	\$ (6)	\$ (6)
Jun-19	\$ (1,353)	\$ (326)	\$ (214)	\$ 112	\$ (1,240)	\$ (1,297)	5.50%	\$ (6)	\$ (12)
Jul-19	\$ (1,246)	\$ (402)	\$ (218)	\$ 184	\$ (1,063)	\$ (1,154)	5.50%	\$ (5)	\$ (18)
Aug-19	\$ (1,068)	\$ (426)	\$ (269)	\$ 157	\$ (911)	\$ (989)	5.25%	\$ (4)	\$ (22)
Sep-19	\$ (915)	\$ (353)	\$ (284)	\$ 69	\$ (846)	\$ (881)	5.25%	\$ (4)	\$ (26)
Oct-19	\$ (850)	\$ (310)	\$ (236)	\$ 74	\$ (777)	\$ (813)	5.00%	\$ (3)	\$ (29)
Nov-19	\$ (780)	\$ (305)	\$ (207)	\$ 98	\$ (682)	\$ (731)	4.75%	\$ (3)	\$ (32)
Dec-19	\$ (685)	\$ (354)	\$ (204)	\$ 150	\$ (535)	\$ (610)	4.75%	\$ (2)	\$ (34)
Jan-20	\$ (537)	\$ (376)	\$ (236)	\$ 140	\$ (397)	\$ (467)	4.75%	\$ (2)	\$ (36)
Feb-20	\$ (399)	\$ (339)	\$ (251)	\$ 88	\$ (311)	\$ (355)	4.75%	\$ (1)	\$ (38)
Mar-20	\$ (312)	\$ (228)	\$ (117)	\$ 111	\$ (201)	\$ (257)	4.75%	\$ (1)	\$ (39)
Apr-20	\$ (202)	\$ (213)	\$ (110)	\$ 104	\$ (98)	\$ (150)	4.75%	\$ (1)	\$ (39)

Cumulative (Over)/Under Collection of Stranded Cost \$ (99)

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities  
Stranded Cost Reconciliation  
May 2019 - April 2020

Rate G-1	(Over)/ Under Beginning Balance	Stranded Cost Revenue (Refund)	CTC Expense (Credit)	Monthly (Over)/ Under	(Over)/ Under Ending Balance	Balance Subject to Interest	Interest Rate	Interest	Total Interest
Month	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
May-19	\$ (136,261)	\$ (28,667)	\$ (20,685)	\$ 7,982	\$(128,280)	\$(132,270)	5.50%	\$ (606)	\$ (606)
Jun-19	\$ (128,886)	\$ (31,068)	\$ (20,380)	\$ 10,688	\$(118,197)	\$(123,542)	5.50%	\$ (566)	\$ (1,172)
Jul-19	\$ (118,764)	\$ (38,336)	\$ (20,814)	\$ 17,521	\$(101,242)	\$(110,003)	5.50%	\$ (504)	\$ (1,677)
Aug-19	\$ (101,746)	\$ (40,545)	\$ (25,618)	\$ 14,927	\$ (86,819)	\$ (94,283)	5.25%	\$ (412)	\$ (2,089)
Sep-19	\$ (87,232)	\$ (33,656)	\$ (27,080)	\$ 6,575	\$ (80,657)	\$ (83,944)	5.25%	\$ (367)	\$ (2,456)
Oct-19	\$ (81,024)	\$ (29,516)	\$ (22,489)	\$ 7,027	\$ (73,997)	\$ (77,510)	5.00%	\$ (323)	\$ (2,779)
Nov-19	\$ (74,320)	\$ (29,051)	\$ (19,727)	\$ 9,324	\$ (64,996)	\$ (69,658)	4.75%	\$ (276)	\$ (3,055)
Dec-19	\$ (65,272)	\$ (33,742)	\$ (19,404)	\$ 14,338	\$ (50,934)	\$ (58,103)	4.75%	\$ (230)	\$ (3,285)
Jan-20	\$ (51,164)	\$ (35,868)	\$ (22,517)	\$ 13,350	\$ (37,813)	\$ (44,489)	4.75%	\$ (176)	\$ (3,461)
Feb-20	\$ (37,989)	\$ (32,346)	\$ (23,952)	\$ 8,394	\$ (29,596)	\$ (33,793)	4.75%	\$ (134)	\$ (3,595)
Mar-20	\$ (29,729)	\$ (21,769)	\$ (11,195)	\$ 10,573	\$ (19,156)	\$ (24,443)	4.75%	\$ (97)	\$ (3,692)
Apr-20	\$ (19,253)	\$ (20,332)	\$ (10,457)	\$ 9,876	\$ (9,377)	\$ (14,315)	4.75%	\$ (57)	\$ (3,748)

Cumulative (Over)/Under Collection of Stranded Cost \$ (9,434)

Rate G-2	(Over)/ Under Beginning Balance	Stranded Cost Revenue (Refund)	CTC Expense (Credit)	Monthly (Over)/ Under	(Over)/ Under Ending Balance	Balance Subject to Interest	Interest Rate	Interest	Total Interest
Month	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
May-19	\$ (50,771)	\$ (10,681)	\$ (7,707)	\$ 2,974	\$ (47,797)	\$ (49,284)	5.50%	\$ (226)	\$ (226)
Jun-19	\$ (48,023)	\$ (11,576)	\$ (7,594)	\$ 3,983	\$ (44,040)	\$ (46,032)	5.50%	\$ (211)	\$ (437)
Jul-19	\$ (44,251)	\$ (14,284)	\$ (7,755)	\$ 6,529	\$ (37,723)	\$ (40,987)	5.50%	\$ (188)	\$ (625)
Aug-19	\$ (37,911)	\$ (15,107)	\$ (9,545)	\$ 5,562	\$ (32,349)	\$ (35,130)	5.25%	\$ (154)	\$ (778)
Sep-19	\$ (32,503)	\$ (12,540)	\$ (10,090)	\$ 2,450	\$ (30,053)	\$ (31,278)	5.25%	\$ (137)	\$ (915)
Oct-19	\$ (30,190)	\$ (10,998)	\$ (8,379)	\$ 2,618	\$ (27,571)	\$ (28,881)	5.00%	\$ (120)	\$ (1,036)
Nov-19	\$ (27,692)	\$ (10,824)	\$ (7,350)	\$ 3,474	\$ (24,218)	\$ (25,955)	4.75%	\$ (103)	\$ (1,138)
Dec-19	\$ (24,320)	\$ (12,572)	\$ (7,230)	\$ 5,342	\$ (18,978)	\$ (21,649)	4.75%	\$ (86)	\$ (1,224)
Jan-20	\$ (19,064)	\$ (13,364)	\$ (8,390)	\$ 4,974	\$ (14,089)	\$ (16,577)	4.75%	\$ (66)	\$ (1,290)
Feb-20	\$ (14,155)	\$ (12,052)	\$ (8,925)	\$ 3,128	\$ (11,027)	\$ (12,591)	4.75%	\$ (50)	\$ (1,339)
Mar-20	\$ (11,077)	\$ (8,111)	\$ (4,171)	\$ 3,940	\$ (7,138)	\$ (9,107)	4.75%	\$ (36)	\$ (1,376)
Apr-20	\$ (7,174)	\$ (7,576)	\$ (3,896)	\$ 3,680	\$ (3,494)	\$ (5,334)	4.75%	\$ (21)	\$ (1,397)

Cumulative (Over)/Under Collection of Stranded Cost \$ (3,515)

- (a) May-19 ties to the deferral account balance, all other months are Prior Month Column (e) + Prior Month Column (h)
- (b) Company billing system report; Includes adjustment factor
- (c) Per Dockets DE 19-025 (May 19 - Dec 19) and DE 20-016 (Jan 20 - April 20)
- (d) Expense (Column c) - Revenue (Column b)
- (e) Column (a) + Column (d)
- (f) [Column (a) + Column (e)] ÷ 2
- (g) Interest rate
- (h) Column (f) x [Column (g) ÷ 12]
- (i) Column (h) + Prior Month Column (i)

Rate G-3	(Over)/ Under Beginning Balance	Stranded Cost Revenue (Refund)	CTC Expense (Credit)	Monthly (Over)/ Under	(Over)/ Under Ending Balance	Balance Subject to Interest	Interest Rate	Interest	Total Interest
Month	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
May-19	\$ (30,470)	\$ (6,410)	\$ (4,626)	\$ 1,785	\$(28,686)	\$(29,578)	5.50%	\$ (136)	\$ (136)
Jun-19	\$ (28,821)	\$ (6,947)	\$ (4,557)	\$ 2,390	\$(26,431)	\$(27,626)	5.50%	\$ (127)	\$ (262)
Jul-19	\$ (26,558)	\$ (8,573)	\$ (4,654)	\$ 3,918	\$(22,640)	\$(24,599)	5.50%	\$ (113)	\$ (375)
Aug-19	\$ (22,752)	\$ (9,066)	\$ (5,729)	\$ 3,338	\$(19,414)	\$(21,083)	5.25%	\$ (92)	\$ (467)
Sep-19	\$ (19,507)	\$ (7,526)	\$ (6,056)	\$ 1,470	\$(18,036)	\$(18,771)	5.25%	\$ (82)	\$ (549)
Oct-19	\$ (18,118)	\$ (6,600)	\$ (5,029)	\$ 1,571	\$(16,547)	\$(17,333)	5.00%	\$ (72)	\$ (622)
Nov-19	\$ (16,619)	\$ (6,496)	\$ (4,411)	\$ 2,085	\$(14,534)	\$(15,577)	4.75%	\$ (62)	\$ (683)
Dec-19	\$ (14,596)	\$ (7,545)	\$ (4,339)	\$ 3,206	\$(11,390)	\$(12,993)	4.75%	\$ (51)	\$ (735)
Jan-20	\$ (11,441)	\$ (8,021)	\$ (5,035)	\$ 2,985	\$ (8,456)	\$(9,948)	4.75%	\$ (39)	\$ (774)
Feb-20	\$ (8,495)	\$ (7,233)	\$ (5,356)	\$ 1,877	\$ (6,618)	\$(7,557)	4.75%	\$ (30)	\$ (804)
Mar-20	\$ (6,648)	\$ (4,868)	\$ (2,504)	\$ 2,364	\$ (4,284)	\$(5,466)	4.75%	\$ (22)	\$ (826)
Apr-20	\$ (4,305)	\$ (4,547)	\$ (2,338)	\$ 2,208	\$(2,097)	\$(3,201)	4.75%	\$ (13)	\$ (838)

Cumulative (Over)/Under Collection of Stranded Cost \$ (2,110)

Rate V	(Over)/ Under Beginning Balance	Stranded Cost Revenue (Refund)	CTC Expense (Credit)	Monthly (Over)/ Under	(Over)/ Under Ending Balance	Balance Subject to Interest	Interest Rate	Interest	Total Interest
Month	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
May-19	\$ (111)	\$ (23)	\$ (17)	\$ 7	\$(104)	\$(108)	5.50%	\$ (0)	\$ (0)
Jun-19	\$ (105)	\$ (25)	\$ (17)	\$ 9	\$(96)	\$(101)	5.50%	\$ (0)	\$ (1)
Jul-19	\$ (97)	\$ (31)	\$ (17)	\$ 14	\$(82)	\$(90)	5.50%	\$ (0)	\$ (1)
Aug-19	\$ (83)	\$ (33)	\$ (21)	\$ 12	\$(71)	\$(77)	5.25%	\$ (0)	\$ (2)
Sep-19	\$ (71)	\$ (27)	\$ (22)	\$ 5	\$(66)	\$(68)	5.25%	\$ (0)	\$ (2)
Oct-19	\$ (66)	\$ (24)	\$ (18)	\$ 6	\$(60)	\$(63)	5.00%	\$ (0)	\$ (2)
Nov-19	\$ (61)	\$ (24)	\$ (16)	\$ 8	\$(53)	\$(57)	4.75%	\$ (0)	\$ (2)
Dec-19	\$ (53)	\$ (27)	\$ (16)	\$ 12	\$(41)	\$(47)	4.75%	\$ (0)	\$ (3)
Jan-20	\$ (42)	\$ (29)	\$ (18)	\$ 11	\$(31)	\$(36)	4.75%	\$ (0)	\$ (3)
Feb-20	\$ (31)	\$ (26)	\$ (20)	\$ 7	\$(24)	\$(28)	4.75%	\$ (0)	\$ (3)
Mar-20	\$ (24)	\$ (18)	\$ (9)	\$ 9	\$(16)	\$(20)	4.75%	\$ (0)	\$ (3)
Apr-20	\$ (16)	\$ (17)	\$ (9)	\$ 8	\$(8)	\$(12)	4.75%	\$ (0)	\$ (3)

Cumulative (Over)/Under Collection of Stranded Cost \$ (8)

**Liberty Utilities (Granite State Electric) d/b/a Liberty Utilities  
Transmission Charge Calculation**

	<b>Total</b>	<b>D</b>	<b>D-10</b>	<b>G-1</b>	<b>G-2</b>	<b>G-3</b>	<b>Streetlights</b>	<b>T</b>	<b>V</b>
[1] <b>Estimate of Transmission Expense</b>	<b>\$23,231,692</b>								
[2] <b>Coincident Peak (KW)</b>	1,732,962	568,062	9,601	650,533	294,008	177,198	5,175	27,736	651
[3] <b>Coincident Peak Allocator</b>	100.00%	32.78%	0.55%	37.54%	16.97%	10.23%	0.30%	1.60%	0.04%
[4] <b>Allocated Transmission Expense</b>	\$23,231,692	\$7,615,303	\$128,713	\$8,720,891	\$3,941,400	\$2,375,472	\$69,371	\$371,821	\$8,723
[5] <b>Forecasted kWh Sales</b>	912,773,764	268,702,066	5,266,936	389,374,739	144,526,523	87,177,837	4,093,528	13,306,074	326,060
[6] <b>Proposed Transmission Charge per kWh</b>	<b>\$0.02545</b>	<b>\$0.02834</b>	<b>\$0.02443</b>	<b>\$0.02239</b>	<b>\$0.02727</b>	<b>\$0.02724</b>	<b>\$0.01694</b>	<b>\$0.02794</b>	<b>\$0.02675</b>
[7] <b>Current Transmission Charge per kWh</b>	\$0.02414	\$0.02744	\$0.02400	\$0.02142	\$0.02449	\$0.02498	\$0.01495	\$0.02774	\$0.02527
[8] <b>Increase (Decrease) in Transmission Charge per kWh</b>	<b>\$0.00131</b>	<b>\$0.00090</b>	<b>\$0.00043</b>	<b>\$0.00097</b>	<b>\$0.00278</b>	<b>\$0.00226</b>	<b>\$0.00199</b>	<b>\$0.00020</b>	<b>\$0.00148</b>

[1] Schedule JDW-1, Line (10)  
 [2] Schedule DBS/AMH-3, Page 2 of 7  
 [3] Line (2) as a percent of total Line (2)  
 [4] Line (1) x Line (3)  
 [5] Per Company Forecast  
 [6] Line (4) ÷ Line (5), truncated after 5 decimal places  
 [7] Per Currently Effective Tariffs  
 [8] Line (6) - Line (7)

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**Liberty Utilities (Granite State Electric) d/b/a Liberty Utilities  
Transmission Charge Calculation  
Coincident Peak Data**

	<b>Total</b>	<b>D</b>	<b>D-10</b>	<b>G-1</b>	<b>G-2</b>	<b>G-3</b>	<b>Streetlights</b>	<b>T</b>	<b>V</b>
Jan-19	150,382	60,010	919	46,456	24,381	14,770	879	2,901	66
Feb-19	135,359	50,700	1,521	42,670	21,599	13,212	804	4,794	59
Mar-19	133,736	49,444	1,139	43,820	21,103	13,678	907	3,583	62
Apr-19	118,212	44,647	651	39,792	17,861	12,382	784	2,048	47
May-19	132,494	30,538	571	60,208	27,411	12,169	6	1,550	41
Jun-19	159,469	55,239	619	63,261	25,693	13,024	6	1,580	47
Jul-19	185,677	71,811	1,008	63,282	28,234	18,809	6	2,459	68
Aug-19	182,125	50,841	632	74,458	31,448	23,041	7	1,617	81
Sep-19	147,089	38,207	456	63,011	27,755	16,312	7	1,292	49
Oct-19	119,225	21,592	323	59,350	24,364	12,734	0	825	37
Nov-19	127,396	41,723	685	47,717	21,263	13,155	897	1,913	46
Dec-19	<u>141,798</u>	<u>53,310</u>	<u>1,078</u>	<u>46,508</u>	<u>22,896</u>	<u>13,912</u>	<u>872</u>	<u>3,174</u>	<u>48</u>
<b>Total</b>	<b>1,732,962</b>	<b>568,062</b>	<b>9,601</b>	<b>650,533</b>	<b>294,008</b>	<b>177,198</b>	<b>5,175</b>	<b>27,736</b>	<b>651</b>

Source: Company Load Data

**Liberty Utilities (Granite State Electric) d/b/a Liberty Utilities  
Transmission Charge Reconciliation  
May 2019 - April 2020**

Month	(Over)/Under Beginning Balance	Transmission Revenue	Transmission Expense	Monthly (Over)/Under	(Over)/Under Ending Balance	Balance Subject to Interest	Interest Rate	Interest	Cumulative Interest
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
May-19	\$406,784	\$1,957,943	\$1,900,361	(\$57,582)	\$349,202	\$377,993	5.50%	\$1,732	\$1,732
Jun-19	\$350,935	\$1,802,715	\$2,272,722	\$470,008	\$820,942	\$585,939	5.50%	\$2,686	\$4,418
Jul-19	\$823,628	\$2,212,793	\$2,502,170	\$289,377	\$1,113,005	\$968,316	5.50%	\$4,438	\$8,856
Aug-19	\$1,117,443	\$2,355,375	\$2,230,833	(\$124,542)	\$992,901	\$1,055,172	5.25%	\$4,616	\$13,473
Sep-19	\$997,518	\$1,940,739	\$1,821,332	(\$119,407)	\$878,111	\$937,814	5.25%	\$4,103	\$17,575
Oct-19	\$882,214	\$1,698,675	\$1,307,982	(\$390,693)	\$491,520	\$686,867	5.00%	\$2,862	\$20,437
Nov-19	\$494,382	\$1,679,248	\$1,570,035	(\$109,213)	\$385,169	\$439,776	4.75%	\$1,741	\$22,178
Dec-19	\$386,910	\$1,970,620	\$1,894,424	(\$76,196)	\$310,714	\$348,812	4.75%	\$1,381	\$23,559
Jan-20	\$312,094	\$2,098,511	\$2,005,468	(\$93,043)	\$219,051	\$265,573	4.75%	\$1,051	\$24,610
Feb-20	\$220,102	\$1,890,132	\$1,735,153	(\$154,979)	\$65,123	\$142,613	4.75%	\$565	\$25,175
* Mar-20	\$65,688	\$1,890,417	\$1,775,898	(\$114,519)	(\$48,831)	\$8,429	4.75%	\$33	\$25,208
* Apr-20	(\$48,798)	<u>\$1,765,677</u>	<u>\$1,621,160</u>	(\$144,517)	(\$193,314)	(\$121,056)	4.75%	(\$479)	\$24,729
		\$23,262,846	\$22,637,540						

**Projected Cumulative (Over)/Under Collection of Transmission Charge: (\$193,793)**

- (a) May-19 ties to the deferral account balance, all other months are Prior Month Column (e) + Prior Month Column (h)
- (b) Company financials
- (c) Company financials
- (d) Column (c) - Column (b)
- (e) Column (a) + Column (d)
- (f) [Column (a) + Column (e)] ÷ 2
- (g) Interest rate on customer deposits
- (h) Column (f) x [Column (g) ÷ 12]
- (i) Column (h) + Prior Month Column (i)
- \* Projected

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**Liberty Utilities (Granite State Electric) d/b/a Liberty Utilities  
Calculation of Transmission Service Cost Adjustment  
Effective May 1, 2020 - April 30, 2021**

<b>[1] Transmission Service (Over)/Under Collection</b>	<b>(\$193,793)</b>
<b>[2] Working Capital</b>	<b>(\$14,579)</b>
<b>[3] Total</b>	<b>(\$208,373)</b>
<b>[4] Forecast kWh Deliveries</b>	<b>912,773,764</b>
<b>[5] Transmission Service Cost Adjustment per kWh</b>	<b>(\$0.00023)</b>

[1] Schedule DBS/AMH-3 Page 3

[2] Schedule DBS/AMH-3 Page 5

[3] Line (1) + Line (2)

[4] Per Company forecast

[5] Line (3) ÷ Line (4), truncated after 5 decimal places

**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities  
Transmission Service Cost Adjustment  
Working Capital Calculation**

	<u>Days of Cost</u> (a)	<u>Invoice Payment Lag %</u> (b)	<u>Customer Payment Lag %</u> (c)	<u>CWC %</u> (d)	<u>Expense</u> (e)	<u>Working Capital Requirement</u> (f)
[1] 2019 Transmission Costs	(62.34)	-17.08%	16.41%	-0.67%	\$23,231,692	(\$155,842)
[2] Working Capital Requirement						(\$155,842)
[3] Capital Structure Post-tax						7.60%
[4] Working Capital Impact						(\$11,840)
[5] Capital Structure Pre-tax						<u>9.36%</u>
[6] Working Capital Impact						(\$14,579)

Columns:

- [1](a) DBS/AMH-3 Page 6
- (b) Column (a) ÷ 365
- (c) DBS/AMH-3 Page 7
- (d) Column (b) + Column (c)
- [1](e) DBS/AMH-3 Page 1
- (f) Column (d) x Column (e)

Lines:

- [3] Per Settlement Agreement Docket No. DE 19-064
- [4] Line (2) x Line (3)
- [5] Per Settlement Agreement Docket No. DE 19-064
- [6] Line (2) x Line (5)



Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities  
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**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities**  
**Transmission Service Cost Adjustment**  
**Working Capital Calculation**  
**Expense Lead/Lag**

	Bill Receipt	Expense	Invoice	Service Period	Payment	Elapsed	% of	Weighted
	<u>Date</u>	<u>Description</u>	<u>Amount</u>	<u>Mid-Point</u>	<u>Date</u>	<u>(Days)</u>	<u>Total</u>	<u>Days</u>
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
[1]	Dec-18	NEP LNS Bill	\$ 466,164.71	11/15/2018	1/10/2019	56	2.09%	1.17
[2]	Jan-19	ISO RNS-Bill	\$ 1,290,361.75	11/15/2018	1/16/2019	62	5.79%	3.59
[3]	Jan-19	NEP LNS Bill	\$ 447,955.77	12/16/2018	2/27/2019	73	2.01%	1.47
[4]	Feb-19	ISO RNS-Bill	\$ 1,373,542.55	12/16/2018	2/13/2019	59	6.16%	3.63
[5]	Feb-19	NEP LNS Bill	\$ 492,909.18	1/16/2019	3/22/2019	65	2.21%	1.44
[6]	Mar-19	ISO RNS-Bill	\$ 1,474,502.48	1/16/2019	3/14/2019	57	6.61%	3.77
[7]	Mar-19	NEP LNS Bill	\$ 302,521.02	2/14/2019	4/15/2019	60	1.36%	0.81
[8]	Apr-19	ISO RNS-Bill	\$ 1,316,322.43	2/14/2019	4/18/2019	63	5.90%	3.72
[9]	Apr-19	NEP LNS Bill	\$ 414,324.42	3/16/2019	5/17/2019	62	1.86%	1.15
[10]	May-19	ISO RNS-Bill	\$ 1,314,639.43	3/16/2019	5/15/2019	60	5.90%	3.54
[11]	May-19	NEP LNS Bill	\$ 528,336.94	4/15/2019	6/28/2019	74	2.37%	1.75
[12]	Jun-19	ISO RNS-Bill	\$ 1,164,745.60	4/15/2019	6/19/2019	65	5.22%	3.40
[13]	Jun-19	NEP LNS Bill	\$ 677,765.71	5/16/2019	7/19/2019	64	3.04%	1.95
[14]	Jul-19	ISO RNS-Bill	\$ 1,282,628.25	5/16/2019	7/17/2019	62	5.75%	3.57
[15]	Jul-19	NEP LNS Bill	\$ 662,117.09	6/15/2019	8/23/2019	69	2.97%	2.05
[16]	Aug-19	ISO RNS-Bill	\$ 1,588,499.22	6/15/2019	8/14/2019	60	7.12%	4.27
[17]	Aug-19	NEP LNS Bill	\$ 368,946.00	7/16/2019	9/20/2019	66	1.65%	1.09
[18]	Sep-19	ISO RNS-Bill	\$ 1,843,513.30	7/16/2019	9/18/2019	64	8.27%	5.29
[19]	Sep-19	NEP LNS Bill	\$ 188,704.14	8/16/2019	10/21/2019	66	0.85%	0.56
[20]	Oct-19	ISO RNS-Bill	\$ 1,808,656.91	8/16/2019	10/17/2019	62	8.11%	5.03
[21]	Oct-19	NEP LNS Bill	\$ 206,878.85	9/15/2019	11/22/2019	68	0.93%	0.63
[22]	Nov-19	ISO RNS-Bill	\$ 1,453,005.09	9/15/2019	11/14/2019	60	6.52%	3.91
[23]	Nov-19	NEP LNS Bill	\$ 518,860.59	10/16/2019	12/16/2019	61	2.33%	1.42
[24]	Dec-19	ISO RNS-Bill	\$ 1,112,915.56	10/16/2019	12/18/2019	63	4.99%	3.14
[25]		Total	\$22,298,817				Days	62.34

Columns:

- (a) Month in which obligation for payment occurred
- (b) Per invoices
- (c) Per invoices
- (d) Applicable service period
- (e) Per invoices
- (f) Column (e) - Column (d)
- (g) Column (c) / Column (c) Line 25
- (h) Column (f) x Column (g)

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities

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**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities  
Revenue Lead/Lag Applied to Transmission and Stranded Cost Mechanisms**

<u>Service Period</u>		<u>Monthly Customer Accts.Receivable</u> (a)	<u>Monthly Sales</u> (b)	<u>Days In Month</u> (c)	<u>Average Daily Revenues</u> (d)
1/1/2019	1/31/2019	\$12,580,711	\$9,515,464	31	\$306,950
2/1/2019	2/28/2019	\$13,005,398	\$9,380,825	28	\$335,029
3/1/2019	3/31/2019	\$12,657,160	\$9,096,737	31	\$293,443
4/1/2019	4/30/2019	\$10,864,616	\$7,854,039	30	\$261,801
5/1/2019	5/31/2019	\$10,192,848	\$7,335,491	31	\$236,629
6/1/2019	6/30/2019	\$10,479,746	\$7,154,520	30	\$238,484
7/1/2019	7/31/2019	\$11,446,569	\$8,649,182	31	\$279,006
8/1/2019	8/31/2019	\$12,769,661	\$9,363,308	31	\$302,042
9/1/2019	9/30/2019	\$11,346,141	\$7,648,644	30	\$254,955
10/1/2019	10/31/2019	\$9,468,822	\$6,807,193	31	\$219,587
11/1/2019	11/30/2019	\$10,262,652	\$6,905,386	30	\$230,180
12/1/2019	12/31/2019	\$10,781,310	\$8,319,085	31	\$268,358
Average		\$11,321,303			\$268,872
[1] Service Lag					15.21
[2] Collection Lag					42.11
[3] Billing Lag					<u>2.59</u>
[4] Total Average Days Lag					59.90
[5] Customer Payment Lag-annual percent					16.41%

Columns:

- (a) Accounts Receivable per general ledger at end of applicable month
- (b) Per Company billing data
- (c) Number of days in applicable service period
- (d) Column (b) ÷ Column (c)

Lines:

- [1] Per Settlement Agreement Docket No. DE 19-064
- [2] (a) / (d)
- [3] Per Settlement Agreement Docket No. DE 19-064
- [4] Line (1) + Line (2) + Line (3)
- [5] Line (5) ÷ 365

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities  
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Schedule DBS/AMH-4  
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**Liberty Utilities (Granite State Electric) d/b/a Liberty Utilities  
Calculation of RGGI Auction Proceeds Refund**

	<b>Month</b>	<b>Beginning Balance With Interest</b>	<b>RGGI Rebate</b>	<b>Actual Refund</b>	<b>Ending Balance</b>	<b>Balance Subject to Interest</b>	<b>Effective Interest Rate</b>	<b>Interest</b>	<b>Cumulative Interest</b>
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
[1]	May-19	(\$1,145,554)		(\$90,496)	(\$1,055,058)	(\$1,100,306)	5.50%	(\$5,043)	(\$5,043)
[2]	Jun-19	(\$1,060,102)		(\$120,823)	(\$939,279)	(\$999,690)	5.50%	(\$4,582)	(\$9,625)
[3]	Jul-19	(\$943,860)	(\$317,845)	(\$150,235)	(\$1,111,471)	(\$1,027,666)	5.50%	(\$4,710)	(\$14,335)
[4]	Aug-19	(\$1,116,181)		(\$158,816)	(\$957,365)	(\$1,036,773)	5.25%	(\$4,536)	(\$18,871)
[5]	Sep-19	(\$961,901)		(\$131,822)	(\$830,078)	(\$895,989)	5.25%	(\$3,920)	(\$22,791)
[6]	Oct-19	(\$833,998)	(\$258,922)	(\$115,699)	(\$977,221)	(\$905,610)	5.00%	(\$3,773)	(\$26,564)
[7]	Nov-19	(\$980,995)		(\$113,822)	(\$867,173)	(\$924,084)	4.75%	(\$3,658)	(\$30,222)
[8]	Dec-19	(\$870,831)		(\$132,083)	(\$738,748)	(\$804,789)	4.75%	(\$3,186)	(\$33,408)
[9]	Jan-20	(\$741,934)	(\$284,197)	(\$140,500)	(\$885,631)	(\$813,782)	4.75%	(\$3,221)	(\$36,629)
[10]	Feb-20	(\$888,852)		(\$126,955)	(\$761,897)	(\$825,374)	4.75%	(\$3,267)	(\$39,896)
[11]	* Mar-20	(\$765,164)		(\$127,691)	(\$637,473)	(\$701,318)	4.75%	(\$2,776)	(\$42,672)
[12]	* Apr-20	(\$640,249)		(\$119,265)	(\$520,983)	(\$580,616)	4.75%	(\$2,298)	(\$44,970)
[13]				Auction Proceeds 5/1/19 - 4/30/20:	(\$860,964)	Sum of Column (b)			
[14]				Estimated Refund 5/1/19 - 4/30/20	(\$1,528,206)	Sum of Column (c)			
[15]				Remaining Refund Through 4/30/20	(\$523,282)	Line 12 Column (d) + Line 12 Column (g)			
[16]				Estimated Auction Proceeds 5/1/20 - 4/30/21	<u>(\$860,964)</u>	Assumes the same as actual proceeds from 5/1/18 - 4/30/19			
[17]				Total Estimated RGGI Refund	(\$1,384,246)	Line 15 + Line 16			
[18]				Projected kWh	912,773,764	Company Forecast			
[19]				<b>RGGI Refund Rate Effective 5/1/2020</b>	<b>(\$0.00152)</b>	Line 19 / Line 20			

- (a) May-19 ties to the deferral account balance, all other months are Prior Month Column (e) + Prior Month Column (h)
  - (b) Company financials
  - (c) Company financials
  - (d) Column (a) - [(Column (c) - Column (b))]
  - (e) Average of Column (a) and Column (c)
  - (f) Interest rate on customer deposits
  - (g) Column (e) x [Column (f) ÷ 12]
  - (h) Prior month Column (h) + Current month Column (g)
- \* Estimate

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**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities  
Typical Residential Customer  
Bill Comparison**

Usage                    650 kWh

	<u>Current Rates</u>	<u>Proposed Rates</u>	<u>Current Bill</u>	<u>Proposed Bill</u>
Customer Charge	\$14.67	\$14.67	\$14.67	\$14.67
Distribution Charge				
All kWh	\$0.04950	\$0.04950	\$32.18	\$32.18
Storm Recovery Adjustment	\$0.00000	\$0.00000	\$0.00	\$0.00
Transmission Charge	\$0.02732	\$0.02660	\$17.76	\$17.29
Stranded Cost Charge	(\$0.00106)	(\$0.00072)	-\$0.69	-\$0.47
System Benefits Charge	\$0.00678	\$0.00678	\$4.41	\$4.41
Electricity Consumption Tax	<u>\$0.00000</u>	<u>\$0.00000</u>	<u>\$0.00</u>	<u>\$0.00</u>
Subtotal Retail Delivery Services	<u>\$0.08254</u>	<u>\$0.08215</u>	\$68.32	\$68.07
Default Service Charge	<u>\$0.07193</u>	<u>\$0.07193</u>	<u>\$46.75</u>	<u>\$46.75</u>
Total Bill			\$115.08	\$114.82
<hr/>				
<b>\$ increase in 650 kWh Total Residential Bill</b>			<b>-\$0.25</b>	
<b>% increase in 650 kWh Total Residential Bill</b>			<b>-0.22%</b>	
<hr/>				

**Rate D**

Availability

Retail Delivery Service under this rate is available for all domestic purposes in an individual private dwelling or an individual apartment and for farm purposes. If electricity is delivered through more than one meter, the charge for electricity delivered through each meter shall be computed separately under this rate.

Character of Service

Service supplied under this rate will be single phase, 60 cycle, alternating current, normally three-wire service at a nominal voltage of 120/240 volts or three-wire 120/208 volts, whichever is available at the location.

Rate Per Month

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff:

Rates for Retail Delivery Service

Customer Charge \$14.74 per month

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	4.922
Reliability Enhancement/Vegetation Management	0.008
<hr/> Total Distribution	<hr/> 4.930
Transmission Service Cost Adjustment	2.660
Stranded Cost Adjustment Factor	(0.072)
Storm Recovery Adjustment Factor	0.000

Issued: xxx xx, 2020

Issued by: /s/ Susan L. Fleck

Effective: May 1, 2020

Susan L. Fleck  
Title: President

NHPUC NO. 20 - ELECTRICITY DELIVERY  
LIBERTY UTILITIES

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Rate D

Off-Peak Use: 16 Hour Control

For all electricity separately metered and delivered between the hours of 11:00 p.m. on each day and 7:00 a.m. on the next day, the price of such electricity shall be:

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge Off Peak Use	4.250
Reliability Enhancement/Vegetation Management	0.008
<hr/>	
Total Distribution	4.258
Transmission Service Cost Adjustment	2.660
Stranded Cost Adjustment Factor	(0.072)
Storm Recovery Adjustment Factor	0.000

If a Customer has installed an electric water heater of a type approved by the Company, electricity is delivered to such water heater is supplied only under this rate.

Off-Peak Use: 6 Hour Control

For all electricity separately metered and subject to the Company’s right to limit the operation of the bottom water heating element up to 6 hours a day, the price of such electricity shall be:

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge Off Peak Use	4.329
Reliability Enhancement/Vegetation Management	0.008
<hr/>	
Total Distribution	4.337
Transmission Service Cost Adjustment	2.660
Stranded Cost Adjustment Factor	(0.072)
Storm Recovery Adjustment Factor	0.000

If a Customer has installed an electric water heater of a type approved by the Company, and electricity delivered to such water heater is supplied only under this rate.

Issued: xxx xx, 2020

Issued by: /s/ Susan L. Fleck

Susan L. Fleck

Effective: May 1, 2020

Title: President







NHPUC NO. 20 - ELECTRICITY DELIVERY  
LIBERTY UTILITIES

Fifth Revised Page 98  
Superseding Fourth Revised Page 98  
Rate G-1

Rates for Retail Delivery Service

Customer Charge \$384.39 per month  
Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge On Peak	0.525
Distribution Charge Off Peak	0.156
Reliability Enhancement/Vegetation Management	0.008
Total Distribution Charge On Peak	0.533
Total Distribution Charge Off Peak	0.164
Transmission Service Cost Adjustment	2.065
Stranded Cost Adjustment Factor	(0.072)
Storm Recovery Adjustment Factor	0.000

Demand Charges Per Kilowatt

Distribution \$8.18

Distribution Energy Charges Peak Periods

Peak hours will be from 8:00 a.m. to 9:00 p.m. daily on Monday through Friday excluding holidays.

Off-Peak hours will be from 9:00 p.m. to 8:00 a.m. daily Monday through Friday, and all day on Saturdays, Sundays, and holidays.

Demand

The Demand for each month under ordinary load conditions shall be the greatest of the following:

1. The greatest fifteen-minute peak during the peak hours which occurs during such month as measured in kilowatts,
2. 90% of the greatest fifteen-minute peak during the peak hours occurring during such month as measured in kilovolt-amperes where the Customer's kilowatt Demand exceeds 75 kilowatts, or
3. 80% of the greatest Demand as so determined above during the preceding eleven months.

Any Demands established during the eleven (11) months prior to the application of this rate shall be considered as having been established under this rate.

Issued: xxx xx, 2020

Issued by: /s/ Susan L. Fleck

Effective: May 1, 2020

Susan L. Fleck  
Title: President



**General Service Rate G-3**

Availability

Retail Delivery Service under this rate is available for all purposes except resale. The sale of electric vehicle charging services to a third party from an electric vehicle charging station shall not be considered resale of electricity. A Customer will take delivery service on this rate if the Company estimates that its average use will be less than 20 kW of demand. If electricity is delivered through more than one meter, except at the Company’s option, the charge for electricity delivered through each meter shall be computed separately under this rate.

Character of Service

Service supplied under this rate will be 60 cycle, alternating current either:

- a) Single-phase normally three-wire at a nominal voltage of 120/240 volts.
- b) Three-phase secondary normally at a nominal voltage of 120/208, or 277/480 volts.
- c) Three-phase primary normally at a nominal voltage of 2400, 4160, 4800, 7200, 13,200 or 13,800 volts.

All voltages are not available in every area.

Rate Per Month

The rate per month will be the sum of the Customer and Energy Charges subject to the adjustments in this tariff:

Rates for Retail Delivery Service

Customer Charge \$14.74 per month

However, if the KVA transformer capacity needed to serve a customer exceeds 25 KVA, the minimum charge will be increased by \$2.61 for each KVA in excess of 25 KVA.

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	4.674
Reliability Enhancement/Vegetation Management	0.008
<hr/>	
Total Distribution Charge	4.682
Transmission Service Cost Adjustment	2.550
Stranded Cost Adjustment Factor	(0.072)
Storm Recovery Adjustment Factor	0.000

Issued: xxx xx, 2020 Issued by:                   /s/ Susan L. Fleck                    
Susan L. Fleck  
Effective: May 1, 2020 Title:                   President

**Outdoor Lighting Service Rate M**

Availability

*Public Lighting*

Available for Street or Highways and areas within the public domain for customers designated as governmental entities, inclusive of the state, municipalities, or other public authorities. Installations on limited access highways, tunnels, bridges and the access and egress ramps thereto are subject to the Special Rate Conditions of this tariff.

*Private Lighting*

Available to private customers for outdoor lighting of areas on private property where necessary fixtures can be supported on existing poles and where such service can be supplied from existing secondary distribution facilities. In special circumstances outlined in the pole and accessory section below, the Company will install a wooden pole.

*Lighting Services*

Service under this rate is for full-night service street lighting whereby the luminaire operates for the entire night time period pursuant to the Hours of Operation provision below. In addition, customers may, at their option, take advantage of part-night service in which the luminaire operates for a portion of the night pursuant to the Hours of Operation provision below. Customers may select the part-night service option at the time of lighting installation or at any time during service. Any request to select the part-time night service option must be made in writing.

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	0.000
Reliability Enhancement/Vegetation Management	0.008
<hr/>	
Total Distribution	0.008
Transmission Service Cost Adjustment	1.520
Stranded Cost Adjustment Factor	(0.072)
Storm Recovery Adjustment Factor	0.000

No further installation or relocation of Incandescent and Mercury Vapor lights will be made after the effective date of this rate.

Issued: xxx xx, 2020	Issued by: <u>                  /s/ Susan L. Fleck                  </u>
Effective: May 1, 2020	Title: <u>                  Susan L. Fleck                  </u> <u>                  President                  </u>





RATES EFFECTIVE MAY 1, 2020  
FOR USAGE ON AND AFTER MAY 1, 2020

Rate	Blocks	Distribution Charge	REP/VMP	Net Distribution Charge	Transmission Charge	Stranded Cost Charge	Storm Recovery Adjustment Factor	System Benefits Charge	Electricity Consumption Tax	Total Delivery Service	Energy Service	Total Rate
D	Customer Charge	\$ 14.74		<b>14.74</b>						<b>14.74</b>		\$ <b>14.74</b>
	All kWh	\$ 0.04922	0.00008	<b>0.04930</b>	0.02660	(0.00072)	-	0.00678	-	<b>0.08196</b>	0.07193	\$ <b>0.15389</b>
Off Peak Water Heating Use 16 Hour Control <sup>1</sup>	All kWh	\$ 0.04250	0.00008	<b>0.04258</b>	0.02660	(0.00072)	-	0.00678	-	<b>0.07524</b>	0.07193	\$ <b>0.14717</b>
Off Peak Water Heating Use 6 Hour Control <sup>1</sup>	All kWh	\$ 0.04329	0.00008	<b>0.04337</b>	0.02660	(0.00072)	-	0.00678	-	<b>0.07603</b>	0.07193	\$ <b>0.14796</b>
Farm <sup>1</sup>	All kWh	\$ 0.04646	0.00008	<b>0.04654</b>	0.02660	(0.00072)	-	0.00678	-	<b>0.07920</b>	0.07193	\$ <b>0.15113</b>
D-10	Customer Charge	\$ 14.74		<b>14.74</b>						<b>14.74</b>		\$ <b>14.74</b>
	On Peak kWh	\$ 0.10580	0.00008	<b>0.10588</b>	0.02269	(0.00072)	-	0.00678	-	<b>0.13463</b>	0.07193	\$ <b>0.20656</b>
	Off Peak kWh	\$ 0.00145	0.00008	<b>0.00153</b>	0.02269	(0.00072)	-	0.00678	-	<b>0.03028</b>	0.07193	\$ <b>0.10221</b>
	Customer Charge	\$ 384.39		<b>384.39</b>						<b>384.39</b>		\$ <b>384.39</b>
	Demand Charge	\$ 8.18		<b>8.18</b>						<b>8.18</b>		\$ <b>8.18</b>
	On Peak kWh	\$ 0.00525	0.00008	<b>0.00533</b>	0.02065	(0.00072)	-	0.00678	-	<b>0.03204</b>		\$ <b>0.12953</b>
									Effective 2/1/20, usage on or after		0.09749	\$ <b>0.10981</b>
									Effective 3/1/20, usage on or after		0.07777	\$ <b>0.09919</b>
									Effective 4/1/20, usage on or after		0.06715	\$ <b>0.09072</b>
									Effective 5/1/20, usage on or after		0.05868	\$ <b>0.08450</b>
									Effective 6/1/20, usage on or after		0.05246	\$ <b>0.08994</b>
									Effective 7/1/20, usage on or after		0.05790	\$ <b>0.12584</b>
G-1	Off Peak kWh	\$ 0.00156	0.00008	<b>0.00164</b>	0.02065	(0.00072)	-	0.00678	-	<b>0.02835</b>		\$ <b>0.10612</b>
									Effective 2/1/20, usage on or after		0.09749	\$ <b>0.09550</b>
									Effective 3/1/20, usage on or after		0.07777	\$ <b>0.08703</b>
									Effective 4/1/20, usage on or after		0.06715	\$ <b>0.08081</b>
									Effective 5/1/20, usage on or after		0.05868	\$ <b>0.08625</b>
									Effective 6/1/20, usage on or after		0.05246	\$ <b>0.13122</b>
									Effective 7/1/20, usage on or after		0.05790	\$ <b>0.11150</b>
G-2	Customer Charge	\$ 64.08		<b>64.08</b>						<b>64.08</b>		\$ <b>64.08</b>
	Demand Charge	\$ 8.23		<b>8.23</b>						<b>8.23</b>		\$ <b>8.23</b>
	All kWh	\$ 0.00206	0.00008	<b>0.00214</b>	0.02553	(0.00072)	-	0.00678	-	<b>0.03373</b>		\$ <b>0.10088</b>
									Effective 2/1/20, usage on or after		0.09749	\$ <b>0.09241</b>
									Effective 3/1/20, usage on or after		0.07777	\$ <b>0.08619</b>
									Effective 4/1/20, usage on or after		0.06715	\$ <b>0.09163</b>
									Effective 5/1/20, usage on or after		0.05868	\$ <b>0.1474</b>
									Effective 6/1/20, usage on or after		0.05246	\$ <b>0.14493</b>
									Effective 7/1/20, usage on or after		0.05790	\$ <b>0.15113</b>
G-3	Customer Charge	\$ 14.74		<b>14.74</b>						<b>14.74</b>		\$ <b>14.74</b>
	All kWh	\$ 0.04674	0.00008	<b>0.04682</b>	0.02550	(0.00072)	-	0.00678	-	<b>0.07838</b>	0.07193	\$ <b>0.15031</b>
M	All kWh	\$ -	0.00008	<b>0.00008</b>	0.01520	(0.00072)	-	0.00678	-	<b>0.02134</b>	0.07193	\$ <b>0.09327</b>
T	Customer Charge	\$ 14.74		<b>14.74</b>						<b>14.74</b>		\$ <b>14.74</b>
	All kWh	\$ 0.04067	0.00008	<b>0.04075</b>	0.02620	(0.00073)	-	0.00678	-	<b>0.07300</b>	0.07193	\$ <b>0.14493</b>
V	Minimum Charge	\$ 14.74		<b>14.74</b>						<b>14.74</b>		\$ <b>14.74</b>
	All kWh	\$ 0.04805	0.00008	<b>0.04813</b>	0.02501	(0.00072)	-	0.00678	-	<b>0.07920</b>	0.07193	\$ <b>0.15113</b>

<sup>1</sup> Rate is a subset of Domestic Rate D

Dated: xxx xx, 2020  
Effective: May 1, 2020

Issued by: /s/Susan L. Fleck  
Susan L. Fleck  
Title: President

Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020

**Rate D**

Availability

Retail Delivery Service under this rate is available for all domestic purposes in an individual private dwelling or an individual apartment and for farm purposes. If electricity is delivered through more than one meter, the charge for electricity delivered through each meter shall be computed separately under this rate.

Character of Service

Service supplied under this rate will be single phase, 60 cycle, alternating current, normally three-wire service at a nominal voltage of 120/240 volts or three-wire 120/208 volts, whichever is available at the location.

Rate Per Month

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff:

Rates for Retail Delivery Service

Customer Charge \$14.74 per month

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	4.922
Reliability Enhancement/Vegetation Management	0.008
<hr/> Total Distribution	<hr/> 4.930

Transmission Service Cost Adjustment	<del>2.732</del> 2.660
Stranded Cost Adjustment Factor	<del>(0.072)</del> (0.106)
Storm Recovery Adjustment Factor	0.000

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: May 1, 2020 Title: President

~~Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020~~ Issued: July 8,  
~~2019~~ Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: July 1, 2019 Title: President



NHPUC NO. 20 - ELECTRICITY DELIVERY  
LIBERTY UTILITIES

~~Fourth-Fifth~~ Revised Page 93  
Superseding ~~Third-Fourth~~ Revised Page 93  
Rate D

Off-Peak Use: 16 Hour Control

For all electricity separately metered and delivered between the hours of 11:00 p.m. on each day and 7:00 a.m. on the next day, the price of such electricity shall be:

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge Off Peak Use	4.250
Reliability Enhancement/Vegetation Management	0.008
<hr/>	
Total Distribution	4.258
Transmission Service Cost Adjustment	<del>2.660</del> 2.732
Stranded Cost Adjustment Factor	<del>(0.072)</del> (0.106)
Storm Recovery Adjustment Factor	0.000

If a Customer has installed an electric water heater of a type approved by the Company, electricity is delivered to such water heater is supplied only under this rate.

Off-Peak Use: 6 Hour Control

For all electricity separately metered and subject to the Company's right to limit the operation of the bottom water heating element up to 6 hours a day, the price of such electricity shall be:

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge Off Peak Use	4.329
Reliability Enhancement/Vegetation Management	0.008
<hr/>	
Total Distribution	4.337
Transmission Service Cost Adjustment	<del>2.660</del> 2.732
Stranded Cost Adjustment Factor	<del>(0.072)</del> (0.106)
Storm Recovery Adjustment Factor	0.000

If a Customer has installed an electric water heater of a type approved by the Company, and electricity delivered to such water heater is supplied only under this rate.

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: May 1, 2020 Title: President

Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020  
Issued: July 8, 2019 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: July 1, 2019 Title: President

~~Authorized by NHPUC Order No. 26,267 in Docket DE 19-064, Dated June 28, 2019~~

NHPUC NO. 20 - ELECTRICITY DELIVERY  
LIBERTY UTILITIES

~~Fourth-Fifth~~ Revised Page 93  
Superseding ~~Third-Fourth~~ Revised Page 93  
Rate D

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: May 1, 2020 Title: President

Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020

Issued: July 8, 2019 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: July 1, 2019 Title: President

Authorized by NHPUC Order No. 26,267 in Docket DE 19-064, Dated June 28, 2019

NHPUC NO. 20 - ELECTRICITY DELIVERY  
LIBERTY UTILITIES

~~Fourth-Fifth~~ Revised Page 94  
Superseding ~~Third-Fourth~~ Revised Page 94  
Rate D

Farm Use

The availability of the Farm Use Section is limited to those locations which were served under the Farm Use Section of Domestic Rate D, N.H.P.U.C. No. 8 - Electricity immediately prior to the effective date of this rate. For such farm customers, where all electricity is supplied by the Company, the RATE PER MONTH is modified as follows:

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge*	4.646
Reliability Enhancement/Vegetation Management	0.008
<hr/>	
Total Distribution	4.654
Transmission Service Cost Adjustment	<del>2.660</del> 2.732
Stranded Cost Adjustment Factor	<del>(0.106)</del>
	<del>(0.072)</del>
Storm Recovery Adjustment Factor	0.000

\*All Regular Use kilowatt-hours in excess of the greater of the following:

- i. 500 kilowatt-hours
- ii. 100 kilowatt-hours per kilovolt-ampere of transformer capacity needed to serve the Customer

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: May 1, 2020 Title: President

Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020 Issued: July 8,  
2019 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: July 1, 2019 Title: President

**Rate D-10 Optional Peak Load Rate**

Availability

Retail Delivery Service under this rate is available for all domestic purposes in an individual private dwelling or an individual apartment and for farm purposes to selected customers presently served under Rate D.

If electricity is delivered through more than one meter, the charge for electricity delivered through each meter shall be computed separately under this rate. The availability of this rate will be subject to the Company's ability to obtain the necessary meters and to render such service.

Character of Service

Service supplied under this rate will be single phase, 60 cycle, alternating current, normally three-wire service at a nominal voltage of 120/240 volts or three-wire 120/208 volts, whichever is available at the location.

Rate Per Month

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff:

Rates for Retail Delivery Service

Customer Charge \$14.74 per month

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge On Peak	10.580
Distribution Charge Off Peak	0.145
Reliability Enhancement/Vegetation Management	0.008
<hr/>	
Total Distribution Charge On Peak	10.588
Total Distribution Charge Off Peak	0.153

Transmission Service Cost Adjustment	<del>2.2692388</del>
Stranded Cost Adjustment Factor	<del>(0.072)(0.105)</del>
Storm Recovery Adjustment Factor	0.000

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: May 1, 2020 Title: President

Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020 Issued: July 8,  
2019 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: July 1, 2019 Title: President

NHPUC NO. 20 - ELECTRICITY DELIVERY  
LIBERTY UTILITIES

~~Fourth-Third~~ Revised Page 95  
Superseding ~~Fourth-Third~~ Revised Page 95  
Rate D-10

Peak hours will be from 8:00 a.m. to 9:00 p.m. daily on Monday through Friday excluding holidays.

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: May 1, 2020 Title: President

Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020 Issued: July 8,  
2019 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: July 1, 2019 Title: President

NHPUC NO. 20 - ELECTRICITY DELIVERY  
LIBERTY UTILITIES

~~Fourth-Fifth~~ Revised Page 98  
Superseding ~~Third-Fourth~~ Revised Page 98  
Rate G-1

Rates for Retail Delivery Service

Customer Charge \$384.39 per month  
Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge On Peak	0.525
Distribution Charge Off Peak	0.156
Reliability Enhancement/Vegetation Management	0.008
Total Distribution Charge On Peak	0.533
Total Distribution Charge Off Peak	0.164

Transmission Service Cost Adjustment	<del>2.0652</del> 130
Stranded Cost Adjustment Factor	<del>(0.072)</del> <del>(0.105)</del>
Storm Recovery Adjustment Factor	0.000

Demand Charges Per Kilowatt

Distribution \$8.18

Distribution Energy Charges Peak Periods

Peak hours will be from 8:00 a.m. to 9:00 p.m. daily on Monday through Friday excluding holidays.

Off-Peak hours will be from 9:00 p.m. to 8:00 a.m. daily Monday through Friday, and all day on Saturdays, Sundays, and holidays.

Demand

The Demand for each month under ordinary load conditions shall be the greatest of the following:

1. The greatest fifteen-minute peak during the peak hours which occurs during such month as measured in kilowatts,
2. 90% of the greatest fifteen-minute peak during the peak hours occurring during such month as measured in kilovolt-amperes where the Customer's kilowatt Demand exceeds 75 kilowatts, or
3. 80% of the greatest Demand as so determined above during the preceding eleven months.

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
 Effective: May 1, 2020 Title: President

Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020 Issued: July 8, 2019  
 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
 Effective: July 1, 2019 Title: President

NHPUC NO. 20 - ELECTRICITY DELIVERY  
LIBERTY UTILITIES

~~Fourth-Fifth~~ Revised Page 98  
Superseding ~~Third-Fourth~~ Revised Page 98  
Rate G-1

Any Demands established during the eleven (11) months prior to the application of this rate shall be considered as having been established under this rate.

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: May 1, 2020 Title: President

Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020 Issued: July 8,  
2019 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: July 1, 2019 Title: President

NHPUC NO. 20 - ELECTRICITY DELIVERY  
LIBERTY UTILITIES

~~Fourth-Fifth~~ Revised Page 101  
Superseding ~~Third-Fourth~~ Revised Page 101  
Rate G-2

Transmission Service Cost Adjustment	2.5532.437
Stranded Cost Adjustment Factor	(0.072)(0.10 2)
Storm Recovery Adjustment Factor	0.000

Demand Charges Per Kilowatt

Distribution \$8.23

Demand

The Demand for each month under ordinary load conditions shall be the greatest of the following:

1. The greatest fifteen-minute peak during the peak hours which occurs during such month as measured in kilowatts,
2. 90% of the greatest fifteen-minute peak occurring during such month as measured in kilovolt-amperes where the Customer's kilowatt Demand exceeds 75 kilowatts, or
3. 80% of the greatest Demand as so determined above during the preceding eleven months.

Any Demands established during the eleven months prior to the application of this rate shall be considered as having been established under this rate.

Optional Determination of Demand

However, a Customer who has been served hereunder for one year or more may upon written request have the Demand for each month, beginning with the next month after such request and running for a period of not less than two consecutive months, be based upon the greatest of items a) or b) above. In such case, the Demand Charge and the Energy Charge will be increased by 20% during such period.

High Voltage Metering Adjustment

The Company reserves the right to determine the metering installation. Where service is metered at the Company's supply line voltage, in no case less than 2400 volts, thereby saving the Company transformer losses, a discount of 1% will be allowed from the amount determined under the preceding provisions.

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: May 1, 2020 Title: President

Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020 Issued: July 8,  
2019 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: July 1, 2019 Title: President



NHPUC NO. 20 - ELECTRICITY DELIVERY  
LIBERTY UTILITIES

~~Fourth-Fifth~~ Revised Page 101  
Superseding ~~Third-Fourth~~ Revised Page 101  
Rate G-2

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: May 1, 2020 Title: President

Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020 Issued: July 8,  
2019 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: July 1, 2019 Title: President

**General Service Rate G-3**

Availability

Retail Delivery Service under this rate is available for all purposes except resale. The sale of electric vehicle charging services to a third party from an electric vehicle charging station shall not be considered resale of electricity. A Customer will take delivery service on this rate if the Company estimates that its average use will be less than 20 kW of demand. If electricity is delivered through more than one meter, except at the Company’s option, the charge for electricity delivered through each meter shall be computed separately under this rate.

Character of Service

Service supplied under this rate will be 60 cycle, alternating current either:

- a) Single-phase normally three-wire at a nominal voltage of 120/240 volts.
- b) Three-phase secondary normally at a nominal voltage of 120/208, or 277/480 volts.
- c) Three-phase primary normally at a nominal voltage of 2400, 4160, 4800, 7200, 13,200 or 13,800 volts.

All voltages are not available in every area.

Rate Per Month

The rate per month will be the sum of the Customer and Energy Charges subject to the adjustments in this tariff:

Rates for Retail Delivery Service

Customer Charge \$14.74 per month

However, if the KVA transformer capacity needed to serve a customer exceeds 25 KVA, the minimum charge will be increased by \$2.61 for each KVA in excess of 25 KVA.

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	4.674
Reliability Enhancement/Vegetation Management	0.008
Total Distribution Charge	4.682

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
 Effective: May 1, 2020 Title: President

Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020 Issued: July 8,  
2019 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
 Effective: July 1, 2019 Title: President

NHPUC NO. 20 - ELECTRICITY DELIVERY  
LIBERTY UTILITIES

~~Fifth~~<sup>Fourth</sup> Revised Page 103  
Superseding ~~Third~~<sup>Fourth</sup> Revised Page 103  
Rate G-3

Transmission Service Cost Adjustment	<del>2.5502</del> <sup>2.486</sup>
Stranded Cost Adjustment Factor	<del>(0.072)</del> <sup>(0.104)</sup>
Storm Recovery Adjustment Factor	0.000

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
 Effective: May 1, 2020 Title: President

Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020 Issued: July 8,  
2019 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
 Effective: July 1, 2019 Title: President

**Outdoor Lighting Service Rate M**

Availability

*Public Lighting*

Available for Street or Highways and areas within the public domain for customers designated as governmental entities, inclusive of the state, municipalities, or other public authorities. Installations on limited access highways, tunnels, bridges and the access and egress ramps thereto are subject to the Special Rate Conditions of this tariff.

*Private Lighting*

Available to private customers for outdoor lighting of areas on private property where necessary fixtures can be supported on existing poles and where such service can be supplied from existing secondary distribution facilities. In special circumstances outlined in the pole and accessory section below, the Company will install a wooden pole.

*Lighting Services*

Service under this rate is for full-night service street lighting whereby the luminaire operates for the entire night time period pursuant to the Hours of Operation provision below. In addition, customers may, at their option, take advantage of part-night service in which the luminaire operates for a portion of the night pursuant to the Hours of Operation provision below. Customers may select the part-night service option at the time of lighting installation or at any time during service. Any request to select the part-time night service option must be made in writing.

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	0.000
Reliability Enhancement/Vegetation Management	0.008
<hr/>	
Total Distribution	0.008
Transmission Service Cost Adjustment	<del>1.520</del> 1.483
Stranded Cost Adjustment Factor	<del>(0.072)</del> (0.103)
Storm Recovery Adjustment Factor	0.000

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: May 1, 2020 Title: President

~~Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020~~ Issued: ~~July 8,~~  
~~2019~~ Issued by: ~~/s/ Susan L. Fleck~~  
~~Susan L. Fleck~~  
Effective: ~~July 1, 2019~~ Title: ~~President~~

NHPUC NO. 20 - ELECTRICITY DELIVERY  
LIBERTY UTILITIES

~~Third~~Fourth Revised Page 105  
Superseding ~~Second~~Third Revised Page 105  
Rate M

No further installation or relocation of Incandescent and Mercury Vapor lights will be made after the effective date of this rate.

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: May 1, 2020 Title: President

Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020 Issued: July 8,  
2019 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: July 1, 2019 Title: President

NHPUC NO. 20 - ELECTRICITY DELIVERY  
LIBERTY UTILITIES

~~Fifth~~<sup>Fourth</sup> Revised Page 113  
Superseding ~~Third~~<sup>Fourth</sup> Revised Page 113  
Rate T

Character of Service

Service supplied under this rate will be single phase, 60 cycle, alternating current, normally three-wire service at a nominal voltage of 120/240 volts or three-wire 120/208 volts, whichever is available at the location.

Rate Per Month

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff.

Rates for Retail Delivery Service

Customer Charge \$14.74 per month

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	4.067
Reliability Enhancement/Vegetation Management	0.008
<hr/>	
Total Distribution Charge	4.075

Transmission Service Cost Adjustment	<del>2.620</del> <sup>2.762</sup>
Stranded Cost Adjustment Factor	<del>(0.108)</del> <del>(0.073)</del>
Storm Recovery Adjustment Factor	0.000

Terms of Agreement

A Customer served under this rate must provide the Company with one-year prior written notice before installing additional generation for its own use. This notice provision shall be waived with respect to the installation of on-site non-emergency generation from renewable energy resources. Renewable energy resources shall mean fuel cells (including natural gas powered fuel cells), and emerging power generation technologies that produce electricity from wind energy, solar energy, small-scale hydro power, ocean power, landfill gas, sustainably managed biomass, and future clean renewable technologies.

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck

Effective: May 1, 2020 Title: President

Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020 Issued: July 8,  
2019 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck

Effective: July 1, 2019 Title: President

~~Authorized by NHPUC Order No. 26,267 in Docket DE 19-064, Dated June 28, 2019~~

NHPUC NO. 20 - ELECTRICITY DELIVERY  
LIBERTY UTILITIES

~~Fifth~~<sup>Fourth</sup> Revised Page 116  
Superseding ~~Third~~<sup>Fourth</sup> Revised Page 116  
Rate V

Rates for Retail Delivery Service

Customer Charge	\$14.74 per month
<u>Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)</u>	
Distribution Charge	4.805
Reliability Enhancement/Vegetation Management	0.008
<hr/>	
Total Distribution Charge	4.813
Transmission Service Cost Adjustment	<del>2.501</del> <sup>2.515</sup>
Stranded Cost Adjustment Factor	<del>(0.072)</del> <sup>(0.103)</sup>
Storm Recovery Adjustment Factor	0.000

Terms of Agreement

A Customer served under this rate must provide the Company with one-year prior written notice before installing additional on-site, non-emergency generation for its own use. This notice provision shall be waived with respect to the installation of on-site non-emergency generation from renewable energy resources. Renewable energy resources shall mean fuel cells (including natural gas powered fuel cells), and emerging power generation technologies that produce electricity from wind energy, solar energy, small-scale hydro power, ocean power, landfill gas, sustainably managed biomass, and future clean renewable technologies.

Issued: xxx xx, 2020 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: May 1, 2020 Title: President

~~Authorized by NHPUC Order No. xx,xxx in Docket DE 20-xxx, Dated xxx xx, 2020~~ Issued: July 8,  
2019 Issued by: /s/ Susan L. Fleck  
Susan L. Fleck  
Effective: July 1, 2019 Title: President

~~Authorized by NHPUC Order No. 26,267 in Docket DE 19-064, Dated June 28, 2019~~

**RATES EFFECTIVE FEBRUARY 1, 2020  
FOR USAGE ON AND AFTER FEBRUARY 1, 2020**

Rate	Blocks	Distribution Charge	REP/VMP	Net Distribution Charge	Transmission Charge	Stranded Cost Charge	Storm Recovery Adjustment Factor	System Benefits Charge	Electricity Consumption Tax	Total Delivery Service	Energy Service	Total Rate	
D	Customer Charge	\$ 14.74		<b>14.74</b>						<b>14.74</b>		\$ <b>14.74</b>	
	All kWh	\$ 0.04922	0.00008	<b>0.04930</b>	<del>0.02732</del>	<del>(0.00106)</del>	-	0.00678	-	<del>-0.08234</del>	0.07193	\$ <del>-0.15427</del>	
Off Peak Water Heating Use 16 Hour Control <sup>1</sup>	All kWh	\$ 0.04250	0.00008	<b>0.04258</b>	<del>0.02732</del>	<del>(0.00106)</del>	-	0.00678	-	<del>-0.07562</del>	0.07193	\$ <del>-0.14755</del>	
Off Peak Water Heating Use 6 Hour Control <sup>1</sup>	All kWh	\$ 0.04329	0.00008	<b>0.04337</b>	<del>0.02732</del>	<del>(0.00106)</del>	-	0.00678	-	<del>-0.07641</del>	0.07193	\$ <del>-0.14834</del>	
Farm <sup>1</sup>	All kWh	\$ 0.04646	0.00008	<b>0.04654</b>	<del>0.02732</del>	<del>(0.00106)</del>	-	0.00678	-	<del>-0.07958</del>	0.07193	\$ <del>-0.15151</del>	
D-10	Customer Charge	\$ 14.74		<b>14.74</b>						<b>14.74</b>		\$ <b>14.74</b>	
	On Peak kWh	\$ 0.10580	0.00008	<b>0.10588</b>	<del>0.02388</del>	<del>(0.00105)</del>	-	0.00678	-	<del>-0.13549</del>	0.07193	\$ <del>-0.20742</del>	
	Off Peak kWh	\$ 0.00145	0.00008	<b>0.00153</b>	<del>0.02388</del>	<del>(0.00105)</del>	-	0.00678	-	<del>-0.03114</del>	0.07193	\$ <del>-0.10307</del>	
	Customer Charge	\$ 384.39		<b>384.39</b>						<b>384.39</b>		\$ <b>384.39</b>	
	Demand Charge	\$ 8.18		<b>8.18</b>						<b>8.18</b>		\$ <b>8.18</b>	
	On Peak kWh	\$ 0.00525	0.00008	<b>0.00533</b>	<del>0.02130</del>	<del>(0.00105)</del>	-	0.00678	-	<del>-0.03236</del>			
											Effective 2/1/20, usage on or after	0.09749	\$ <del>-0.12985</del>
											Effective 3/1/20, usage on or after	0.07777	\$ <del>-0.11013</del>
											Effective 4/1/20, usage on or after	0.06715	\$ <del>-0.09951</del>
											Effective 5/1/20, usage on or after	0.05868	\$ <del>-0.09104</del>
											Effective 6/1/20, usage on or after	0.05246	\$ <del>-0.08482</del>
											Effective 7/1/20, usage on or after	0.05790	\$ <del>-0.09026</del>
G-1	Off Peak kWh	\$ 0.00156	0.00008	<b>0.00164</b>	<del>0.02130</del>	<del>(0.00105)</del>	-	0.00678	-	<del>-0.02867</del>			
											Effective 2/1/20, usage on or after	0.09749	\$ <del>-0.12616</del>
											Effective 3/1/20, usage on or after	0.07777	\$ <del>-0.10644</del>
											Effective 4/1/20, usage on or after	0.06715	\$ <del>-0.09582</del>
											Effective 5/1/20, usage on or after	0.05868	\$ <del>-0.08735</del>
											Effective 6/1/20, usage on or after	0.05246	\$ <del>-0.08113</del>
											Effective 7/1/20, usage on or after	0.05790	\$ <del>-0.08657</del>
	Customer Charge	\$ 64.08		<b>64.08</b>						<b>64.08</b>		\$ <b>64.08</b>	
	Demand Charge	\$ 8.23		<b>8.23</b>						<b>8.23</b>		\$ <b>8.23</b>	
	All kWh	\$ 0.00206	0.00008	<b>0.00214</b>	<del>0.02437</del>	<del>(0.00102)</del>	-	0.00678	-	<del>-0.03227</del>			
											Effective 2/1/20, usage on or after	0.09749	\$ <del>-0.12976</del>
											Effective 3/1/20, usage on or after	0.07777	\$ <del>-0.11004</del>
											Effective 4/1/20, usage on or after	0.06715	\$ <del>-0.09942</del>
											Effective 5/1/20, usage on or after	0.05868	\$ <del>-0.09095</del>
											Effective 6/1/20, usage on or after	0.05246	\$ <del>-0.08473</del>
											Effective 7/1/20, usage on or after	0.05790	\$ <del>-0.09017</del>
G-3	Customer Charge	\$ 14.74		<b>14.74</b>						<b>14.74</b>		\$ <b>14.74</b>	
	All kWh	\$ 0.04674	0.00008	<b>0.04682</b>	<del>0.02486</del>	<del>(0.00104)</del>	-	0.00678	-	<del>-0.07742</del>	0.07193	\$ <del>-0.14935</del>	
M	All kWh	\$ -	0.00008	<b>0.00008</b>	<del>0.01483</del>	<del>(0.00103)</del>	-	0.00678	-	<del>-0.02066</del>	0.07193	\$ <del>-0.09259</del>	
T	Customer Charge	\$ 14.74		<b>14.74</b>						<b>14.74</b>		\$ <b>14.74</b>	
	All kWh	\$ 0.04067	0.00008	<b>0.04075</b>	<del>0.02762</del>	<del>(0.00108)</del>	-	0.00678	-	<del>-0.07407</del>	0.07193	\$ <del>-0.14600</del>	
V	Minimum Charge	\$ 14.74		<b>14.74</b>						<b>14.74</b>		\$ <b>14.74</b>	
	All kWh	\$ 0.04805	0.00008	<b>0.04813</b>	<del>0.02515</del>	<del>(0.00103)</del>	-	0.00678	-	<del>-0.07903</del>	0.07193	\$ <del>-0.15096</del>	

<sup>1</sup> Rate is a subset of Domestic Rate D

Dated: **January 28, 2020**  
Effective: **February 1, 2020**

Issued by: /s/Susan L. Fleck  
Susan L. Fleck  
Title: President

Authorized by NHPUC Order No. 26,320 in Docket DE 19-059, Dated December 23, 2019