



Steven E. Mullen
Director, Rates and Regulatory Affairs
15 Buttrick Rd.
Londonderry, NH 03053
603-216-3516
Steven.Mullen@libertyutilities.com

May 27, 2021

Via Electronic Mail

Debra A. Howland
Executive Director
New Hampshire Public Utilities Commission
21 South Fruit St., Suite 10
Concord, NH 03301-2429

Dear Ms. Howland:

**Re: DE 17-136; Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty
Energy Efficiency Programs
Performance Incentive Calculation – YE 2020**

Enclosed for filing with the Commission is Liberty's performance incentive calculations related to the Energy Efficiency Programs for year end 2020. The Commission approved the 2020 programs in its Order No. 26, 207 issued on December 31, 2019.

Thank you for your attention to this matter. Please do not hesitate to call if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Steven E. Mullen". The signature is written in a cursive, flowing style.

Steven E. Mullen

Enclosure

Cc: Service List

NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

d/b/a

LIBERTY

ENERGY EFFICIENCY PROGRAMS - 2020 YEAR-END REPORT

NHPUC Docket No. DE 17-136

May 27, 2021



TABLE OF CONTENTS

Summary of 2020 Program Activity.....	2
Table 1a - Program Cost Effectiveness - 2020 Plan.....	3
Table 1b - Program Cost Effectiveness - 2020 Actual	3
Table 1c - Percent of Plan Program Cost Effectiveness Targets Achieved	3
Table 2a - Present Value Benefits - 2020 Plan.....	4
Table 2b - Present Value Benefits - 2020 Actual.....	4
Table 2c - Percent of Plan Present Value Benefits Achieved.....	4
Table 3- Performance Incentive Calculation – 2020 Planned versus Actual.....	5
Table 4 - Program Expenditures by Category – 2020 Actual.....	6
Table 5 - Granite State Electric Company Energy Efficiency Revenue/Expense Balance.....	7
Table 6 - RGGI RFP – Retail & Large Business Energy Reduction Partners Program Performance Incentive Calculation – 2020.....	8
Table 7a - Lost Base Revenue – 2020 Forecast.....	9
Table 7b - Lost Base Revenue – 2020 Actual.....	10
Table 7c - Lost Base Revenue – 2020 Actual C&I kW Savings	11
Table 7d - Lost Base Revenue – 2020 Actual Calculation	12
Table 8 - Calculation of Average Distribution Rates.....	13

SUMMARY OF 2020 PROGRAM ACTIVITY

This report presents the results of Liberty Utilities (Granite State Electric) Corp.'s d/b/a Liberty ("Liberty" or "Company") residential and commercial & industrial energy efficiency programs for calendar year 2020.

Table 1a, Table 1b and Table 1c show the 2020 year-end performance for the commercial & industrial and residential programs and the annual goals and spending targets. Overall, the Company achieved 109% and 101% of its goals for annual and lifetime MWh savings respectively. The Company achieved 160% and 127% of its goals for winter and summer kW savings. The Company achieved 139% of its planned participation while spending 93% of its planned budget in 2020. In addition, 90% of the annual, and 84% of the lifetime, total energy savings generated were for electricity.

Table 2a, Table 2b and Table 2c document the value created by the 2020 energy efficiency programs. Overall, efforts in 2020 created over \$17.3 million of value through achieved energy, demand and other resource savings.

Table 3 documents the Company's earned 2020 year-end performance incentive of \$320,987. As specified by the Commission, the performance incentive for 2020 has been documented using assumptions that are consistent with assumptions used to develop program-year goals. Table 3a summarizes the performance incentive calculation by component (portfolio). As specified by the Commission, results for all programs have been included in the performance incentive calculation.

Table 4 documents the Company's expenses by Program. Overall, the Company had a total of \$5,665,477 of expenses in 2020, including \$39,446 in ISO-NE FCM expenses.

Table 5 provides the 2020 year-end energy efficiency fund balance. The table reflects revenues collected in support of energy efficiency efforts, 2020 spending levels, and the 2020 incentive. Table 5 summarizes the 2020 year-end energy efficiency fund balances for both the residential and commercial & industrial sectors.

Table 6 documents the Company's earned 2020 year-end RGGI RFP – Retail & Large Business Energy Reduction Partners Program performance incentive of \$0.

Table 7a documents the Company's forecasted annualized kWh savings by month, commercial & industrial kW savings by month, and the total lost base revenue calculation.

Table 7b, Table 7c and Table 7d document the actual annualized kWh savings by month, the actual commercial & industrial kW savings by month, and the associated lost base revenue calculation. There was a total program actual annualized savings by month of 13,768,647 kWh, a total C&I actual savings by month of 593 kW, and a total lost base revenue of \$356,482 for 2020.

Table 8 details the calculation of average distribution rates, excluding customer, meter and luminaire charges calculation.

Table 1a. Program Cost-Effectiveness - 2020 PLAN

	Total Resource Benefit/Cost Ratio	Present Value			Performance Incentive (\$000)	Annual MWh Savings	Lifetime MWh Savings	Winter kW Savings	Summer kW Savings	Number of Customers Served	Annual MMBTU Savings	Lifetime MMBTU Savings
		Benefit (\$000)	Utility Costs (\$000)	Customer Costs (\$000)								
Residential Programs												
ENERGY STAR Homes	2.84	\$ 1,557	\$ 359	\$ 189		173	3,903	18	40	149	1,746	41,666
Home Performance with Energy Star	2.06	\$ 1,784	\$ 577	\$ 287		169	2,389	16	27	214	4,126	65,497
ENERGY STAR Products ¹	1.91	\$ 846	\$ 367	\$ 76		845	6,614	206	112	13,846	184	2,631
Home Energy Assistance	1.93	\$ 2,316	\$ 1,202	\$ -		123	1,649	11	16	124	4,890	106,013
Home Energy Reports	1.20	\$ 146	\$ 121	\$ -		453	1,192	97	71	10,256	-	-
ISO NE FCM - Residential	0.00	\$ -	\$ 27	\$ -		-	-	-	-	-	-	-
Subtotal Residential	2.07	\$ 6,649	\$ 2,654	\$ 552		1,762	15,748	347	266	24,589	10,946	215,807
Commercial & Industrial Programs												
Large Business	2.42	\$ 8,804	\$ 1,899	\$ 1,740		7,476	106,441	508	626	129	-	-
Small Business	1.60	\$ 3,316	\$ 1,209	\$ 866		3,007	40,776	170	218	247	-	-
C&I Education	0.00	\$ -	\$ 73	\$ -		-	-	-	-	-	-	-
Municipal	1.74	\$ 354	\$ 167	\$ 37		354	4,938	12	13	11	-	-
ISO NE FCM - C&I	0.00	\$ -	\$ 63	\$ -		-	-	-	-	-	-	-
Subtotal Commercial & Industrial	2.06	\$ 12,474	\$ 3,410	\$ 2,642		10,836	152,155	690	857	387	-	-
Total	2.07	\$ 19,123	\$ 6,064	\$ 3,194	\$ 334	12,599	167,903	1,037	1,123	24,976	10,946	215,807

Note: a 10% NEI adder is applied to total benefits, and an additional 10% NEI adder is applied to total benefits of the Home Energy Assistance program, excluding water.

Annual kWh Savings	12,598,839	80% kWh > 55%
Annual MMBTU Savings (in kWh)	3,207,946	20%
	15,806,784	100%

Lifetime kWh Savings	167,902,537	73% kWh > 55%
Lifetime MMBTU Savings (in kWh)	63,249,400	27%
	231,151,937	100%

Table 1b. Program Cost-Effectiveness - 2020 ACTUAL

	Total Resource Benefit/Cost Ratio	Present Value			Performance Incentive (\$000)	Annual MWh Savings	Lifetime MWh Savings	Winter kW Savings	Summer kW Savings	Number of Customers Served	Annual MMBTU Savings	Lifetime MMBTU Savings
		Benefit (\$000)	Utility Costs (\$000)	Customer Costs (\$000)								
Residential Programs												
ENERGY STAR Homes	2.11	\$ 426	\$ 176	\$ 25		148.9	3,291	43	16	39	240	5,715
Home Performance with ENERGY STAR	2.68	\$ 1,967	\$ 565	\$ 168		136.4	2,934	13	31	88	3,487	77,226
ENERGY STAR Products	1.82	\$ 1,169	\$ 540	\$ 102		1,366.1	10,035	350	176	23,412	296	4,389
Home Energy Assistance	1.18	\$ 1,090	\$ 922	\$ -		554.8	6,304	45	64	1,262	883	14,844
Home Energy Reports	0.97	\$ 103	\$ 105	\$ -		791.5	791	169	123	9,532	-	-
ISO-NE FCM	0.00	\$ -	\$ 17	\$ -		-	-	-	-	-	-	-
Subtotal Residential	1.81	\$ 4,754	\$ 2,325	\$ 295		2,997.7	23,356	621	411	34,333	4,906	102,173
Commercial & Industrial Programs												
Large Business	2.35	\$ 7,585	\$ 1,620	\$ 1,607		6,537	89,034	606	594	94	-	-
Small Business	1.52	\$ 4,500	\$ 1,503	\$ 1,463		3,824	51,460	388	363	221	51	1,285
C&I Education	0.00	\$ -	\$ 29	\$ -		-	-	-	-	-	-	-
Municipal	1.80	\$ 554	\$ 165	\$ 142		410	5,337	41	55	15	189	4,725
ISO-NE FCM	0.00	\$ -	\$ 22	\$ -		-	-	-	-	-	-	-
Subtotal Commercial & Industrial	1.93	\$ 12,638	\$ 3,341	\$ 3,212		10,771	145,831	1,034	1,012	330	240	6,010
Total	1.83	\$ 17,392	\$ 5,665	\$ 3,507	\$ 321	13,769	169,186	1,655	1,422	34,663	5,147	108,183

Annual kWh Savings	13,768,892	90% kWh > 55%
Annual MMBTU Savings (in kWh)	1,508,388	10%
Total Energy Savings	15,277,280	100%

Lifetime kWh Savings	169,186,472	84% kWh > 55%
Lifetime MMBTU Savings (in kWh)	31,706,741	16%
Total Energy Savings	200,893,213	100%

Table 1c. Percent of Plan Program Cost-Effectiveness Targets Achieved

	Total Resource Benefit/Cost Ratio	Present Value			Performance Incentive (\$000)	Annual MWh Savings	Lifetime MWh Savings	Winter kW Savings	Summer kW Savings	Number of Customers Served	Annual MMBTU Savings	Lifetime MMBTU Savings
		Benefit (\$000)	Utility Costs (\$000)	Customer Costs (\$000)								
Residential Programs	87%	71%	88%	53%	n/a	170%	148%	179%	155%	140%	45%	47%
Commercial & Industrial Programs	94%	101%	98%	122%	n/a	99%	96%	150%	118%	85%	0%	0%
Total	89%	91%	93%	110%	96%	109%	101%	160%	127%	139%	47%	50%

Table 2a. Present Value Benefits - 2020 PLAN

	Total Benefits (\$000)	Resource Benefits										Non-Resource Benefits					
		Electric					Non - Electric					Total Resource Benefits	Fossil Emissions	Other Non-Resource Benefits	Total Non-Resource Benefits		
		CAPACITY				ENERGY											
		Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	Electric DRIPE	Total Electric Resource Benefits					Other Fuels Benefits	Fossil Emissions
Residential Programs																	
ENERGY STAR Homes	\$1,557	\$60	\$0	\$62	\$54	\$60	\$77	\$25	\$32	\$9	\$379	\$991	\$2	\$1,372	\$48	\$137	\$185
Home Performance w/Energy Star	\$1,784	\$32	\$0	\$35	\$30	\$42	\$48	\$17	\$19	\$8	\$232	\$1,318	\$10	\$1,559	\$70	\$155	\$225
ENERGY STAR Products	\$846	\$60	\$0	\$78	\$68	\$155	\$114	\$70	\$48	\$36	\$629	\$42	\$105	\$776	\$3	\$67	\$70
Home Energy Assistance	\$2,316	\$20	\$0	\$21	\$18	\$31	\$33	\$12	\$13	\$6	\$153	\$1,671	\$6	\$1,829	\$122	\$365	\$486
Home Energy Reports	\$146	\$11	\$0	\$17	\$15	\$31	\$26	\$11	\$10	\$11	\$133	\$0	\$0	\$133	\$0	\$13	\$13
Subtotal Residential	\$14,823	\$183	\$0	\$214	\$186	\$319	\$298	\$135	\$121	\$69	\$1,525	\$4,022	\$123	\$5,669	\$243	\$737	\$980
Commercial & Industrial Programs																	
Large Business	\$8,804	\$594	\$0	\$682	\$592	\$1,940	\$2,181	\$803	\$847	\$365	\$8,004	\$0	\$0	\$8,004	\$0	\$800	\$800
Small Business	\$3,316	\$199	\$0	\$230	\$199	\$818	\$782	\$332	\$310	\$145	\$3,015	\$0	\$0	\$3,015	\$0	\$301	\$301
C&I Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Municipal	\$354	\$10	\$0	\$12	\$11	\$99	\$105	\$31	\$35	\$17	\$321	\$0	\$0	\$321	\$0	\$32	\$32
Subtotal Commercial & Industrial	\$12,474	\$803	\$0	\$924	\$802	\$2,857	\$3,068	\$1,166	\$1,192	\$527	\$11,340	\$0	\$0	\$11,340	\$0	\$1,134	\$1,134
Total	\$27,297	\$986	\$0	\$1,138	\$987	\$3,176	\$3,367	\$1,302	\$1,313	\$595	\$12,865	\$4,022	\$123	\$17,009	\$243	\$1,871	\$2,114

Table 2b. Present Value Benefits - 2020 ACTUAL

	Total Benefits (\$000)	Resource Benefits										Non-Resource Benefits					
		Electric					Non - Electric					Total Resource Benefits	Fossil Emissions	Other Non-Resource Benefits	Total Non-Resource Benefits		
		CAPACITY				ENERGY											
		Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	Electric DRIPE	Total Electric Resource Benefits					Other Fuels Benefits	Fossil Emissions
Residential Programs																	
ENERGY STAR Homes	\$426	\$24	\$0	\$25	\$22	\$71	\$71	\$12	\$14	\$7	\$248	\$132	\$2	\$381	\$7	\$38	\$45
Home Performance w/Energy Star	\$1,967	\$45	\$0	\$47	\$41	\$45	\$59	\$19	\$24	\$7	\$287	\$1,416	\$0	\$1,703	\$94	\$170	\$265
ENERGY STAR Products	\$1,169	\$88	\$0	\$117	\$101	\$245	\$173	\$106	\$70	\$57	\$957	\$76	\$28	\$1,061	\$5	\$103	\$108
Home Energy Assistance	\$1,090	\$70	\$0	\$77	\$67	\$128	\$132	\$43	\$44	\$24	\$585	\$308	\$0	\$893	\$18	\$179	\$196
Home Energy Reports	\$103	\$9	\$0	\$12	\$10	\$21	\$18	\$7	\$6	\$9	\$93	\$0	\$0	\$93	\$0	\$9	\$9
Subtotal Residential	\$4,754	\$236	\$0	\$278	\$241	\$511	\$454	\$187	\$159	\$104	\$2,170	\$1,931	\$30	\$4,131	\$123	\$499	\$623
Commercial & Industrial Programs																	
Large Business	\$7,585	\$531	\$0	\$617	\$535	\$1,803	\$1,704	\$736	\$653	\$316	\$6,895	\$0	\$0	\$6,895	\$0	\$690	\$690
Small Business	\$4,500	\$331	\$0	\$382	\$331	\$1,095	\$973	\$425	\$360	\$184	\$4,082	\$8	\$0	\$4,089	\$1	\$409	\$410
C&I Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Municipal	\$554	\$49	\$0	\$57	\$49	\$119	\$88	\$53	\$37	\$20	\$471	\$28	\$0	\$499	\$5	\$50	\$55
Subtotal Commercial & Industrial	\$12,638	\$911	\$0	\$1,056	\$916	\$3,018	\$2,764	\$1,214	\$1,051	\$519	\$11,448	\$36	\$0	\$11,484	\$6	\$1,148	\$1,154
Total	\$17,392	\$1,147	\$0	\$1,334	\$1,157	\$3,528	\$3,218	\$1,401	\$1,210	\$623	\$13,618	\$1,967	\$30	\$15,615	\$129	\$1,648	\$1,777

Table 2c. Percent of Plan Present Value Benefits Achieved

	Total Benefits (\$000)	Resource Benefits										Non-Resource Benefits					
		Electric					Non - Electric					Total Resource Benefits	Fossil Emissions	Other Non-Resource Benefits	Total Non-Resource Benefits		
		CAPACITY				ENERGY											
		Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	Electric DRIPE	Total Electric Resource Benefits					Other Fuels Benefits	Fossil Emissions
Residential Programs	32%	129%	0%	130%	130%	160%	152%	138%	132%	152%	142%	48%	24%	73%	51%	68%	64%
Commercial & Industrial Programs	101%	113%	0%	114%	114%	106%	90%	104%	88%	99%	101%	0%	0%	101%	0%	101%	102%
Total	64%	116%	0%	117%	117%	111%	96%	108%	92%	105%	106%	49%	24%	92%	53%	88%	84%

Table 3. Performance Incentive Calculation - 2020

Row	Category	Planned	Threshold	Actual	% of Plan	Design Coefficient	Actual Coefficient	Planned PI	125% of Planned PI	Actual PI	Source
1	Lifetime kWh Savings	167,902,537	125,926,903	169,186,472	101%	1.925%	1.940%	\$ 116,738	\$ 145,922	\$ 109,894	Program Cost Effectiveness (Page 1 of 3)
2	Annual kWh Savings	12,598,839	9,449,129	13,768,892	109%	0.550%	0.601%	\$ 33,354	\$ 41,692	\$ 34,054	Program Cost Effectiveness (Page 1 of 3)
3	Summer Peak Demand kW ¹	1,122.7948	729.8166	1,422.4264	127%	0.660%	0.825%	\$ 40,024	\$ 50,030	\$ 46,740	Program Cost Effectiveness (Page 1 of 3)
4	Winter Peak Demand kW ¹	1,036.5618	673.7652	1,654.9044	160%	0.440%	0.550%	\$ 26,683	\$ 33,354	\$ 31,160	Program Cost Effectiveness (Page 1 of 3)
5	Total Resource Benefits	\$ 17,009,304		15,614,697	92%						Present Value Benefits (Page 2 of 3)
6	Total Utility Costs ²	\$ 6,064,297		5,665,477	93%						Program Cost Effectiveness (Page 1 of 3)
7	Net Benefits	\$ 10,945,007	\$ 8,208,755	\$ 9,949,220	91%	1.925%	1.750%	\$ 116,738	\$ 145,922	\$ 99,138	Row 5 Minus Row 6
8	Total					5.500%	5.666%	\$ 333,536	\$ 416,920	\$ 320,987	Sum of Rows 1, 2, 3, 4 & 7

Row	Category	Total Resource Cost Test		Source
		Planned	Actual	
9	Total Benefits (incl. NEIs)	\$ 19,122,952	\$ 17,391,907	Present Value Benefits (Page 2 of 3)
10	Performance Incentive	\$ 333,536	\$ 320,987	Row 8
11	Participant Costs	\$ 3,194,023	\$ 3,506,823	Program Cost Effectiveness (Page 1 of 3)
12	Total Utility Costs	\$ 6,064,297	\$ 5,665,477	Row 6
13	Total Resource Benefit / Cost Ratio	1.99	1.83	Row 9 Divided by Rows 10+11+12

All dollar values are expressed in 2020 dollars.

¹Category percentage of actual plan achievement exceeds 125% cap level, therefore maximum actual coefficient multiplier value applied."

²In order to avoid circular reference in the calculation of the Performance Incentive (PI), "Total Utility Costs" does not include the value of the PI.

Table 4. Program Expenditures by Category - 2020 ACTUAL

	Evaluation	External Administration	Internal Administration	Internal Implementation	Marketing	Rebates-Services	Total
Residential Programs							
ENERGY STAR Homes	\$ 12,092	\$ 1,254	\$ 2,346	\$ 29,769	\$ 5,257	\$ 125,543	\$ 176,261
Home Performance with ENERGY STAR	\$ 19,429	\$ 2,015	\$ 3,174	\$ 36,611	\$ 7,112	\$ 496,887	\$ 565,229
ENERGY STAR Products	\$ 12,369	\$ 1,283	\$ 2,346	\$ 23,854	\$ 10,225	\$ 489,463	\$ 539,539
Home Energy Assistance	\$ 40,458	\$ 4,197	\$ 7,915	\$ 120,643	\$ 17,740	\$ 730,624	\$ 921,576
Home Energy Reports	\$ 4,012	\$ 386	\$ 1,315	\$ 9,182	\$ -	\$ 90,502	\$ 105,397
ISO-NE FCM	\$ 16,962	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16,962
Subtotal Residential	\$ 105,322	\$ 9,135	\$ 17,096	\$ 220,059	\$ 40,333	\$ 1,933,018	\$ 2,324,965
Commercial & Industrial Programs							
C&I Education	\$ 2,665	\$ 254	\$ 974	\$ 7,092	\$ 800	\$ 17,388	\$ 29,173
Large Business Energy Solutions	\$ 63,125	\$ 6,631	\$ 12,427	\$ 147,269	\$ 19,697	\$ 1,371,224	\$ 1,620,373
Small Business Energy Solutions	\$ 44,074	\$ 5,634	\$ 8,618	\$ 106,338	\$ 12,566	\$ 1,325,891	\$ 1,503,121
Municipal	\$ 5,083	\$ 449	\$ 1,492	\$ 11,420	\$ 1,382	\$ 145,536	\$ 165,361
ISO-NE FCM	\$ 22,484	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 22,484
Subtotal Commercial & Industrial	\$ 137,431	\$ 12,968	\$ 23,510	\$ 272,119	\$ 34,445	\$ 2,860,039	\$ 3,340,512
Total	\$ 242,754	\$ 22,103	\$ 40,607	\$ 492,178	\$ 74,778	\$ 4,793,058	\$ 5,665,477

**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty
Energy Efficiency Programs 2020 Year End Report**
NHPUC Docket No. DE 17-136

**Table 5. Revenue and Expense Balance
12 Months Actual 2020**

			2020
1	Beginning Balance: 1/1/2020	(Over) / Under	\$1,283,557.97
Revenues			
2	System Benefits Charge		\$4,614,349.00
3	RGGI Funding		\$214,280.00
4	FCM Payments		\$623,179.00
5	Interest		<u>\$76,676.27</u>
6	Total Revenues	Sum Lines 2 - 5	\$5,528,484.27
Expenses			
7	Program Expenses		\$5,665,477.04
8	Performance Incentive - 2020	Table 3a	<u>\$320,986.69</u>
9	Total Expenses	Sum Lines 7 - 8	\$5,986,463.73
10	Ending Balance: 12/31/2020	Lines 1 + 6 - 9	<u><u>\$825,578.51</u></u>

**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty
Energy Efficiency Programs 2020 Year End Report
NHPUC Docket No. DE 17-136**

**Table 6. RGGI RFP – Retail & Large Business Energy Reduction Partners
Program Performance Incentive Calculation - 2020**

Total RGGI Grant Expenses 2020	\$0
Percentage for PI calculation	7.50%
TOTAL RGGI RFP INCENTIVE EARNED	\$0

Table 7a. Lost Base Revenue - 2020 Forecast
Estimated Monthly and Cumulative Savings (kWh) and Lost Base Revenue
January 1, 2020 to December 31, 2020

Line	Description	Carryforward :	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	2020 Annual kWh and
		12/31/2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	June 2020	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Col. O	Monthly kWh Savings	
	Col. A	Col. B	Col. C	Col. D	Col. E	Col. F	Col. G	Col. H	Col. I	Col. J	Col. K	Col. L	Col. M	Col. N			
1	Residential Annual kWh Savings (2020)	2,246,439	146,882	146,882	146,882	146,882	146,882	146,882	146,882	146,882	146,882	146,882	146,882	146,882	146,882		1,762,578
2	C&I Annual kWh Savings (2017 & 2018)	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
3	C&I Annual kWh Savings (2020)	6,977,921	903,036	903,036	903,036	903,036	903,036	903,036	903,036	903,036	903,036	903,036	903,036	903,036	903,036		10,836,436
4	C&I Monthly Installed kW Savings*	901	120	120	120	120	120	120	120	120	120	120	120	120	120		1,444
																	13,858,915
																	1,588
																	Total 2019
																	Lost Base Revenue
5	Monthly Residential Savings (2020)		11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300	11,300		
6	Cumulative Residential Savings	187,203	198,503	209,803	221,103	232,403	243,703	255,003	266,303	277,603	288,903	300,203	311,503	322,803			
7	Average Residential Distribution Rate		0.04349	0.04349	0.04349	0.04349	0.04349	0.04349	0.04349	0.04349	0.04349	0.04349	0.04349	0.04349	0.04349		
8	Lost Residential Revenue		\$ 8,633	\$ 9,125	\$ 9,616	\$ 10,108	\$ 10,599	\$ 11,091	\$ 11,582	\$ 12,074	\$ 12,565	\$ 13,057	\$ 13,548	\$ 14,040		\$	136,039
9	Monthly C&I Savings (2017 & 2018)		-	-	-	-	-	-	-	-	-	-	-	-	-		
10	Average C&I kWh Distribution Rate		-	-	-	-	-	-	-	-	-	-	-	-	-		
11	Lost C&I kWh Revenue		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$	
12	Monthly C&I Savings (2020)		69,500	69,500	69,500	69,500	69,500	69,500	69,500	69,500	69,500	69,500	69,500	69,500	69,500		
13	Cumulative C&I Savings	581,493	650,993	720,493	789,993	859,493	928,993	998,493	1,067,993	1,137,493	1,206,993	1,276,493	1,345,993	1,415,493			
14	Average C&I kWh Distribution Rate		0.00873	0.00873	0.00873	0.00873	0.00873	0.00873	0.00873	0.00873	0.00873	0.00873	0.00873	0.00873	0.00873		
15	Lost C&I kWh Revenue		\$ 5,681	\$ 6,287	\$ 6,894	\$ 7,500	\$ 8,107	\$ 8,713	\$ 9,320	\$ 9,926	\$ 10,533	\$ 11,139	\$ 11,746	\$ 12,352		\$	108,200
16	Monthly C&I kWh Savings (2020)		60	60	60	60	60	60	60	60	60	60	60	60	60		
17	Cumulative Monthly C&I kWh Savings	75.08	135	256	376	496	617	737	857	978	1,098	1,218	1,339	1,459			
18	Average C&I Demand Rate		\$ 7.65	\$ 7.65	\$ 7.65	\$ 7.65	\$ 7.65	\$ 7.65	\$ 7.65	\$ 7.65	\$ 7.65	\$ 7.65	\$ 7.65	\$ 7.65			
19	Lost C&I Demand Revenue		\$ 1,035	\$ 1,956	\$ 2,877	\$ 3,798	\$ 4,719	\$ 5,640	\$ 6,561	\$ 7,482	\$ 8,403	\$ 9,324	\$ 10,245	\$ 11,166		\$	73,210
20	Total Lost C&I kWh and Demand Revenue		\$ 6,716	\$ 8,244	\$ 9,771	\$ 11,299	\$ 12,826	\$ 14,354	\$ 15,881	\$ 17,409	\$ 18,936	\$ 20,464	\$ 21,991	\$ 23,519		\$	181,410
21	Total Lost Revenue		\$ 15,350	\$ 17,369	\$ 19,388	\$ 21,407	\$ 23,426	\$ 25,445	\$ 27,464	\$ 29,482	\$ 31,501	\$ 33,520	\$ 35,539	\$ 37,558		\$	317,448

Lines 1-3: Company Forecast
 Line 4: Line 1 + Line 2 + Line 3
 Line 5: Company Forecast
 Line 6: Line 5
 Line 7: Line 2 / 12
 Line 8: Prior Month Line 8 + Current Month Line 7
 Line 9: Page 8, Column 7
 Line 10: Line 8 x Line 9
 Line 11: Line 1 / 12
 Line 12: Page 8, Column 8
 Line 14: Line 3 / 12
 Line 15: Prior Month Line 15 + Current Month Line 14
 Line 16: Page 8, Column 7
 Line 17: Line 15 x Line 16
 Line 18: Line 5 / 12
 Line 19: Prior Month Line 19 + Current Month Line 18
 Line 20: Page 8, Column 6
 Line 21: Line 19 x Line 20
 Line 22: Line 10 + Line 13 + Line 17 + Line 21

**Table 7b. Lost Base Revenue - 2020 Actual
 Actual Monthly and Cumulative Savings (kWh) and Lost Base Revenue
 January 1, 2020 to December 31, 2020**

Line	Description	Carryforward as of 12/31/2019	Actual Jan 2020	Actual Feb 2020	Actual Mar 2020	Actual Apr 2020	Actual May 2020	Actual June 2020	Actual Jul 2020	Actual Aug 2020	Actual Sep 2020	Actual Oct 2020	Actual Nov 2020	Actual Dec 2020	Cumulative Jan - Dec 2020 LBR Savings
	Col. A	Col. B	Col. C	Col. D	Col. E	Col. F	Col. G	Col. H	Col. I	Col. J	Col. K	Col. L	Col. M	Col. N	Col. O
1	Residential Annual kWh Savings (2020) *	2,925,291	205,628	277,850	211,230	133,973	155,928	484,994	209,969	182,494	223,909	173,764	188,689	549,280	2,997,707
2	C&I Annual kWh Savings (2020)	7,221,506	125,100	134,075	711,904	1,097,686	374,987	1,489,152	249,568	385,293	996,095	970,379	2,312,498	1,924,204	10,770,939
3	C&I Annual Installed kW Savings	534	3.394	16.661	7.342	70.151	11.150	150.657	14.350	11.632	40.810	107.957	82.698	76.643	593.444
												110% capped annualized kWh savings		13,858,915	
												110% capped annualized kW savings		1,588	
															Cumulative 2017 - 2020
4	Monthly Residential Savings (2020)	243,774	17,136	23,154	17,602	11,164	12,994	40,416	17,497	15,208	18,659	14,480	15,724	45,773	
5	Cumulative Residential Savings	243,774	260,910	284,064	301,667	312,831	325,825	366,241	383,738	398,946	417,605	432,086	447,810	493,583	4,425,306
6	Average Residential Distribution Rate		0.05276	0.05276	0.05276	0.05276	0.05276	0.05276	0.05276	0.05276	0.05276	0.05276	0.05276	0.05276	
7	Lost Residential Revenue		\$ 13,766	\$ 14,987	\$ 15,916	\$ 16,505	\$ 17,191	\$ 19,323	\$ 20,246	\$ 21,048	\$ 22,033	\$ 22,797	\$ 23,626	\$ 26,041	\$ 233,479
															Cumulative 2017 - 2020
8	Monthly C&I Savings (2020)	601,792	10,425	11,173	59,325	91,474	31,249	124,096	20,797	32,108	83,008	80,865	192,708	160,350	
9	Cumulative C&I Savings	601,792	612,217	623,390	682,715	774,189	805,438	929,534	950,331	982,439	1,065,447	1,146,312	1,339,020	1,499,370	11,410,405
10	Average C&I kWh Distribution Rate		0.01019	0.01019	0.01019	0.01019	0.01019	0.01019	0.01019	0.01019	0.01019	0.01019	0.01019	0.01019	
11	Lost C&I kWh Revenue		\$ 6,238	\$ 6,352	\$ 6,957	\$ 7,889	\$ 8,207	\$ 9,472	\$ 9,684	\$ 10,011	\$ 10,857	\$ 11,681	\$ 13,645	\$ 15,279	\$ 116,272
12	Monthly C&I kW Savings (2020)	44,521	0.283	1.388	0.612	5.846	0.929	12.555	1.196	0.969	3.401	8.996	6.892	6.387	
13	Cumulative Monthly C&I kW Savings	44,521	44,804	46,193	46,804	52,650	53,580	66,134	67,330	68,299	71,700	80,697	87,588	93,975	779,754
14	Average C&I Demand Rate		\$ 8.6323	\$ 8.632	\$ 8.632	\$ 8.632	\$ 8.632	\$ 8.632	\$ 8.632	\$ 8.632	\$ 8.632	\$ 8.632	\$ 8.632	\$ 8.632	
15	Lost C&I Demand Revenue		\$ 387	\$ 399	\$ 404	\$ 454	\$ 463	\$ 571	\$ 581	\$ 590	\$ 619	\$ 697	\$ 756	\$ 811	\$ 6,731
16	Total Lost C&I kWh and Demand Revenue		\$ 6,625	\$ 6,751	\$ 7,361	\$ 8,343	\$ 8,670	\$ 10,043	\$ 10,265	\$ 10,601	\$ 11,476	\$ 12,378	\$ 14,401	\$ 16,090	\$ 123,003
17	Total Lost Revenue		\$ 20,391	\$ 21,738	\$ 23,277	\$ 24,848	\$ 25,860	\$ 29,366	\$ 30,511	\$ 31,649	\$ 33,509	\$ 35,174	\$ 38,027	\$ 42,131	\$ 356,482

* the kWh savings were adjusted for the 110% cap reached during the month of November 2019

Lines 1-2: Actual Annualized Residential + Commercial Savings
 Line 3: Actual Annualized kW Savings
 Line 4: Line 1 / 12
 Line 5: Prior Month Line 5 + Current Month Line 4
 Line 6: GSE Avg Distribution Rates, Line 5, Col. E
 Line 7: Line 5 x Line 6
 Line 8: Actual Monthly Savings
 Line 9: Cumulative Historical Savings Prior Month Line 9 + Current Month Line 8
 Line 10: GSE Avg Distribution Rates, Line 12 Col. E
 Line 11: Line 9 x Line 10
 Line 12: Line 3 / 12
 Line 13: Prior Month Line 13 + Current Month Line 12
 Line 14: GSE Avg Distribution Rates, Line 17, Col. E
 Line 15: Line 13 x Line 14
 Line 16: Line 11 + Line 15
 Line 17: Line 7 + Line 16

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty
Energy Efficiency Programs 2020 Year End Report
NHPUC Docket No. DE 17-136

Table 7b. Lost Base Revenue - 2020 Actual
Actual C&I kW Savings - New Component Beginning in Year 2019
January 1, 2020 to December 31, 2020

Line No.	Description	Liberty
1	Gross Annualized kWh Savings	10,875,266
2	Maximum Demand Factor (MDF)	Varies by measure
3	Extended Max. Load Reduction kW	1,603.5
4	% kW Demand Reduction at Customer Peak	Varies by measure
5	Sub-Total Customer Peak kW Reduction	1,127.7
6	% Net to Gross	100.00%
7	Sub-Total Customer Peak kW Reduction	1,127.7
8	% In-Service Rate	100.00%
9	Sub-Total Customer Peak kW Reduction	1,127.7
10	% kW Realization Rate	Varies by measure
11	Sub-Total Customer Peak kW Reduction	779.8
12	% Billing Adjustment to Reflect Ratchets (1)	100.00%
13	Sub-Total Customer Peak kW Reduction	779.8
14	% Retirement Adjustment	100.00%
15	Total Customer Peak kW Reduction, Full Year	779.8
16	% Annual Savings Achieved in First Year	n/a
17	Total Customer Peak Red. in First Year	779.8
18	Annualized (x12)	9,357.1
19	Average Distribution Rate (ADR)	\$ 8.632
20	LBR Calculation	\$ 6,731

Comments:

Above schedule mirrors the Template recommended by the LBRWG Report (p.6)
Gross Annualized kWh Savings includes 2020 (6,537,396 kWh) and 2019 (4,337,870 kWh)
Extended Max. Load Reduction kW includes 2020 (786.7 kW) and 2019 (816.80 kW)
Sub-Total Customer Peak kW Reduction includes 2020 (593.4 kW) and 2019 (534.3 kW)

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty
Energy Efficiency Programs 2020 Year End Report
NHPUC Docket No. DE 17-136

Table 7c. Lost Base Revenue - 2020 Actual
Actual Calculation for LBR New Methodology for Year 2019
January 1, 2020 to December 31, 2020

Description	Residential kWh	Commercial kWh	C&I kW	Total
Legacy (Measures Installed in 2017 and 2018): (1)				
1 Program Year 2017 Actual LBR Savings (2)	-	-	-	-
2 2020 Average Distribution Rate (ADR)	\$ 0.0528	\$ 0.0102	\$ -	-
3 Sub-Total LBR	\$ -	\$ -	\$ -	\$ -
4 Program Year 2018 Estimated LBR Savings	\$ -	\$ -	-	-
5 2020 Average Distribution Rate (ADR)	\$ 0.0528	\$ 0.0102	\$ -	-
6 Sub-Total LBR	\$ -	\$ -	\$ -	\$ -
7 Sub-Total Legacy (Measures Installed in 2017 and 2018)	-	-	-	-
8 Sub-Total Legacy LBR	\$ -	\$ -	\$ -	\$ -
New Methodology (Measures Installed in 2020 and forward):				
9 Program Year 2020 Estimated LBR Savings to be achieved (annualized)	2,997,707	10,770,939	593	13,769,240
10 Program Year 2020 Estimated LBR Savings to be achieved in 2020	4,425,306	11,410,405	780	15,836,491
11 2020 Average Distribution Rate (ADR)	\$ 0.0528	\$ 0.0102	\$ 8.6323	-
12 Sub-Total LBR (Line 2 x Line 3)	\$ 233,479	\$ 116,272	\$ 6,731	\$ 356,482
13 Total Actual LBR - Year 2020	\$ 233,479	\$ 116,272	\$ 6,731	\$ 356,482

Comments:

New methodology disaggregates kWh and kW components as specified in the Settlement Agreement in DE 17-136 (Order No. 26,095).

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities
Energy Efficiency Programs 2020 Year End Report
NHPUC Docket No. DE 17-136

Table 8. Calculation of Average Distribution Rates Excluding Customer, Meter, and per Luminaire Charges
Based on 2020 actual data

<u>Line</u>	<u>Rate Class</u> Col. A	2020		<u>Average</u> <u>\$/kWh</u> Col. D
		<u>Delivery</u> <u>kWh</u> Col. B	<u>Distribution</u> <u>Revenue</u> <u>Excluding</u> <u>Fixed Charges</u> Col. C	
1	Residential Rate D	289,130,347	\$ 15,451,552	
2	Residential D-6	767,754	\$ 35,827	
3	Residential TOU Rate D-10 All kWh	5,625,668	\$ 236,714	
4	Residential Electric Heat Rate T	13,698,537	\$ 591,810	
5	Residential Subtotal (kWh only)	309,222,306	\$ 16,315,904	\$ 0.05276
6	General Service Rate G-1 All kWh	339,620,279	\$ 1,337,553	
7	General Service Rate G-1 Credit for High Voltage (KV)	-	\$ -	
8	General Service Rate G-2 All kWh	131,822,452	\$ 317,878	
9	General Service Rate G-2 Credit for High Voltage (KV)	-	\$ -	
10	General Service Rate G-3 All kWh	79,968,319	\$ 3,954,515	
11	Commercial Electric Heat Rate V All kWh	259,731	\$ 13,119	
12	Commercial and Industrial Subtotal (kWh only)	551,670,781	\$ 5,623,064	\$ 0.01019
13	Outdoor Lighting Rate M	-	\$ -	
14	Total Retail	860,893,087	\$ 21,938,968	\$ 0.02548
<u>Line</u>	<u>Rate Class</u>	<u>KW</u>	<u>Distribution</u> <u>Revenue</u>	<u>\$/KW</u>
15	General Service Rate G-1 Demand Charge (KW)	903,352	\$ 7,784,840	
16	General Service Rate G-2 Demand Charge (KW)	472,216	\$ 4,089,508	
17	Total Retail per KW	1,375,568	\$ 11,874,348	\$ 8.63232

*Excludes customer charge and street light luminaire charges.