

NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

d/b/a

LIBERTY UTILITIES

NHSAVES EE PROGRAMS - 2019 YEAR-END REPORT

NHPUC Docket No. DE 17-136

Revised December 23, 2020



TABLE OF CONTENTS

Summary of 2019 Program Activity.....	2
Table 1a - Program Cost Effectiveness - 2019 Plan.....	3
Table 1b - Program Cost Effectiveness - 2019 Actual	3
Table 1c - Percent of Plan Program Cost Effectiveness Targets Achieved	3
Table 2a - Present Value Benefits - 2019 Plan.....	4
Table 2b - Present Value Benefits - 2019 Actual.....	4
Table 2c - Percent of Plan Present Value Benefits Achieved.....	4
Table 3a- Performance Incentive Calculation – 2019 Planned versus Actual.....	5
Table 3b - Achieved Benefit / Cost Ratio by Sector - 2019 Planned versus Actual.....	6
Table 3c - Actual Lifetime Energy Savings by Sector & Program 2019 Planned versus Actual.....	7
Table 4 - Program Expenditures by Category – 2019 Actual.....	8
Table 5 - Granite State Electric Company Energy Efficiency Revenue/Expense Balance.....	9
Table 6 - RGGI RFP – Retail & Large Business Energy Reduction Partners Program Performance Incentive Calculation – 2019.....	10
Table 7a - Lost Base Revenue – 2019 Forecast.....	11
Table 7b - Lost Base Revenue – 2019 Actual.....	12
Table 7c - Lost Base Revenue – 2019 Actual C&I kW Savings	13
Table 7d - Lost Base Revenue – 2019 Actual Calculation	14
Table 8 - Calculation of Average Distribution Rates.....	15

SUMMARY OF 2019 PROGRAM ACTIVITY

This report presents the results of Liberty Utilities (Granite State Electric) Corp.'s d/b/a Liberty Utilities ("Liberty Utilities" or "Company") residential and commercial & industrial energy efficiency programs for calendar year 2019.

Table 1a, Table 1b and Table 1c show the 2019 year-end performance for the commercial & industrial and residential programs and the annual goals and spending targets. Overall, the Company achieved 110% and 99% of its goals for annual and lifetime energy savings respectively. The Company achieved 110% and 103% of its goals for winter and summer demand savings. The Company achieved 111% of its planned participation while spending 92% of its planned budget in 2019. In addition, 87% of the annual, and 77% of the lifetime, total energy savings generated were for electricity.

Table 2a, Table 2b and Table 2c document the value created by the 2019 energy efficiency programs. Overall, efforts in 2019 created over \$13.8 million of value through achieved energy, demand and other resource savings.

Table 3a documents the Company's earned 2019 year-end performance incentive of \$196,000. As specified by the Commission, the performance incentive for 2019 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 (commercial & industrial and residential). As specified by the Commission, results for all programs have been included in the performance incentive calculation.

Table 3b provides the actual Total Resource Cost (TRC) benefit/cost ratio for each program, by sector (commercial & industrial and residential), and for the entire portfolio of energy efficiency programs implemented in 2019. The overall benefit/cost ratio for energy efficiency efforts in 2019 for residential was 2.40 and for commercial & industrial was 1.88.

Table 3c documents the Company's savings by sector and program. Overall, the Company achieved 116,700 megawatt hours of lifetime energy savings.

Table 4 documents the Company's expenses by Program. Overall, the Company had a total of \$3,721,019 of expenses in 2019, including \$43,182 in ISO-NE FCM expenses.

Table 5 provides the 2019 year-end energy efficiency fund balance. The table reflects revenues collected in support of energy efficiency efforts, 2019 spending levels, and the 2019 incentive. Table 5 summarizes the 2019 year-end energy efficiency fund balances for both the residential and commercial & industrial sectors.

Table 6 documents the Company's earned 2019 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 10,146,797 kWh, a total C&I actual savings by month of 534 kW, and a total lost base revenue of \$107,427 for 2019.

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

Table 1a. Program Cost-Effectiveness - 2019 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	6.30	\$ 1,663	\$ 185	\$ 79		329	7,935	33	77	73	1,171	29,189	
Home Performance with ENERGY STAR	2.03	\$ 1,230	\$ 355	\$ 251		88	1,328	10	16	83	2,452	49,020	
ENERGY STAR Products ¹	2.10	\$ 729	\$ 302	\$ 46		988	6,469	269	118	14,459	132	1,886	
Home Energy Assistance	1.73	\$ 1,196	\$ 690	\$ -		173	1,698	11	14	72	1,998	45,207	
Home Energy Reports	1.43	\$ 185	\$ 129	\$ -		668	1,991	87	63	12,000	-	-	
ISO NE FCM - Residential	0.00	\$ -	\$ -	\$ -		-	-	-	-	-	-	-	
	0.00	\$ -	\$ 20	\$ -		-	-	-	-	-	-	-	
Subtotal Residential	2.43	\$ 5,003	\$ 1,681	\$ 376	\$ 92	2,246	19,421	410	288	26,686	5,753	125,301	
Commercial & Industrial Programs													
Large Business	2.73	\$ 6,180	\$ 1,231	\$ 1,030		4,717	67,850	522	617	101	-	-	
Small Business	1.66	\$ 2,428	\$ 878	\$ 587		1,986	26,724	175	248	95	-	-	
C&I Education	0.00	\$ -	\$ 58	\$ -		-	-	-	-	-	-	-	
Municipal	1.36	\$ 396	\$ 167	\$ 125		275	3,850	25	37	5	59	1,485	
ISO NE FCM - C&I	0.00	\$ -	\$ 46	\$ -		-	-	-	-	-	-	-	
Subtotal Commercial & Industrial	2.18	\$ 9,003	\$ 2,380	\$ 1,742	\$ 131	6,978	98,424	722	901	202	59	1,485	
Total	2.27	\$ 14,006	\$ 4,061	\$ 2,118	\$ 223	9,224	117,845	1,132	1,190	26,888	5,812	126,787	

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	9,224,361	84% kWh > 55%	Lifetime kWh Savings	117,844,688	76% kWh > 55%
Annual MMBTU Savings (in kWh)	1,703,488	16%	Lifetime MMBTU Savings (in kWh)	37,159,052	24%
	10,927,849	100%		155,003,740	100%

Table 1b. Program Cost-Effectiveness - 2019 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	8.52	\$ 1,838	\$ 168	\$ 48		130	2,909	6	3	40	2,536	58,863	
Home Performance with ENERGY STAR	2.20	\$ 1,099	\$ 314	\$ 185		106	1,877	10	24	62	1,936	41,458	
ENERGY STAR Products	2.56	\$ 988	\$ 318	\$ 67		1,313	8,776	356	160	19,138	171	2,443	
Home Energy Assistance	0.91	\$ 610	\$ 671	\$ -		199	2,722	19	28	168	587	13,548	
Home Energy Reports	2.16	\$ 282	\$ 131	\$ -		1,210	3,509	74	54	10,289	-	-	
ISO-NE FCM	0.00	\$ -	\$ 19	\$ -		-	-	-	-	-	-	-	
Subtotal Residential	2.40	\$ 4,817	\$ 1,621	\$ 300	\$ 89	2,957,560	19,793,075	465,372	268,987	29,698	5,229	116,311	
Commercial & Industrial Programs													
Large Business	2.11	\$ 5,238	\$ 968	\$ 1,519		4,338	57,940	488	534	33	-	-	
Small Business	1.92	\$ 3,073	\$ 886	\$ 717		2,342	31,415	249	356	118	-	-	
C&I Education	0.00	\$ -	\$ 54	\$ -		-	-	-	-	-	-	-	
Municipal	1.38	\$ 708	\$ 167	\$ 346		542	7,552	47	68	19	56	1,104	
ISO-NE FCM	0.00	\$ -	\$ 25	\$ -		-	-	-	-	-	-	-	
Subtotal Commercial & Industrial	1.88	\$ 9,019	\$ 2,100	\$ 2,582	\$ 107	7,221,503	96,907,071	783,315	958,135	170	56	1,104	
Total	2.03	\$ 13,836	\$ 3,721	\$ 2,882	\$ 196	10,179	116,700	1,249	1,227	29,868	5,285	117,415	

Annual kWh Savings	10,179,064	87% kWh > 55%	Lifetime kWh Savings	116,700,147	77% kWh > 55%
Annual MMBTU Savings (in kWh)	1,548,928	13%	Lifetime MMBTU Savings (in kWh)	34,412,381	23%
Total Energy Savings	11,727,992	100%	Total Energy Savings	151,112,528	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													
	99%	96%	96%	80%	97%	132%	102%	113%	93%	111%	91%	93%	
Commercial & Industrial Programs													
	86%	100%	88%	148%	81%	103%	98%	109%	106%	84%	94%	74%	
Total	90%	99%	92%	136%	88%	110%	99%	110%	103%	111%	91%	93%	

Table 2a. Present Value Benefits - 2019 PLAN

	Total Benefits (\$000)	CAPACITY				ENERGY				Electric DRIPE	Gas Benefits	Gas DRIPE	Other Fuels Benefits	Fossil Emissions	Water Benefits	Other Non Resource Benefits
		Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak							
Residential Programs																
ENERGY STAR Homes	\$1,663	\$116	\$0	\$127	\$113	\$118	\$152	\$49	\$62	\$33	\$0	\$0	\$710	\$34	\$2	\$148
Home Performance w/Energy Star	\$1,230	\$17	\$0	\$21	\$18	\$22	\$27	\$8	\$10	\$7	\$0	\$0	\$940	\$54	\$0	\$107
ENERGY STAR Products	\$729	\$39	\$0	\$69	\$61	\$156	\$102	\$65	\$40	\$28	\$4	\$0	\$26	\$2	\$77	\$59
Home Energy Assistance	\$1,196	\$15	\$0	\$18	\$16	\$34	\$31	\$13	\$12	\$7	\$21	\$1	\$783	\$56	\$0	\$190
Home Energy Reports	\$185	\$8	\$0	\$17	\$15	\$48	\$41	\$17	\$15	\$8	\$0	\$0	\$0	\$0	\$0	\$17
Subtotal Residential	\$5,003	\$195	\$0	\$252	\$223	\$377	\$352	\$152	\$139	\$83	\$26	\$1	\$2,458	\$146	\$80	\$521
Commercial & Industrial Programs																
Large Business	\$6,180	\$518	\$0	\$679	\$601	\$1,411	\$1,091	\$590	\$434	\$294	\$0	\$0	\$0	\$0	\$0	\$562
Small Business	\$2,428	\$193	\$0	\$260	\$230	\$551	\$445	\$231	\$177	\$119	\$0	\$0	\$0	\$0	\$0	\$221
C&I Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Municipal	\$396	\$31	\$0	\$40	\$36	\$83	\$61	\$34	\$23	\$17	\$0	\$0	\$33	\$2	\$0	\$36
Subtotal Commercial & Industrial	\$9,003	\$742	\$0	\$979	\$866	\$2,045	\$1,598	\$855	\$634	\$431	\$0	\$0	\$33	\$2	\$0	\$818
Total	\$14,006	\$937	\$0	\$1,230	\$1,089	\$2,422	\$1,950	\$1,007	\$773	\$514	\$26	\$1	\$2,490	\$148	\$80	\$1,339

Table 2b. Present Value Benefits - 2019 ACTUAL

	Total Benefits (\$000)	CAPACITY				ENERGY				Electric DRIPE	Gas Benefits	Gas DRIPE	Other Fuels Benefits	Fossil Emissions	Water Benefits	Other Non Resource Benefits
		Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak							
Residential Programs																
ENERGY STAR Homes	\$1,838	\$3	\$0	\$4	\$4	\$47	\$53	\$19	\$21	\$4	\$0	\$0	\$1,449	\$67	\$5	\$161
Home Performance w/Energy Star	\$1,099	\$27	\$0	\$32	\$29	\$29	\$38	\$11	\$15	\$10	\$5	\$0	\$761	\$45	\$0	\$96
ENERGY STAR Products	\$988	\$55	\$0	\$96	\$85	\$210	\$138	\$88	\$55	\$40	\$5	\$0	\$33	\$2	\$99	\$81
Home Energy Assistance	\$610	\$26	\$0	\$32	\$29	\$50	\$56	\$17	\$19	\$13	\$0	\$0	\$253	\$17	\$0	\$99
Home Energy Reports	\$282	\$7	\$0	\$14	\$13	\$85	\$72	\$29	\$26	\$12	\$0	\$0	\$0	\$0	\$0	\$26
Subtotal Residential	\$4,817	\$118	\$0	\$180	\$159	\$421	\$356	\$165	\$136	\$78	\$11	\$0	\$2,496	\$132	\$104	\$461
Commercial & Industrial Programs																
Large Business	\$5,238	\$416	\$0	\$558	\$494	\$1,200	\$901	\$538	\$397	\$256	\$0	\$0	\$0	\$0	\$0	\$476
Small Business	\$3,073	\$276	\$0	\$371	\$328	\$674	\$508	\$277	\$198	\$162	\$0	\$0	\$0	\$0	\$0	\$279
C&I Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Municipal	\$708	\$53	\$0	\$71	\$63	\$164	\$119	\$67	\$46	\$33	\$0	\$0	\$28	\$1	\$0	\$64
Subtotal Commercial & Industrial	\$9,019	\$744	\$0	\$1,000	\$886	\$2,038	\$1,527	\$883	\$641	\$451	\$0	\$0	\$28	\$1	\$0	\$820
Total	\$13,836	\$862	\$0	\$1,180	\$1,045	\$2,459	\$1,883	\$1,048	\$777	\$529	\$11	\$0	\$2,524	\$133	\$104	\$1,281

Table 2c. Percent of Plan Present Value Benefits Achieved

	Total Benefits (\$000)	CAPACITY				ENERGY				Electric DRIPE	Gas Benefits	Gas DRIPE	Other Fuels Benefits	Fossil Emissions	Water Benefits	Other Non Resource Benefits
		Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak							
Residential Programs	96%	61%	0%	71%	71%	112%	101%	109%	98%	93%	41%	43%	102%	90%	130%	89%
Commercial & Industrial Programs	100%	100%	0%	102%	102%	100%	96%	103%	101%	105%	0%	0%	85%	64%	0%	100%
Total	99%	92%	0%	96%	96%	102%	97%	104%	100%	103%	41%	43%	101%	90%	130%	96%

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities
NHSaves Energy Efficiency Programs 2019 Year End Report
NHPUC Docket No. DE 17-136

Table 3a. Performance Incentive Calculation - 2019

	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial Incentive		
1. Benefit/Cost Ratio	2.18	1.88
2. Threshold Benefit / Cost Ratio ¹	1.00	1.00
3. Lifetime kWh Savings	98,424,088	96,907,071
4. Threshold Lifetime kWh Savings (65%) ²	63,975,657	63,975,657
5. Implementation Expenses	\$ 2,379,917	\$ 2,100,171
6. Benefit / Cost Percentage of Implementaton Expenses	2.75%	2.75%
7. Lifetime kWh Percentage of Implementation Expenses	2.75%	2.75%
8. Commercial & Industrial Performance Incentive	\$ 130,895	\$ 106,662
9. Maximum Commercial & Industrial Performance Incentive (6.875%)	\$ 163,619	\$ 163,619
Residential Incentive		
10. Benefit / Cost Ratio	2.43	2.40
11. Threshold Benefit / Cost Ratio ¹	1.00	1.00
12. Lifetime kWh Savings	19,420,600	19,793,075
13. Threshold Lifetime kWh Savings (65%)	12,623,390	12,623,390
14. Implementation Expenses	\$ 1,680,951	\$ 1,620,849
15. Benefit / Cost Percentage of Implementation Expenses	2.75%	
16. Lifetime kWh Percentage of Implementation Expenses	2.75%	
17. Residential Performance Incentive	\$ 92,452	\$ 89,337
18. Maximum Residential Performance Incentive (6.875%)	\$ 115,565	\$ 115,565
19. TOTAL PLANNED / EARNED INCENTIVE	\$ 223,348	\$ 196,000

Notes

1. Actual Benefit / Cost Ratio for each sector must be greater than or equal to 1.0.
2. Actual Lifetime kWh Savings for each sector must be greater than or equal to 65% of projected savings.
3. Benefit Cost ratios are Nominal\$/Nominal\$

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities
NHSaves Energy Efficiency Programs 2019 Year End Report
NHPUC Docket No. DE 17-136

Table 3b. Planned Versus Actual Benefit / Cost Ratio by Sector - 2019

	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial:		
1. Benefits (Value) From Eligible Programs	\$ 9,003	\$ 9,019
2. Implementation Expenses	\$ 2,380	\$ 2,100
3. Customer Contribution	\$ 1,742	\$ 2,582
4. Performance Incentive	<u>\$ 131</u>	<u>\$ 107</u>
5. Total Costs Including Performance Incentive	\$ 4,253	\$ 4,789
6. Benefit/Cost Ratio - Commercial & Industrial Sector	2.18	1.93
7. Benefit/Cost Ratio - Commercial & Industrial Sector including PI	2.18	1.88
Residential:		
8. Benefits (Value) From Eligible Programs	\$ 5,003	\$ 4,817
9. Implementation Expenses	\$ 1,681	\$ 1,621
10. Customer Contribution	\$ 376	\$ 300
11. Performance Incentive	<u>\$ 92</u>	<u>\$ 89</u>
12. Total Costs Including Performance Incentive	\$ 2,149	\$ 2,010
13. Benefit/Cost Ratio - Residential Sector	2.43	2.51
14. Benefit/Cost Ratio - Residential Sector including PI	2.33	2.40

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities
NHSaves Energy Efficiency Programs 2019 Year End Report
 NHPUC Docket No. DE 17-136

Table 3c. Actual Lifetime Energy Savings by Sector and Program - 2019

	Lifetime kWh Savings	
	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial:		
Large Business	67,850,378	57,940,088
Small Business	26,723,868	31,415,220
C&I Education	0	0
Municipal	3,849,842	7,551,764
Total Commercial & Industrial Included for Incentive Calculation	98,424,088	96,907,071
Residential:		
ENERGY STAR Homes	7,935,055	2,908,931
NH Home Performance with ENERGY STAR	1,327,806	1,876,918
ENERGY STAR Products	6,469,068	8,776,072
Home Energy Assistance	1,697,671	2,722,154
Home Energy Reports	1,991,000	3,509,000
Total Residential Included for Incentive Calculation	19,420,600	19,793,075
Total	117,844,688	116,700,147

Table 4. Program Expenditures by Category - 2019 ACTUAL

	Evaluation	External Administration	Internal Administration	Internal Implementation	Marketing	Rebates-Services	Total
Residential Programs							
ENERGY STAR Homes	\$ 8,662	\$ 25	\$ 8,705	\$ 9,306	\$ 3,608	\$ 137,659	\$ 167,964
Home Performance with ENERGY STAR	\$ 16,611	\$ 48	\$ 26,828	\$ 21,123	\$ 8,574	\$ 241,239	\$ 314,424
ENERGY STAR Products	\$ 13,637	\$ 18	\$ 6,141	\$ 14,851	\$ 5,759	\$ 278,041	\$ 318,447
Home Energy Assistance	\$ 32,298	\$ 93	\$ 50,253	\$ 42,822	\$ 11,171	\$ 533,885	\$ 670,522
Home Energy Reports	\$ 3,022	\$ 8	\$ 3,015	\$ 5,230	\$ 2,055	\$ 117,595	\$ 130,924
ISO-NE FCM	\$ 18,568	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,568
Subtotal Residential	\$ 92,798	\$ 191	\$ 94,941	\$ 93,331	\$ 31,167	\$ 1,308,420	\$ 1,620,849
Commercial & Industrial Programs							
C&I Education	\$ 2,943	\$ 8	\$ 1,394	\$ 7,651	\$ 438	\$ 41,882	\$ 54,316
Large Business Energy Solutions	\$ 56,697	\$ 166	\$ 13,725	\$ 96,804	\$ 14,281	\$ 786,599	\$ 968,272
Small Business Energy Solutions	\$ 40,422	\$ 118	\$ 12,184	\$ 78,836	\$ 13,939	\$ 740,628	\$ 886,127
Municipal	\$ 7,693	\$ 20	\$ 2,481	\$ 14,509	\$ 2,174	\$ 139,966	\$ 166,842
ISO-NE FCM	\$ 24,614	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 24,614
Subtotal Commercial & Industrial	\$ 132,369	\$ 312	\$ 29,783	\$ 197,800	\$ 30,833	\$ 1,709,074	\$ 2,100,171
Total	\$ 225,167	\$ 503	\$ 124,725	\$ 291,131	\$ 62,000	\$ 3,017,494	\$ 3,721,019

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities
NHSaves Energy Efficiency Programs 2019 Year End Report
 NHPUC Docket No. DE 17-136

Table 5. Revenue and Expense Balance
12 Months Actual 2019

			2019
1	Beginning Balance: 1/1/2019	(Over) / Under	\$843,082.90
Revenues			
2	System Benefits Charge		\$3,311,243.43
3	RGGI Funding		\$216,195.98
4	FCM Payments		\$738,155.71
5	Interest		<u>\$91,898.86</u>
6	Total Revenues	Sum Lines 2 - 5	\$4,357,493.98
Expenses			
7	Program Expenses		\$3,721,019.35
8	Performance Incentive - 2019	Table 3a	<u>\$195,999.56</u>
9	Total Expenses	Sum Lines 7 - 8	\$3,917,018.91
10	Ending Balance: 12/31/2019	Lines 1 + 6 - 9	<u><u>\$1,283,557.97</u></u>

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities
NHSaves Energy Efficiency Programs 2019 Year End Report
NHPUC Docket No. DE 17-136

**Table 6. RGGI RFP – Retail & Large Business Energy Reduction Partners
Program Performance Incentive Calculation - 2019**

Total RGGI Grant Expenses 2019	\$0
Percentage for PI calculation	7.50%
TOTAL RGGI RFP INCENTIVE EARNED	\$0

Table 7a. Lost Base Revenue - 2019 Forecast
Estimated Monthly and Cumulative Savings (kWh) and Lost Base Revenue
January 1, 2019 to December 31, 2019

Line	Description	Carryforward :	Forecast												2019 Annual MWh and Monthly MW Savings	
		12/31/2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	June 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019		
	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 (2017, 2018, & 2019)	-	187,203	187,203	187,203	187,203	187,203	187,203	187,203	187,203	187,203	187,203	187,203	187,203	187,203	2,246,440
2	C&I Annual kWh Savings (2017 & 2018)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	C&I Annual kWh Savings (2019)	-	581,493	581,493	581,493	581,493	581,493	581,493	581,493	581,493	581,493	581,493	581,493	581,493	581,493	6,977,921
4	C&I Monthly Installed kW Savings*	-	61	61	61	61	61	61	61	61	61	61	61	61	61	736
																10,146,797
																810
																Total 2019
																Lost Base Revenue
5	Monthly Residential Savings (2019)		14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	
6	Cumulative Residential Savings		14,400	28,800	43,200	57,600	72,000	86,400	100,800	115,200	129,600	144,000	158,400	172,800		
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		\$ 626	\$ 1,253	\$ 1,879	\$ 2,505	\$ 3,131	\$ 3,758	\$ 4,384	\$ 5,010	\$ 5,637	\$ 6,263	\$ 6,889	\$ 7,516		\$ 48,851
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 (2019)		44,731	48,458	48,458	48,458	48,458	48,458	48,458	48,458	48,458	48,458	48,458	48,458	48,458	
13	Cumulative C&I Savings		44,731	89,463	134,194	178,925	223,656	268,388	313,119	357,850	402,581	447,313	492,044	536,775		
14	Average C&I kWh Distribution Rate		0.00872	0.00872	0.00872	0.00872	0.00872	0.00872	0.00872	0.00872	0.00872	0.00872	0.00872	0.00872	0.00872	
15	Lost C&I kWh Revenue		\$ 390	\$ 780	\$ 1,170	\$ 1,560	\$ 1,950	\$ 2,340	\$ 2,730	\$ 3,120	\$ 3,510	\$ 3,900	\$ 4,289	\$ 4,679		\$ 30,416
16	Monthly C&I kW Savings (2019)		31	31	31	31	31	31	31	31	31	31	31	31	31	
17	Cumulative Monthly C&I kW Savings		31	92	153	215	276	337	399	460	521	583	644	705		
18	Average C&I Demand Rate		\$ 7.77	\$ 7.77	\$ 7.77	\$ 7.77	\$ 7.77	\$ 7.77	\$ 7.77	\$ 7.77	\$ 7.77	\$ 7.77	\$ 7.77	\$ 7.77		
19	Lost C&I Demand Revenue		\$ 238	\$ 715	\$ 1,191	\$ 1,667	\$ 2,144	\$ 2,620	\$ 3,096	\$ 3,573	\$ 4,049	\$ 4,525	\$ 5,002	\$ 5,478		\$ 34,297
20	Total Lost C&I kWh and Demand Revenue		\$ 628	\$ 1,494	\$ 2,361	\$ 3,227	\$ 4,093	\$ 4,960	\$ 5,826	\$ 6,692	\$ 7,559	\$ 8,425	\$ 9,291	\$ 10,157		\$ 64,714
21	Total Lost Revenue		\$ 1,254	\$ 2,747	\$ 4,240	\$ 5,732	\$ 7,225	\$ 8,717	\$ 10,210	\$ 11,703	\$ 13,195	\$ 14,688	\$ 16,180	\$ 17,673		\$ 113,565

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 - 2019 Actual
Actual Monthly and Cumulative Savings (kWh) and Lost Base Revenue
January 1, 2019 to December 31, 2019

Line	Description	Carryforward as of 12/31/2018	Actual												Cumulative Jan - Dec 2019 LBR Savings
			Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	June 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019	
	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 (2017, 2018, & 2019) *	-	498,438	204,028	186,872	191,830	184,745	259,243	122,472	252,446	319,469	243,598	259,148	203,002	2,925,291
2	C&I Annual kWh Savings (2017 & 2018)	-													
3	C&I Annual kWh Savings (2019)		227,589	524,636	829,247	214,183	628,807	138,434	26,415	1,006,971	580,482	616,689	702,543	1,725,509	7,221,506
4	C&I Annual Installed kW Savings		4,935	67,512	79,198	0,000	0,000	16,734	0,000	92,988	0,000	51,733	73,897	147,261	534
												110% capped annualized kWh savings			10,146,797
												110% capped annualized kW savings			810
															Cumulative 2017 - 2019
5	Monthly Residential Savings (2017, 2018 & 2019)	-	41,537	17,002	15,573	15,986	15,395	21,604	10,206	21,037	26,622	20,300	21,596	16,917	
6	Cumulative Residential Savings	-	41,537	58,539	74,112	90,097	105,493	127,096	137,302	158,339	184,962	205,262	226,857	243,774	1,653,370
7	Average Residential Distribution Rate		0.04739	0.04739	0.04739	0.04739	0.04739	0.04739	0.04739	0.04739	0.04739	0.04739	0.04739	0.04739	
8	Lost Residential Revenue		\$ 1,968	\$ 2,774	\$ 3,512	\$ 4,270	\$ 4,999	\$ 6,023	\$ 6,507	\$ 7,504	\$ 8,765	\$ 9,727	\$ 10,751	\$ 11,552	\$ 78,353
															Cumulative 2017 - 2019
9	Monthly C&I Savings (2017 & 2018)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Cumulative C&I Savings	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Average C&I kWh Distribution Rate		0.00881	0.00881	0.00881	0.00881	0.00881	0.00881	0.00881	0.00881	0.00881	0.00881	0.00881	0.00881	
12	Lost C&I kWh Revenue		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13	Monthly C&I Savings (2019)		18,966	43,720	69,104	17,849	52,401	11,536	2,201	83,914	48,373	51,391	58,545	143,792	
14	Cumulative C&I Savings		18,966	62,685	131,789	149,638	202,039	213,575	215,776	299,690	348,064	399,455	458,000	601,792	3,101,468
15	Average C&I kWh Distribution Rate		0.00881	0.00881	0.00881	0.00881	0.00881	0.00881	0.00881	0.00881	0.00881	0.00881	0.00881	0.00881	
16	Lost C&I kWh Revenue		\$ 167	\$ 552	\$ 1,161	\$ 1,318	\$ 1,780	\$ 1,882	\$ 1,901	\$ 2,640	\$ 3,066	\$ 3,519	\$ 4,035	\$ 5,302	\$ 27,324
17	Monthly C&I kW Savings (2019)		0.411	5.626	6.600	-	-	1.394	-	7.749	-	4.311	6.158	12.272	
18	Cumulative Monthly C&I kW Savings		0.411	6.037	12.637	12.637	12.637	14.031	14.031	21.780	21.780	26.092	32.250	44.521	219
19	Average C&I Demand Rate		\$ 7.9967	\$ 7.997	\$ 7.997	\$ 7.997	\$ 7.997	\$ 7.997	\$ 7.997	\$ 7.997	\$ 7.997	\$ 7.997	\$ 7.997	\$ 7.997	
20	Lost C&I Demand Revenue		\$ 3	\$ 48	\$ 101	\$ 101	\$ 101	\$ 112	\$ 112	\$ 174	\$ 174	\$ 209	\$ 258	\$ 356	\$ 1,750
21	Total Lost C&I kWh and Demand Revenue		\$ 170	\$ 601	\$ 1,262	\$ 1,419	\$ 1,881	\$ 1,994	\$ 2,013	\$ 2,814	\$ 3,241	\$ 3,728	\$ 4,293	\$ 5,658	\$ 29,074
22	Total Lost Revenue		\$ 2,139	\$ 3,375	\$ 4,774	\$ 5,689	\$ 6,880	\$ 8,017	\$ 8,520	\$ 10,318	\$ 12,006	\$ 13,455	\$ 15,044	\$ 17,210	\$ 107,427

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

Lines 1-3: Actual Annualized Residential + Commercial Savings

Line 4: Actual Annualized kW Savings

Line 5: Line 1 / 12

Line 6: Prior Month Line 6 + Current Month Line 5

Line 7: GSE Avg Distribution Rates, Line 5, Col. D

Line 8: Prior Month Line 8 + Current Month Line 7

Line 9: Cumulative historical savings

Line 10: GSE Avg Distribution Rates, Line 12 Col. D

Line 11: Prior Month Line 11 + Current Month Line 10

Line 12: Line 10 x Line 11

Line 13: Line 3 / 12

Line 14: Prior Month Line 14 + Current Month Line 13

Line 15: GSE Avg Distribution Rates, Line 14, Col. D

Line 16: Line 14 x Line 15

Line 17: Line 4 / 12

Line 18: Prior Month Line 18 + Current Month Line 17

Line 19: GSE Avg Distribution Rates, Line 17, Col. D

Line 20: Line 18 x Line 19

Line 21: Line 12 + Line 16 + Line 20

Line 22: Line 8 + Line 21

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities
NHSaves Energy Efficiency Programs 2019 Year End Report
NHPUC Docket No. DE 17-136

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

Line No.	Description	Liberty
1	Gross Annualized kWh Savings	4,337,870
2	Maximum Demand Factor (MDF)	Varies by measure
3	Extended Max. Load Reduction kW	816.8
4	% kW Demand Reduction at Customer Peak	Varies by measure
5	Sub-Total Customer Peak kW Reduction	534.3
6	% Net to Gross	100.00%
7	Sub-Total Customer Peak kW Reduction	534.3
8	% In-Service Rate	100.00%
9	Sub-Total Customer Peak kW Reduction	534.3
10	% kW Realization Rate	Varies by measure
11	Sub-Total Customer Peak kW Reduction	218.8
12	% Billing Adjustment to Reflect Ratchets (1)	100.00%
13	Sub-Total Customer Peak kW Reduction	218.8
14	% Retirement Adjustment	100.00%
15	Total Customer Peak kW Reduction, Full Year	218.8
16	% Annual Savings Achieved in First Year	n/a
17	Total Customer Peak Red. in First Year	218.8
18	Annualized (x12)	2,626.2
19	Average Distribution Rate (ADR)	\$ 7.997
20	LBR Calculation	\$ 1,750

Comments:

Above schedule mirrors the Template recommended by the LBRWG Report (p.6)

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities
NHSaves Energy Efficiency Programs 2019 Year End Report
NHPUC Docket No. DE 17-136

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

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 2019 Average Distribution Rate (ADR)	\$ 0.0474	\$ 0.0088	\$ -	
3 Sub-Total LBR	\$ -	\$ -	\$ -	\$ -
4 Program Year 2018 Estimated LBR Savings	\$ -	\$ -	-	-
5 2019 Average Distribution Rate (ADR)	\$ 0.0474	\$ 0.0088	\$ -	
6 Sub-Total LBR	\$ -	\$ -	\$ -	\$ -
7 Sub-Total Legacy (Measures Installed in 2017 and 2018)	-	-	-	-
8 Sub-Total Legacy LBR	\$ -	\$ -	\$ -	\$ -
New Methodology (Measures Installed in 2019 and forward):				
9 Program Year 2019 Estimated LBR Savings to be achieved (annualized)	2,925,291	7,221,506	534	10,147,331
10 Program Year 2019 Estimated LBR Savings to be achieved in 2019	1,653,370	3,101,468	219	4,755,058
11 2019 Average Distribution Rate (ADR)	\$ 0.0474	\$ 0.0088	\$ 7.9967	
12 Sub-Total LBR (Line 2 x Line 3)	\$ 78,353	\$ 27,324	\$ 1,750	\$ 107,427
13 Total Actual LBR - Year 2019	\$ 78,353	\$ 27,324	\$ 1,750	\$ 107,427

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
NHSaves Energy Efficiency Programs 2019 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 2019 actual data

<u>Line</u>	<u>Rate Class</u> Col. A	2019		<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	269,097,087	\$ 12,930,181	
2	Residential D-6	744,413	\$ 31,487	
3	Residential TOU Rate D-10 All kWh	5,390,208	\$ 196,947	
4	Residential Electric Heat Rate T	14,723,325	\$ 582,575	
5	Residential Subtotal (kWh only)	289,955,033	\$ 13,741,189	\$ 0.04739
6	General Service Rate G-1 All kWh	377,564,381	\$ 1,297,424	
7	General Service Rate G-1 Credit for High Voltage (KV)	-	\$ (234,618)	
8	General Service Rate G-2 All kWh	141,341,341	\$ 328,408	
9	General Service Rate G-2 Credit for High Voltage (KV)	-	\$ (1,814)	
10	General Service Rate G-3 All kWh	86,048,678	\$ 3,926,553	
11	Commercial Electric Heat Rate V All kWh	325,565	\$ 15,239	
12	Commercial and Industrial Subtotal (kWh only)	605,279,965	5,331,192	\$ 0.00881
13	Outdoor Lighting Rate M	-	\$ -	
14	Total Retail	895,234,998	\$ 19,072,381	\$ 0.02130
<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)	938,346	\$ 7,493,962	
16	General Service Rate G-2 Demand Charge (KW)	488,463	\$ 3,915,864	
17	Total Retail per KW	1,426,809	\$ 11,409,826	\$ 7.99674

*Excludes customer charge and street light luminaire charges.