

NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP. d/b/a

LIBERTY

ENERGY EFFICIENCY PROGRAMS - 2020 YEAR-END REPORT

NHPUC Docket No. DE 17-136

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SUMMARY OF 2020 PROGRAM ACTIVITY

The following report presents the results of Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty (“Liberty” or “Company”) residential and commercial & industrial energy efficiency programs for calendar year 2020.

Table 1 shows a summary of overall program savings results. In total, the Company served 30,322 participants and saved 2,355,506 Lifetime MMBTUs. Annual MMBTU savings were 146,879 with an average savings per participant per year of 4.84. Of the 30,322 participants, 1,649 also had electric savings which totaled (2,883,033) Lifetime kWh’s. Annual kWh savings were (159,869) with an average savings per participant per year of (94.37).

Table 2 documents the quantified benefits and costs achieved by program for the residential market. In total, the residential programs generated \$8,049,652 in customer benefits and incurred costs of \$6,106,654, for an overall program benefit cost ratio of 1.32.

Table 3 documents the quantified benefits and costs achieved by program for the commercial & industrial market. In total, the commercial & industrial programs generated \$11,625,471 in customer benefits and incurred costs of \$5,332,972 for an overall program benefit cost ratio of 2.18.

Table 4 documents the MMBTU savings achieved by program for the individual residential and commercial and industrial programs. In summary, the residential program activities resulted in 846,970 in total lifetime MMBTU savings and 3,946,867 lifetime kWh savings. The commercial and industrial program activities resulted in 1,508,536 in total lifetime MMBTU savings and (6,829,900) lifetime kWh savings.

Table 5 documents footnotes for the residential and commercial & industrial program benefit cost ratios and the rate of savings per MMBTU based on the Avoided Energy Supply Components in New England: 2018 Report.

Table 6 documents the Company’s earned 2020 year-end performance incentive of \$440,093. 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 6 summarizes the performance incentive calculation by component. As specified by the Commission, results for all programs have been included in the performance incentive calculation.

Table 7 documents the Company’s expenses by Program and budget category. Overall, the Company incurred a total of \$8,514,515 of expenses in 2020.

Table 1. Program Savings Summary

Gas Savings in MMBTU's resulting from Energy Efficiency Measures Installed in the Program Year	
Number of Participants served in the annual program year time period	30,322
MMBTU Savings per Participant Per Year	5
Total MMBTU Savings Per Year	146,879
Measure Life of Measures Installed in the annual program year time period	16
Grand Total MMBTU Savings Benchmark for Performance Incentive	2,355,506
Electric Savings in kWh's resulting from Energy Efficiency Measures Installed in the Program Year	
Number of Participants served in the annual program year time period	1,694
kWh Savings per Participant Per Year	(94)
Total kWh Savings Per Year	(159,869)
Measure Life of Measures Installed in the annual program year time period	18
Grand Total kWh Savings Benchmark for Performance Incentive	(2,883,033)

Table 2. Benefit Cost (B/C) Benchmark for Computing Performance Incentive - Residential Programs

Residential Programs	Home Energy Assistance	ENERGY STAR Products	Home Performance w/ENERGY STAR	ENERGY STAR Homes	Home Energy Reports	Total
Benefits:						
Total Resource Benefits	\$ 1,069,098	\$ 1,596,689	\$ 2,104,043	\$ 1,631,793	\$ 103,948	\$ 6,505,570
Total Non-Resource Benefits	\$ 332,992	\$ 336,186	\$ 470,711	\$ 385,561	\$ 18,631	\$ 1,544,082
Total Benefits	\$ 1,402,090	\$ 1,932,875	\$ 2,574,755	\$ 2,017,354	\$ 122,579	\$ 8,049,652
Costs:						
Program costs (e.g. incentives, admin, monitoring, evaluation for:						
Utility Costs (e.g., for admin, monitoring, evaluation, marketing)	\$ 1,676,017	\$ 932,145	\$ 1,198,339	\$ 684,613	\$ 289,531	\$ 4,780,645
Program participants (e.g., incremental costs not reimbursed)	\$0	\$ 917,810	\$ 226,046	\$ 182,153	\$ -	\$ 1,326,009
Total Costs	\$ 1,676,017	\$ 1,849,955	\$ 1,424,385	\$ 866,766	\$ 289,531	\$ 6,106,654
Utility Performance Incentive at the Sector Level	n/a	n/a	n/a	n/a	n/a	n/a
Total Costs Including Utility Performance Incentives at Sector Level						\$ 6,106,654
Benefit Cost Ratio by Sector (i.e., B/C Benchmark for PI Calc.)	0.84	1.04	1.81	2.33	0.42	1.32

Table 3. Benefit Cost (B/C) Benchmark for Computing Performance Incentive - Commercial & Industrial Programs

Commercial & Industrial Programs	Small Business	Large Business	C&I Education	Total
Benefits:				
Total Resource Benefits	\$ 3,882,050	\$ 5,448,666	\$ -	\$ 9,330,715
Total Non-Resource Benefits	\$ 980,175	\$ 1,314,580	\$ -	\$ 2,294,755
Total Benefits	\$ 4,862,225	\$ 6,763,246	\$ -	\$ 11,625,471
Costs:				
Program costs (e.g. incentives, admin, monitoring, evaluation for:				
Utility Costs (e.g., for admin, monitoring, evaluation, marketing)	\$ 2,088,171	\$ 1,619,656	\$ 26,042	\$ 3,733,870
Program participants (e.g., incremental costs not reimbursed)	\$ 499,824	\$ 1,099,279	\$ -	\$ 1,599,102
Total Costs	\$ 2,587,995	\$ 2,718,935	\$ 26,042	\$ 5,332,972
Utility Performance Incentive at the Sector Level	n/a	n/a	n/a	n/a
Total Costs Including Utility Performance Incentives at Sector Level				\$ 5,332,972
Benefit Cost Ratio by Sector (i.e., B/C Benchmark for PI Calc.)	1.88	2.49	-	2.18

Table 4. MMBTU Savings Benchmark for Computing Performance Incentive

Residential Programs	Home Energy Assistance	ENERGY STAR Products	Home Performance w/ENERGY STAR	ENERGY STAR Homes	Home Energy Reports	Total
Gas Savings in MMBTU's from Measures Installed in the Program Year						
Number of Participants	575	2,022	593	226	25,541	28,957
MMBTU Savings per Participant Per Year	13	6	23	42	0.5	2
Total MMBTU Savings Per Year	7,377	11,669	13,577	9,395	11,994	54,011
Measure Life of Measures Installed During the Program Year	17	17	21	25	1	16
Grand Total MMBTU Savings Benchmark for Performance Incentive	126,396	198,289	278,476	231,815	11,994	846,970
Electric Savings in kWh's from Measures Installed in the Program Year						
Number of Participants	141	1,255	288	1	-	1,685
kWh Savings per Participant	298	104	463	1,437	-	183
Total kWh Savings Per Participant Per Year	41,960	130,883	133,273	1,437	-	307,553
Measure Life of Measures Installed in the annual program year time period	20	16	8	25	-	13
Grand Total kWh Savings Benchmark for Performance Incentive	829,893	2,055,652	1,025,395	35,928	-	3,946,867
Commercial & Industrial Programs						
	Small Business	Large Business	C&I Education	Total		
Number of Participants	1,236	128	-	1,364		
MMBTU Savings per Participant Per Year	48	264	-	68		
Total MMBTU Savings Per Year	59,114	33,753	-	92,867		
Measure Life of Measures Installed During the Program Year	11	26	-	16		
Grand Total MMBTU Savings Benchmark for Performance Incentive	633,324	875,212	-	1,508,536		
Electric Savings in kWh's from Measures Installed in the Program Year						
Number of Participants	3	6	-	9		
kWh Savings per Participant	(694)	(77,557)	-	(51,936)		
Total kWh Savings Per Participant Per Year	(2,083)	(465,339)	-	(467,422)		
Measure Life of Measures Installed in the annual program year time period	36	15	-	15		
Grand Total kWh Savings Benchmark for Performance Incentive	(74,300)	(6,755,600)	-	(6,829,900)		

Table 5. Footnotes for Benefit Cost Ratio

Residential Programs	Home Energy Assistance	ENERGY STAR Products	Home Performance w/ENERGY STAR	ENERGY STAR Homes	Home Energy Reports	Total
Number of Participants*	575	2,022	593	226	25,541	28,957
MMBTU Savings per Participant Per Year**	13	6	23	42	0.5	2
Total MMBTU Savings Per Year	7,377	11,669	13,577	9,395	11,994	54,011
Number of Years in the Measure Life**	17	17	21	25	1	16
Grand Total MMBTU Savings Benchmark for Performance Incentive	126,396	198,289	278,476	231,815	11,994	846,970
Lifetime Therm Savings	1,263,956	1,982,889	2,784,761	2,318,151	119,940	8,469,697
Rate of Savings per MMBTU ***	\$ 8.28	\$ 8.28	\$ 8.28	\$ 8.28	\$ 8.28	\$ 8.28
Grand Total Dollar Savings	\$ 1,046,556	\$ 1,641,832	\$ 2,305,782	\$ 1,919,429	\$ 99,310	\$ 7,012,909
Commercial & Industrial Programs						
	Small Business	Large Business	C&I Education	Total		
Number of Participants*	1,236	128	-	1,364		
MMBTU Savings per Participant Per Year**	48	264	-	68		
Total MMBTU Savings Per Year	59,114	33,753	-	92,867		
Number of Years in the Measure Life**	11	26	-	16		
Grand Total MMBTU Savings Benchmark for Performance Incentive	633,324	875,212	-	1,508,536		
Lifetime Therm Savings	6,333,238	8,752,122	-	15,085,360		
Rate of Savings per MMBTU ***	\$ 7.34	\$ 7.34	\$ -	\$ 7.34		
Grand Total Dollar Savings	\$ 4,648,597	\$ 6,424,058	\$ -	\$ 11,072,654		
* eTrack (Liberty Utilities Energy Efficiency Program Tracking System)						
** The values are variable for program year measurement purposes and based upon the B/C model assumptions.						
*** Source: Avoided Energy Supply Components in New England: 2018 Report, Synapse Energy Economics, Inc., (Amended June 1, 2018). Pg.47, Table 14						
Residential Programs	Home Energy Assistance	ENERGY STAR Appliances	Home Performance w/ENERGY STAR	ENERGY STAR Homes	Residential Building Practices & Demo	Total
Number of Participants*	575	2,022	593	226	25,541	28,957
Participant Incremental Cost	\$ -	\$ 917,810	\$ 226,046	\$ 182,153	\$ -	\$ 1,326,009
Program Participant Cost	\$ -	\$ 454	\$ 381	\$ 806	\$ -	\$ 46
Commercial & Industrial Programs						
	Small Business	Large Business	C&I Education	Total		
Number of Participants*	1,236	128	-	1,364		
Participant Incremental Cost	\$ 499,824	\$ 1,099,279	\$ -	\$ 1,599,102		
Program Participant Cost	\$ 404	\$ 8,614	\$ -	\$ 1,172		

Table 6. Performance Incentive Calculation - 2020

Row	Portfolio	Planned	Threshold	Actual	% of Plan	Design Coefficient	Actual Coefficient	Planned PI	125% of Planned PI	Actual PI	Source
1	Lifetime MMBtu Savings	2,408,424	1,806,318	2,355,506	98%	2.475%	2.421%	\$ 215,885	\$ 269,856	\$ 206,104	Program Cost Effectiveness (Page 1 of 3)
2	Annual MMBtu Savings	147,422	110,566	146,879	100%	1.100%	1.096%	\$ 95,949	\$ 119,936	\$ 93,315	Program Cost Effectiveness (Page 1 of 3)
3	Total Resource Benefits	\$ 17,253,478		\$ 15,836,286	92%						Present Value Benefits (Page 2 of 3)
4	Total Utility Costs ¹	\$ 8,722,615		\$ 8,514,515	98%						Program Cost Effectiveness (Page 1 of 3)
5	Net Benefits	\$ 8,530,863	\$ 5,553,317	\$ 7,321,771	86%	1.925%	1.652%	\$ 167,910	\$ 209,888	\$ 140,674	Line 5 minus line 6
6	Total					5.500%	5.169%	\$ 479,744	\$ 599,680	\$ 440,093	Sum of Rows 1, 2 & 5

Row	Portfolio	Total Resource Cost Test		Source
		Planned	Actual	
7	Total Benefits	\$ 21,252,105	\$ 19,675,123	Present Value Benefits (Page 2 of 3)
8	Performance Incentive	\$ 479,744	\$ 440,093	Row 6
9	Participant Costs	\$ 6,501,354	\$ 2,925,111	Program Cost Effectiveness (Page 1 of 3)
10	Total Utility Costs	\$ 8,722,615	\$ 8,514,515	Row 4
11	Total Resource Benefit / Cost Ratio	1.35	1.66	Row 7 Divided by Rows 8+9+10

All dollar values are expressed in 2020 dollars.

¹In 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 7. Program Expenditures by Category - 2020 Actual

Program	Evaluation	External Administration	Internal Administration	Internal Implementation	Marketing	Rebates- Services	Total
Residential Programs							
ENERGY STAR Products	\$ 30,819	\$ 3,136	\$ 10,284	\$ 44,300	\$ 29,609	\$ 813,998	\$ 932,145
ENERGY STAR Homes	\$ 31,071	\$ 3,162	\$ 8,820	\$ 46,118	\$ 28,476	\$ 566,967	\$ 684,613
Home Energy Assistance	\$ 59,551	\$ 6,060	\$ 7,635	\$ 85,331	\$ 52,060	\$ 1,465,382	\$ 1,676,017
Home Performance with ENERGY STAR	\$ 33,150	\$ 3,373	\$ 3,513	\$ 42,522	\$ 29,437	\$ 1,086,344	\$ 1,198,339
Home Energy Reports	\$ 10,195	\$ 948	\$ 2,225	\$ 13,662	\$ -	\$ 262,501	\$ 289,531
Subtotal - Residential	\$ 164,786	\$ 16,679	\$ 32,475	\$ 231,933	\$ 139,581	\$ 4,195,191	\$ 4,780,645
Commercial & Industrial Programs							
C&I Education	\$ 3,216	\$ 318	\$ 1,604	\$ 6,959	\$ 2,647	\$ 11,299	\$ 26,042
Large Business Energy Solutions	\$ 72,647	\$ 7,919	\$ 8,001	\$ 130,106	\$ 74,907	\$ 1,326,076	\$ 1,619,656
Small Business Energy Solutions	\$ 56,281	\$ 5,113	\$ 8,818	\$ 111,690	\$ 62,019	\$ 1,844,251	\$ 2,088,171
Subtotal - C&I	\$ 132,144	\$ 13,350	\$ 18,423	\$ 248,756	\$ 139,572	\$ 3,181,625	\$ 3,733,870
Total - All	\$ 296,929	\$ 30,029	\$ 50,898	\$ 480,688	\$ 279,154	\$ 7,376,817	\$ 8,514,515