

NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

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

LIBERTY

ENERGY EFFICIENCY PROGRAMS - 2019 YEAR-END REPORT

NHPUC Docket No. DE 17-136

Revised: September 17, 2021



TABLE OF CONTENTS

Summary of 2019 Program Activity.....	2
Table 1 - Program Savings Summary.....	3
Table 2 - Benefit Cost (B/C) Benchmark for Computing Performance Incentive – Residential Programs	4
Table 3 - Benefit Cost (B/C) Benchmark for Computing Performance Incentive – Commercial & Industrial Programs	5
Table 4 - MMBTU Savings Benchmark for Computing Performance Incentive	6
Table 5 - Footnotes for Benefit Cost Ratio.....	7
Table 6 - Performance Incentive Calculation – 2019 Planned versus Actual.....	8
Table 7 - Planned Versus Actual Benefit / Cost Ratio by Sector – 2019.....	9
Table 8 - Program Expenditures by Category – 2019 Actual.....	10
Table 9 - Lose Base Revenue and Savings – 2019 Forecast.....	11

SUMMARY OF 2019 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 2019.

Table 1 shows a summary of overall program savings results. In total, the Company served 32,475 participants and saved 2,214,401 Lifetime MMBTUs. Annual MMBTU savings were 149,494 with an average savings per participant per year of 4.60. Of the 32,475 participants, 899 also had electric savings which totaled 7,515,643 Lifetime kWh’s. Annual kWh savings were 630,569 with an average savings per participant per year of 701.41.

Table 2 documents the quantified benefits and costs achieved by program for the residential market. In total, the residential programs generated \$7,552,162 in customer benefits and incurred costs of \$5,829,010, for an overall program benefit cost ratio of 1.30.

Table 3 documents the quantified benefits and costs achieved by program for the commercial & industrial market. In total, the commercial & industrial programs generated \$12,206,561 in customer benefits and incurred costs of \$7,750,771 for an overall program benefit cost ratio of 1.57.

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 769,206 in total lifetime MMBTU savings and 4,636,165 lifetime kWh savings. The commercial and industrial program activities resulted in 1,445,195 in total lifetime MMBTU savings and 2,879,478 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: 2019 Report.

Table 6 documents the Company’s earned 2019 year-end performance incentive of \$423,421. 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 6 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 7 documents the planned versus actual benefit cost ratio by sector (residential and commercial & industrial), and for the entire portfolio of energy efficiency programs implemented in 2019.

Table 8 documents the Company’s expenses by Program and budget category. Overall, the Company incurred a total of \$7,431,694 of expenses in 2019.

Table 9 documents the forecast of annualized therm savings by month and the total lost base revenue calculation.

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	32,475
MMBTU Savings per Participant Per Year	4.60
Total MMBTU Savings Per Year	149,494
Measure Life of Measures Installed in the annual program year time period	14.81
Grand Total MMBTU Savings Benchmark for Performance Incentive	2,214,401
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	899
kWh Savings per Participant Per Year	701.41
Total kWh Savings Per Year	630,569
Measure Life of Measures Installed in the annual program year time period	12
Grand Total kWh Savings Benchmark for Performance Incentive	7,515,643

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:						
Avoided Generation, Transmission & Distribution Costs for:						
Program Participants	\$ 1,454,694	\$ 2,668,090	\$ 1,975,477	\$ 1,080,756	\$ 373,146	\$ 7,552,162
Market effects (e.g., spillover, post-program adoptions)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Benefits (including O&M)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Quantifiable avoided resource costs (e.g., water, electricity)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Adder for other non-quantifiable benefits (e.g., environmental and other)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Benefits	\$ 1,454,694	\$ 2,668,090	\$ 1,975,477	\$ 1,080,756	\$ 373,146	\$ 7,552,162
Costs:						
Program costs (e.g. incentives, admin, monitoring, evaluation for:						
Utility Costs (e.g., for admin, monitoring, evaluation, markeing)	\$ 1,683,152	\$ 921,922	\$ 888,595	\$ 430,693	\$ 269,755	\$ 4,194,116
Program participants (e.g., incremental costs not reimbursed)	\$ -	\$ 889,109	\$ 329,273	\$ 153,288	\$ -	\$ 1,371,671
Market effects (e.g., spillover, post-program adoptions)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Costs (including O&M)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Quantifiable additional resource costs (e.g. water, electricity)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Costs	\$ 1,683,152	\$ 1,811,031	\$ 1,217,868	\$ 583,982	\$ 269,755	\$ 5,565,787
Utility Performance Incentive at the Sector Level	n/a	n/a	n/a	n/a	n/a	\$ 262,937
Total Costs Including Utility Performance Incentives at Sector Level						\$ 5,828,724
Benefit Cost Ratio by Sector (i.e., B/C Benchmark for PI Calc.)	0.86	1.47	1.62	1.85	1.38	1.30

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:				
Avoided Generation, Transmission & Distribution Costs for:				
Program Participants	\$ 4,079,890	\$ 8,126,671	\$ -	\$ 12,206,561
Market effects (e.g., spillover, post-program adoptions)	\$ -	\$ -	\$ -	\$ -
Customer Benefits (including O&M)	\$ -	\$ -	\$ -	\$ -
Quantifiable avoided resource costs (e.g., water, electricity)	\$ -	\$ -	\$ -	\$ -
Adder for other non-quantifiable benefits (e.g., environmental and other)	\$ -	\$ -	\$ -	\$ -
Total Benefits	\$ 4,079,890	\$ 8,126,671	\$ -	\$ 12,206,561
Costs:				
Program costs (e.g. incentives, admin, monitoring, evaluation for:				
Utility Costs (e.g., for admin, monitoring, evaluation, marketing)	\$ 1,389,860	\$ 1,808,918	\$ 38,799	\$ 3,237,577
Program participants (e.g., incremental costs not reimbursed)	\$ 1,353,643	\$ 2,999,066	\$ -	\$ 4,352,709
Market effects (e.g., spillover, post-program adoptions)	\$ -	\$ -	\$ -	\$ -
Customer Costs (including O&M)	\$ -	\$ -	\$ -	\$ -
Quantifiable additional resource costs (e.g. water, electricity)	\$ -	\$ -	\$ -	\$ -
Total Costs	\$ 2,743,503	\$ 4,807,984	\$ 38,799	\$ 7,590,286
Utility Performance Incentive at the Sector Level	n/a	n/a	n/a	\$ 160,485
Total Costs Including Utility Performance Incentives at Sector Level				\$ 7,750,771
Benefit Cost Ratio by Sector (i.e., B/C Benchmark for PI Calc.)	1.49	1.69	-	1.57

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	374	2,341	643	121	27,633	31,112
MMBTU Savings per Participant Per Year	20	8	18	33	0.4	2
Total MMBTU Savings Per Year	7,378	17,651	11,519	3,953	10,884	51,384
Measure Life of Measures Installed During the Program Year	19	16	18	25	3	14.97
Grand Total MMBTU Savings Benchmark for Performance Incentive	141,756	285,346	206,599	98,501	37,004	769,206
Electric Savings in kWh's from Measures Installed in the Program Year						
Number of Participants	116	233	493	44	-	886
kWh Savings per Participant	700	167	391	1,559	-	430
Total kWh Savings Per Participant Per Year	81,247	38,843	192,556	68,608	-	381,254
Measure Life of Measures Installed in the annual program year time period	15.74	16.99	6.71	20.49	-	12.16
Grand Total kWh Savings Benchmark for Performance Incentive	1,279,146	659,932	1,291,582	1,405,505	-	4,636,165
Commercial & Industrial Programs						
	Small Business	Large Business	C&I Education	Total		
Number of Participants	1,289	74	-	1,363		
MMBTU Savings per Participant Per Year	22	946	-	72		
Total MMBTU Savings Per Year	28,467	69,643	-	98,110		
Measure Life of Measures Installed During the Program Year	17	14	-	14.73		
Grand Total MMBTU Savings Benchmark for Performance Incentive	486,647	958,548	-	1,445,195		
Electric Savings in kWh's from Measures Installed in the Program Year						
Number of Participants	9	4	-	13		
kWh Savings per Participant	3,483	54,493	-	19,178		
Total kWh Savings Per Participant Per Year	31,344	217,971	-	249,315		
Measure Life of Measures Installed in the annual program year time period	17.60	10.68	-	11.55		
Grand Total kWh Savings Benchmark for Performance Incentive	551,797	2,327,681	-	2,879,478		

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*	374	2,341	643	121	27,633	31,112
MMBTU Savings per Participant Per Year**	20	8	18	33	0.4	2
Total MMBTU Savings Per Year	7,378	17,651	11,519	3,953	10,884	51,384
Number of Years in the Measure Life**	19	16	18	25	3	15
Grand Total MMBTU Savings Benchmark for Performance Incentive	141,756	285,346	206,599	98,501	37,004	769,206
Lifetime Therm Savings	1,417,560	2,853,464	2,065,994	985,005	370,039	7,692,062
Rate of Savings per MMBTU ***	\$ 8.28	\$ 8.28	\$ 8.28	\$ 8.28	\$ 8.28	\$ 8.28
Grand Total Dollar Savings	\$ 1,173,740	\$ 2,362,668	\$ 1,710,643	\$ 815,584	\$ 306,392	\$ 6,369,027
Commercial & Industrial Programs						
	Small Business	Large Business	C&I Education	Total		
Number of Participants*	1,289	74	-	1,363		
MMBTU Savings per Participant Per Year**	22	946	-	72		
Total MMBTU Savings Per Year	28,467	69,643	-	98,110		
Number of Years in the Measure Life**	17	14	-	15		
Grand Total MMBTU Savings Benchmark for Performance Incentive	486,647	958,548	-	1,445,195		
Lifetime Therm Savings	4,866,472	9,585,477	-	14,451,949		
Rate of Savings per MMBTU ***	\$ 7.34	\$ 7.34	\$ -	\$ 7.34		
Grand Total Dollar Savings	\$ 3,571,991	\$ 7,035,740	\$ -	\$ 10,607,731		
* 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*	374	2,341	643	121	27,633	31,112
Participant Incremental Cost	\$ -	\$ 889,109	\$ 329,273	\$ 153,288	\$ -	\$ 1,371,671
Program Participant Cost	\$ -	\$ 380	\$ 512	\$ 1,267	\$ -	\$ 44
Commercial & Industrial Programs						
	Small Business	Large Business	C&I Education	Total		
Number of Participants*	1,289	74	-	1,363		
Participant Incremental Cost	\$ 1,353,643	\$ 2,999,066	\$ -	\$ 4,352,709		
Program Participant Cost	\$ 1,050	\$ 40,722	\$ -	\$ 3,194		

Table 6. Performance Incentive Calculation - 2019

Commercial & Industrial Incentive	<u>Planned</u>	<u>Actual</u>
1. Benefit/Cost Ratio	1.71	1.57
2. Threshold Benefit / Cost Ratio ¹	1.00	
3. Lifetime MMBTU Savings	1,642,601	1,445,195
4. Threshold Lifetime MMBTU Savings (65%) ²	1,067,691	
5. Budget / Actual Spend	\$3,744,684	\$3,237,577
6. Benefit / Cost Percentage of Budget	2.75%	
7. Lifetime MMBTU Percentage of Budget	2.75%	
8. Commercial & Industrial Incentive	\$205,958	\$160,484.80
9. Cap	\$257,447	\$257,447
Residential Incentive		
10. Benefit / Cost Ratio	1.18	1.30
11. Threshold Benefit / Cost Ratio ¹	1.00	
12. Lifetime MMBTU Savings	650,340	769,206
13. Threshold Lifetime MMBTU Savings (65%) ²	422,721	
14. Budget / Actual Spend	\$3,963,210	\$4,194,116
15. Benefit / Cost Percentage of Budget	2.75%	
16. Lifetime MMBTU Percentage of Budget	2.75%	
17. Residential Incentive	\$217,977	\$262,937
18. Cap	\$272,471	\$272,471
19. TOTAL INCENTIVE	\$423,934	\$423,421

Notes

1. Actual Benefit / Cost Ratio for each sector must be greater than or equal to 1.0.
2. Actual Lifetime MMBTU Savings for each sector must be greater than or equal to 65% of projected savings.

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
 NHSaves Energy Efficiency Programs 2019 Year End Report
 NHPUC Docket No. DE 17-136**

Table 7. Planned Versus Actual Benefit / Cost Ratio by Sector - 2019

Commercial & Industrial:	<u>Planned</u>	<u>Actual</u>
1. Benefits (Value) From Eligible Programs	\$13,523,142	\$12,206,561
2. Implementation Expenses	\$3,744,684	\$3,237,577
3. Customer Contribution	\$3,972,387	\$4,352,709
4. Performance Incentive	\$205,958	\$160,485
5. Total Costs Including Performance Incentive	\$7,923,028	\$7,750,771
6. Benefit/Cost Ratio - C&I Sector	1.75	1.61
7. Benefit/Cost Ratio including PI in cost	1.71	1.57
Residential:		
8. Benefits (Value) From Eligible Programs	\$6,440,637	\$7,552,162
9. Implementation Expenses	\$3,963,210	\$4,194,116
10. Customer Contribution	\$1,271,476	\$1,371,671
11. Performance Incentive	\$217,977	\$262,937
12. Total Costs Including Performance Incentive	\$5,452,662	\$5,828,724
13. Benefit/Cost Ratio - Residential Sector	1.23	1.36
14. Benefit/Cost Ratio including PI in cost	1.18	1.30

Table 8. Program Expenditures by Category - 2019 Actual

Program	Evaluation	External Administration	Internal Administration	Internal Implementation	Marketing	Rebates-Services	Total
Residential Programs							
ENERGY STAR Products	\$ 41,962	\$ 130	\$ 37,898	\$ 31,231	\$ 39,333	\$ 771,368	\$ 921,922
ENERGY STAR Homes	\$ 19,114	\$ 59	\$ 10,008	\$ 14,141	\$ 14,080	\$ 373,291	\$ 430,693
Home Energy Assistance	\$ 57,347	\$ 76	\$ 48,868	\$ 51,744	\$ 43,268	\$ 1,481,848	\$ 1,683,152
Home Performance with ENERGY STAR	\$ 46,986	\$ 146	\$ 7,071	\$ 24,448	\$ 39,147	\$ 770,798	\$ 888,595
Home Energy Reports	\$ 7,559	\$ 16	\$ 13,190	\$ 9,376	\$ 3,913	\$ 235,701	\$ 269,755
Subtotal - Residential	\$ 172,967	\$ 427	\$ 117,036	\$ 130,940	\$ 139,741	\$ 3,633,005	\$ 4,194,116
Commercial & Industrial Programs							
C&I Education	\$ 4,038	\$ 12	\$ 2,714	\$ 4,437	\$ 1,276	\$ 26,323	\$ 38,799
Large Business Energy Solutions	\$ 102,659	\$ 324	\$ 31,315	\$ 164,829	\$ 76,876	\$ 1,432,916	\$ 1,808,918
Small Business Energy Solutions	\$ 60,783	\$ 192	\$ 17,317	\$ 88,249	\$ 54,071	\$ 1,169,248	\$ 1,389,860
Subtotal - C&I	\$ 167,479	\$ 527	\$ 51,347	\$ 257,515	\$ 132,223	\$ 2,628,486	\$ 3,237,577
Total - All	\$ 340,446	\$ 954	\$ 168,383	\$ 388,455	\$ 271,964	\$ 6,261,491	\$ 7,431,694