

NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

LIBERTY UTILITIES

(ENERGYNORTH NATURAL GAS) CORP.

d/b/a

LIBERTY UTILITIES

CORE PROGRAMS - 2015 YEAR-END REPORT

N.H.P.U.C. Docket No. DE 14-216

May 31, 2016



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Liberty Utilities (EnergyNorth Natural Gas) Corp.
d/b/a Liberty Utilities

SUMMARY OF 2015 PROGRAM ACTIVITY

The following report presents the results of Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities (“Liberty Utilities” or “Company”) Residential and Commercial and Industrial (C&I) energy efficiency programs for calendar year 2015.

Table 1 shows a summary of overall program savings results. In total, the Company served 31,180 participants and saved 1,878,813 Lifetime MMBTUs. Annual MMBTU savings were 144,485 with an average savings per participant per year of 4.63. Of the 31,180 participants, 979 also had electric savings which totaled 10,529,400 Lifetime kWh’s. Annual kWh savings were 836,948 with an average savings per participant per year of 854.90.

Table 2 documents the quantified benefits and costs achieved by program for the Residential market. In total, the residential programs generated \$7,212,817 in customer benefits and incurred costs of \$4,369,026, for an overall program benefit cost ratio of 1.65.

Table 3 documents the quantified benefits and costs achieved by program for the C&I market. In total, the C&I programs generated \$6,762,702 in customer benefits and incurred costs of \$4,427,363, for an overall program benefit cost ratio of 1.53.

Table 4 documents the MMBTU savings achieved by program for the individual Residential and C&I programs. In summary, the Residential program activities resulted in 883,196 in total lifetime MMBTU savings and 2,796,702 lifetime kWh savings. The C&I program activities resulted in 995,617 in total lifetime MMBTU savings and 7,732,698 lifetime kWh savings.

Table 5 documents footnotes for the Residential and C&I program benefit cost ratios and the rate of savings per MMBTU based on the Avoided Energy Supply Costs in New England 2015 report.

Table 6 documents the Company’s earned 2015 year-end performance incentive of \$490,340. As specified by the Commission, the performance incentive for 2015 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 (Residential and C&I). 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 C&I), and for the entire portfolio of energy efficiency programs implemented in 2015.

Table 8 documents the Company’s expenses by Program and budget category. Overall, the Company incurred a total of \$5,177,245 of expenses in 2015.

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	31,180
MMBTU Savings per Participant Per Year	4.63
Total MMBTU Savings Per Year	144,485
Measure Life of Measures Installed in the annual program year time period	13.00
Grand Total MMBTU Savings Benchmark for Performance Incentive	1,878,813
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	979
kWh Savings per Participant Per Year	854.90
Total kWh Savings Per Year	836,948
Measure Life of Measures Installed in the annual program year time period	13
Grand Total kWh Savings Benchmark for Performance Incentive	10,529,400

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

Residential Programs	Home Energy Assistance	ENERGY STAR Appliances	Home Performance w/ENERGY STAR	ENERGY STAR Homes	Residential Building Practices & Demo	Total
Benefits:						
Avoided Generation, Transmission & Distribution Costs for:						
Program Participants	\$ 743,763	\$ 2,328,640	\$ 3,453,056	\$ 325,986	\$ 361,372	\$ 7,212,817
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	\$ 743,763	\$ 2,328,640	\$ 3,453,056	\$ 325,986	\$ 361,372	\$ 7,212,817
Costs:						
Program costs (e.g. incentives, admin, monitoring, evaluation for:						
Utility Costs (e.g., for admin, monitoring, evaluation, markeing)	\$ 919,751	\$ 899,814	\$ 619,873	\$ 84,958	\$ 298,542	\$ 2,822,937
Program participants (e.g., incremental costs not reimbursed)	\$ -	\$ 652,288	\$ 538,721	\$ 66,300	\$ -	\$ 1,257,308
Market effects (e.g., spillover, post-program adoptions)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Costs (including O&M)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Quantifiable additional resource costs (e.g. water, electricity)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Costs	\$ 919,751	\$ 1,552,101	\$ 1,158,593	\$ 151,258	\$ 298,542	\$ 4,080,245
Utility Performance Incentive at the Sector Level	n/a	n/a	n/a	n/a	n/a	\$ 288,781
Total Costs Including Utility Performance Incentives at Sector Level						\$ 4,369,026
Benefit Cost Ratio by Sector (i.e., B/C Benchmark for PI Calc.)	0.81	1.50	2.98	2.16	1.21	1.65

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

C&I Programs	Small Business	Large Business	C&I Education	Total
Benefits:				
Avoided Generation, Transmission & Distribution Costs for:				
Program Participants	\$ 3,437,533	\$ 3,325,169	\$ -	\$ 6,762,702
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	\$ 3,437,533	\$ 3,325,169	\$ -	\$ 6,762,702
Costs:				
Program costs (e.g. incentives, admin, monitoring, evaluation for:				
Utility Costs (e.g., for admin, monitoring, evaluation, marketing)	\$ 1,129,098	\$ 1,213,707	\$ 11,503	\$ 2,354,308
Program participants (e.g., incremental costs not reimbursed)	\$ 873,481	\$ 998,016	\$ -	\$ 1,871,497
Market effects (e.g., spillover, post-program adoptions)	\$ -	\$ -	\$ -	\$ -
Customer Costs (including O&M)	\$ -	\$ -	\$ -	\$ -
Quantifiable additional resource costs (e.g. water, electricity)	\$ -	\$ -	\$ -	\$ -
Total Costs	\$ 2,002,579	\$ 2,211,723	\$ 11,503	\$ 4,225,805
Utility Performance Incentive at the Sector Level	n/a	n/a	n/a	\$ 201,559
Total Costs Including Utility Performance Incentives at Sector Level				\$ 4,427,363
Benefit Cost Ratio by Sector (i.e., B/C Benchmark for PI Calc.)	1.72	1.50	-	1.53

Table 4. MMBTU Savings Benchmark for Computing Performance Incentive

Residential Programs	Home Energy Assistance	ENERGY STAR Appliances	Home Performance w/ENERGY STAR	ENERGY STAR Homes	Residential Building Practices & Demo	Total
Gas Savings in MMBTU's from Measures Installed in the Program Year						
Number of Participants	227	1,534	706	34	25,000	27,501
MMBTU Savings per Participant Per Year	19	11	27	42	1	2
Total MMBTU Savings Per Year	4,206	17,351	19,203	1,420	22,213	64,393
Measure Life of Measures Installed During the Program Year	21	17	21	25	3	14
Grand Total MMBTU Savings Benchmark for Performance Incentive	86,505	292,253	410,520	35,488	58,430	883,196
Electric Savings in kWh's from Measures Installed in the Program Year						
Number of Participants	227	518	51	34	-	830
kWh Savings per Participant	99	104	895	656	-	174
Total kWh Savings Per Participant Per Year	22,452	53,803	45,640	22,296	-	144,191
Measure Life of Measures Installed in the annual program year time period	20.08	16.27	20.00	25.00	-	19.40
Grand Total kWh Savings Benchmark for Performance Incentive	450,916	875,586	912,800	557,400	-	2,796,702
C&I Programs						
	Small Business	Large Business	C&I Education	Total		
Number of Participants	3,491	188	-	3,679		
MMBTU Savings per Participant Per Year	11	214	-	22		
Total MMBTU Savings Per Year	39,916	40,176	-	80,092		
Measure Life of Measures Installed During the Program Year	13	12	-	12		
Grand Total MMBTU Savings Benchmark for Performance Incentive	505,914	489,703	-	995,617		
Electric Savings in kWh's from Measures Installed in the Program Year						
Number of Participants	110	39	-	149		
kWh Savings per Participant	2,879	9,642	-	4,649		
Total kWh Savings Per Participant Per Year	316,732	376,025.00	-	692,757.00		
Measure Life of Measures Installed in the annual program year time period	11.66	10.74	-	11.16		
Grand Total kWh Savings Benchmark for Performance Incentive	3,694,178	4,038,520	-	7,732,698		

Table 5. Footnotes for Benefit Cost Ratio

Residential Programs	Home Energy Assistance	ENERGY STAR Appliances	Home Performance w/ENERGY STAR	ENERGY STAR Homes	Residential Building Practices & Demo	Total
Number of Participants*	227	1,534	706	34	25,000	27,501
MMBTU Savings per Participant Per Year**	19	11	27	42	1	2
Total MMBTU Savings Per Year	4,206	17,351	19,203	1,420	22,213	64,393
Number of Years in the Measure Life**	21	17	21	25	3	14
Grand Total MMBTU Savings Benchmark for Performance Incentive	86,505	292,253	410,520	35,488	58,430	883,196
Lifetime Therm Savings	865,052	2,922,529	4,105,203	354,875	584,300	8,831,959
Rate of Savings per MMBTU ***	\$ 8.91	\$ 8.91	\$ 8.91	\$ 8.91	\$ -	\$ 8.91
Grand Total Dollar Savings	\$ 770,762	\$ 2,603,973	\$ 3,657,736	\$ 316,194	\$ -	\$ 7,869,276
C&I Programs						
	Small Business	Large Business	C&I Education	Total		
Number of Participants*	3,491	188	-	3,679		
MMBTU Savings per Participant Per Year**	11	214	-	22		
Total MMBTU Savings Per Year	39,916	40,176	-	80,092		
Number of Years in the Measure Life**	13	12	-	12		
Grand Total MMBTU Savings Benchmark for Performance Incentive	505,914	489,703	-	995,617		
Lifetime Therm Savings	5,059,135	4,897,033	-	9,956,168		
Rate of Savings per MMBTU ***	\$ 7.17	\$ 7.17	\$ -	\$ 7.17		
Grand Total Dollar Savings	\$ 3,627,400	\$ 3,511,173	\$ -	\$ 7,138,572		
* 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 Costs in New England: 2013 Report, <i>Synapse Energy Economics, Inc.</i> (Cambridge, MA). pp. 1-17						
Residential Programs						
	Home Energy Assistance	ENERGY STAR Appliances	Home Performance w/ENERGY STAR	ENERGY STAR Homes	Residential Building Practices & Demo	Total
Number of Participants*	227	1,534	706	34	25,000	27,501
Participant Incremental Cost	\$ -	\$ 652,288	\$ 538,721	\$ 66,300	\$ -	\$ 1,257,308
Program Participant Cost	\$ -	\$ 425	\$ 763	\$ 1,950	\$ -	\$ 46
C&I Programs						
	Small Business	Large Business	C&I Education	Total		
Number of Participants*	3,491	188	-	3,679		
Participant Incremental Cost	\$ 873,481	\$ 998,016	\$ -	\$ 1,871,497		
Program Participant Cost	\$ 250	\$ 5,309	\$ -	\$ 509		

Table 6. Performance Incentive Calculation - 2015

Commercial/Industrial Incentive	<u>Planned</u>	<u>Actual</u>
1. Benefit/Cost Ratio	1.48	1.53
2. Threshold Benefit / Cost Ratio ¹	1.00	
3. Lifetime MMBTU Savings	900,217	995,617
4. Threshold Lifetime MMBTU Savings (65%) ²	585,141	
5. Budget / Actual Spend	\$2,493,010	\$2,354,308
6. Benefit / Cost Percentage of Budget	4.00%	
7. Lifetime MMBTU Percentage of Budget	4.00%	
8. C/I Incentive	\$199,441	\$201,559
9. Cap	\$299,161	\$299,161
Residential Incentive		
10. Benefit / Cost Ratio	1.30	1.65
11. Threshold Benefit / Cost Ratio ¹	1.00	
12. Lifetime MMBTU Savings	685,399	883,196
13. Threshold Lifetime MMBTU Savings (65%) ²	445,509	
14. Budget / Actual Spend	\$2,833,800	\$2,822,937
15. Benefit / Cost Percentage of Budget	4.00%	
16. Lifetime MMBTU Percentage of Budget	4.00%	
17. Residential Incentive	\$226,704	\$288,781
18. Cap	\$340,056	\$340,056
19. TOTAL INCENTIVE	\$426,145	\$490,340

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 Utilities
CORE Energy Efficiency Programs 2015 Year End Report
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Table 7. Planned Versus Actual Benefit / Cost Ratio by Sector - 2015

	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial:		
1. Benefits (Value) From Eligible Programs	\$6,003,749	\$6,762,702
2. Implementation Expenses	\$2,493,010	\$2,354,308
3. Customer Contribution	\$1,373,033	\$1,871,497
4. Performance Incentive	\$199,441	\$201,559
5. Total Costs Including Performance Incentive	\$4,065,484	\$4,427,363
6. Benefit/Cost Ratio - C&I Sector	1.55	1.60
7. Benefit/Cost Ratio including PI in cost	1.48	1.53
Residential:		
8. Benefits (Value) From Eligible Programs	\$5,561,911	\$7,212,817
9. Implementation Expenses	\$2,833,800	\$2,822,937
10. Customer Contribution	\$1,214,331	\$1,257,308
11. Performance Incentive	\$226,704	\$288,781
12. Total Costs Including Performance Incentive	\$4,274,835	\$4,369,026
13. Benefit/Cost Ratio - Residential Sector	1.37	1.77
14. Benefit/Cost Ratio including PI in cost	1.30	1.65

Table 8. Program Expenditures by Category - 2015 Actual

Program	Evaluation	External Administration	Internal Administration	Internal Implementation	Marketing	Rebates- Services	Total
Residential Programs							
ENERGY STAR Appliances	\$ 19,736		\$ 3,442	\$ 51,614	\$ 14,361	\$ 810,661	\$ 899,814
ENERGY STAR Homes	\$ 2,028		\$ 35	\$ 24,726	\$ 1,189	\$ 56,980	\$ 84,958
Home Energy Assistance	\$ 22,360		\$ 3,422	\$ 64,874	\$ 471	\$ 828,624	\$ 919,751
Home Performance with ENERGY STAR	\$ 17,704		\$ 7,105	\$ 75,874	\$ 11,891	\$ 507,299	\$ 619,873
Residential Building Practices & Demonstration	\$ 7,229		\$ 16,925	\$ 13,376	\$ 4,255	\$ 256,756	\$ 298,542
Subtotal - Residential	\$ 69,057	\$ -	\$ 30,929	\$ 230,463	\$ 32,166	\$ 2,460,321	\$ 2,822,937
Commercial/Industrial Programs							
C&I Education	\$ -		\$ -	\$ -	\$ 506	\$ 10,997	\$ 11,503
Large Business Energy Solutions	\$ 55,824		\$ 5,986	\$ 125,761	\$ 12,914	\$ 1,013,223	\$ 1,213,707
Small Business Energy Solutions	\$ 25,026		\$ 4,159	\$ 69,510	\$ 9,603	\$ 1,020,800	\$ 1,129,098
Subtotal - C&I	\$ 80,850	\$ -	\$ 10,145	\$ 195,271	\$ 23,023	\$ 2,045,020	\$ 2,354,308
Total - All	\$ 149,907	\$ -	\$ 41,073	\$ 425,735	\$ 55,189	\$ 4,505,341	\$ 5,177,245