

2016

**New Hampshire Statewide CORE
Energy Efficiency Plan**



Jointly Submitted by New Hampshire's Electric and Natural Gas Utilities

Granite State Electric Company d/b/a Liberty Utilities
New Hampshire Electric Cooperative, Inc.
Public Service Company of New Hampshire d/b/a Eversource Energy
Unitil Energy Systems, Inc.
EnergyNorth Natural Gas, Inc. d/b/a Liberty Utilities
Northern Utilities, Inc.

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I. INTRODUCTION

This filing is being made jointly by Granite State Electric Company d/b/a Liberty Utilities, New Hampshire Electric Cooperative, Inc., Public Service Company of New Hampshire d/b/a Eversource Energy and Unitil Energy Systems, Inc. (referred to throughout the remainder of this document as the “NH Electric Utilities”) as well as EnergyNorth Natural Gas, Inc. d/b/a Liberty Utilities and Northern Utilities, Inc. (referred to as the “NH Gas Utilities”) or collectively as the “NH CORE Utilities”.

A. Background

On September 12, 2014, in Docket DE 14-216, the NH CORE Utilities submitted a two-year plan entitled “2015-2016 New Hampshire Statewide CORE Energy Efficiency Plan” (“two year plan”) with the Commission for approval. On December 31, 2014, the Commission issued Order No. 25,747 approving the CORE Energy Efficiency Programs for 2015 and 2016, as amended by the Settlement Agreement reached in the proceeding. In the two year plan, the NH CORE Utilities committed to provide an update for the 2016 program year by September 30, 2015. In accordance with that commitment, this filing includes the NH CORE Utilities proposed program changes for the program year 2016. The sections contained in the original 2015-2016 New Hampshire Statewide CORE Energy Efficiency Plan that are not updated in this plan, remain in their original form as approved by the Commission.

This plan is separated into the following major categories and each category includes the proposed changes for 2016:

- Program Funding
- Program Budgets
- CORE Program Changes
- Utility-specific Program Changes
- Monitoring and Evaluation
- Attachments (All Attachments included in the 2015-2016 CORE Programs Plan updated for 2016)

B. Program Funding

CORE Electric Energy Efficiency Program Funding

The CORE Electric Energy Efficiency Programs are funded through three main sources: 1) a portion of the System Benefits Charge (SBC) which is applied to the electric bills of all customers receiving delivery service through one of the NH Electric Utilities; 2) a portion of the Regional Greenhouse Gas Initiative (RGGI) auction proceeds subject to certain conditions; and 3) proceeds obtained by each of the NH Electric Utilities from ISO-NE for participation in ISO-NE’s Forward Capacity Market. In addition, any unspent funds from prior program years are carried forward to future years, including interest at the prime rate.

Table I.1 summarizes the original two year plan estimated program funding for 2016, the updated estimated program funding for 2016, and the difference in program funding by source and utility for the CORE Electric Programs. The overall estimated level of funding for 2016 increased by \$380,000, which consists primarily of a) an increase of \$932,000 in carryforward and interest, b) a decrease in SBC funding of \$405,000 due to lower kilowatt-hour sales than

originally projected, and c) a decrease in Forward Capacity Market proceeds of \$147,000 due to an updated forecast.

Of the total increase in the carryforward and interest amount of \$932,000, approximately one-third or \$333,000 represents the difference in the previous estimates of carryforward and interest estimates from Liberty Utilities, New Hampshire Electric Cooperative and Unitil Energy Systems, and \$599,000 from Eversource.

Unitil's carryforward amount includes \$65,000 that was originally budgeted for its revolving loan fund and approved in the 2014 Plan. Since the demand for on-bill financing has decreased due to program design changes, Unitil will utilize these funds in 2016 for its electric Home Performance with ENERGY STAR program.

Eversource's carryforward amount of approximately \$599,000 is allocated to its HEA program (\$136,818) as well as its Customer Engagement Platform (\$462,540). In the Commission's Order No. 25,812 issued on September 11, 2015, the Commission approved Eversource's request to immediately transfer a portion of its 2014 carryforward and interest balance to its 2015 programs, and to include \$136,818 in the 2016 Home Energy Assistance Program.

For the 2015 Program Year, Eversource transferred \$591,540 from the SBC funds set aside in compliance with RSA 125-O:5 for energy efficiency projects at Eversource's facilities to the 2015 program year budget to implement a Customer Engagement Platform (CEP). Eversource estimates that it will spend \$129,000 for the CEP in 2015, leaving a balance of \$462,540 to be carried over to the 2016 CEP budget. For more details, please refer to Eversource's 2016 Budget Development in Section III.1.A and III.1.C.

Table I.1 – CORE Electric Program Funding 2016

Electric Programs					
Original 2016 Estimated Program Funding (\$000's)					
	LU-Electric	NHEC	Eversource	Unitil	Total
System Benefits Charge (SBC)	1,787.924	1,427.709	14,721.080	2,247.618	20,184.331
Carryforward & Interest	-	-	-	270.860	270.860
RGGI	222.024	203.635	1,904.598	292.830	2,623.088
ISO-NE Forward Capacity Market (FCM)	115.000	55.000	2,075.171	312.800	2,557.971
Total Electric Energy Efficiency Funding	2,124.949	1,686.344	18,700.849	3,124.108	25,636.250
Updated 2016 Estimated Program Funding (\$000's)					
	LU-Electric	NHEC	Eversource	Unitil	Total
System Benefits Charge (SBC)	1,714.102	1,398.688	14,462.705	2,203.549	19,779.044
Carryforward (HEA)	-	-	136.818	-	136.818
Carryforward (Municipal)	(2.667)	-	-	-	(2.667)
Carryforward & Interest (Excluding Muncpal Carryforward)	150.321	103.249	-	352.362	605.932
RGGI	218.739	206.230	1,908.853	289.263	2,623.085
Carryforward (CEP)	-	-	462.540	-	462.540
ISO-NE Forward Capacity Market (FCM)	210.000	65.000	1,823.283	312.800	2,411.083
Total Electric Energy Efficiency Funding	2,290.495	1,773.167	18,794.199	3,157.974	26,015.835
2016 Estimated Funding Difference (\$000's)					
	LU-Electric	NHEC	Eversource	Unitil	Total
System Benefits Charge (SBC)	(73.822)	(29.021)	(258.375)	(44.069)	(405.287)
Carryforward (HEA)	-	-	136.818	-	136.818
Carryforward (Municipal)	(2.667)	-	-	-	(2.667)
Carryforward & Interest (Excluding Muncpal Carryforward)	150.321	103.249	-	81.502	335.072
RGGI	(3.286)	2.595	4.255	(3.567)	(0.003)
Carryforward (CEP)	-	-	462.540	-	462.540
ISO-NE Forward Capacity Market (FCM)	95.000	10.000	(251.888)	-	(146.888)
Total Electric Energy Efficiency Funding	165.546	86.823	93.350	33.866	379.585

CORE Gas Energy Efficiency Program Funding

The CORE Gas Energy Efficiency Programs are funded by a portion of the Local Distribution Adjustment Charge (LDAC), which is applied to the gas bills of all customers receiving service through one of the NH Gas Utilities. Similar to the electric programs, any unspent funds from prior program years are carried forward to future years, including interest earned at the prime rate.

Table I.2 below summarizes the original 2016 estimated program funding, the updated 2016 estimated program funding and the difference in program funding by source and utility for the CORE Gas Programs. The overall estimated level of funding for 2016 increased by \$64,600.

Table I.2 – CORE Gas Program Funding 2016

New Hampshire Statewide CORE Energy Efficiency Programs Gas Programs			
Original 2016 Estimated Program Funding (\$000's)			
	LU-Gas	Unitil-Gas	Total
Local Distribution Adjustment Charge (LDAC)	5,925.060	1,530.200	7,455.260
Carryforward & Interest	-	7.180	7.180
Total Gas Energy Efficiency Funding	5,925.060	1,537.380	7,462.440
Updated 2016 Estimated Program Funding (\$000's)			
	LU-Gas	Unitil-Gas	Total
Local Distribution Adjustment Charge (LDAC)	5,925.057	1,321.604	7,246.661
Carryforward & Interest	146.503	133.854	280.357
Total Gas Energy Efficiency Funding	6,071.560	1,455.459	7,527.019
2016 Estimated Program Funding Difference (\$000's)			
	LU-Gas	Unitil-Gas	Total
Local Distribution Adjustment Charge (LDAC)	(0.003)	(208.596)	(208.599)
Carryforward & Interest	146.503	126.674	273.177
Total Gas Energy Efficiency Funding	146.500	(81.921)	64.579

C. Program Budgets

CORE Electric Energy Efficiency Program Budgets

Table I.3 below summarizes the original 2016 electric program budget, the updated 2016 electric program budget and the difference in electric program budget by sector and utility for the CORE Electric Programs. The overall 2016 electric program budget increased by approximately \$352,000 from the original 2016 budget projection. The increase is largely due to the carryforward for Eversource's HEA and the CEP programs. Without these carryforward amounts, the budget decreased by approximately \$202,000. The program budget figures in Table I.3 do not include the estimated performance incentive, which is summarized in Attachment H2 for each utility, along with individual program budgets. As shown, the HEA Program budget is at least 15.5% of each utility's total program budget.

For Eversource, the HEA Program percentage calculation excludes the 2014 carryforward allocated to HEA and the 2015 carryforward for the CEP¹.

A summary of the process and assumptions used to develop Eversource's updated 2016 budget by sector can be found in Sections III.1.A. The budget development process is similar for each utility.

Table I.3 – CORE Electric Program Budget 2016

Electric Programs					
Original 2016 Program Budgets (\$000's)					
	LU-Electric	NHEC	Eversource	Unitil	Total
Residential - Income Eligible (HEA Program)	306.311	243.237	2,696.888	450.453	3,696.889
Residential - All Other	530.590	782.306	5,104.384	915.766	7,333.046
C&I and Municipal	1,119.800	523.497	9,386.494	1,509.928	12,539.719
Smart Start & FCM	20.000	20.000	212.000	30.000	282.000
Total Budget	1,976.701	1,569.040	17,399.766	2,906.147	23,851.654
HEA Program % of Total Budget	15.5%	15.5%	15.5%	15.5%	15.5%
Updated 2016 Program Budgets (\$000's)					
	LU-Electric	NHEC	Eversource	Unitil	Total
Residential - Income Eligible (HEA Program)	330.589	255.703	2,751.286	455.327	3,792.905
Residential - All Other	521.148	728.901	5,156.696	1,024.407	7,431.152
C&I and Municipal	1,243.956	654.854	9,366.622	1,427.916	12,693.348
Smart Start & FCM	35.000	10.000	212.000	30.000	287.000
Total Budget	2,130.693	1,649.458	17,486.604	2,937.650	24,204.405
Less Carryforward (HEA)	-	-	127.273	-	127.273
Less Carryforward (Municipal)	(2.481)	-	-	-	(2.481)
Less Carryforward (CEP)	-	-	430.270	-	430.270
Total Budget to Base HEA Allocation	2,133.174	1,649.458	16,929.061	2,937.650	23,649.343
HEA Program (net of HEA carryforward) % of Total Budget¹	15.5%	15.5%	15.5%	15.5%	15.5%
2016 Estimated Program Budget Difference (\$000's)					
	LU-Electric	NHEC	Eversource	Unitil	Total
Residential - Income Eligible (HEA Program)	24.278	12.466	54.398	4.874	96.016
Residential - All Other	(9.442)	(53.405)	52.312	108.641	98.106
C&I and Municipal	124.156	131.357	(19.872)	(82.012)	153.629
Smart Start & FCM	15.000	(10.000)	-	-	5.000
Total Budget Before Carryforward	153.992	80.418	86.838	31.503	352.751
Carryforward (HEA)	-	-	(127.273)	-	(127.273)
Carryforward (Municipal)	2.481	-	-	-	2.481
Carryforward (CEP)	-	-	(430.270)	-	(430.270)
Total Budget	156.473	80.418	(470.705)	31.503	(202.311)

¹ Eversource's HEA Program Budget calculation: $(\$2,751,286 - \$127,273) / \$16,929,061 = 15.5\%$

CORE Gas Energy Efficiency Program Budgets

Table I.4 below summarizes the original 2016 gas program budget, the updated 2016 gas program budget and the difference in gas program budget by sector and utility for the CORE Gas Programs. The overall 2016 gas program budget increased by \$60,000 from the original 2016 budget estimate.

Table I.4 – CORE Gas Program Budget 2016

New Hampshire Statewide CORE Energy Efficiency Programs Gas Programs			
Original 2016 Program Budgets (\$000's)			
	LU-Gas	Unitil -Gas	Total
Residential - Income Eligible (HEA Program)	948.887	220.642	1,169.529
Residential - All Other	1,969.926	644.922	2,614.848
Commercial & Industrial	2,567.350	557.936	3,125.286
Total Budget	5,486.163	1,423.500	6,909.663
HEA Program % of Total Budget	17.3%	15.5%	16.9%
Updated 2016 Program Budgets (\$000's)			
	LU-Gas	Unitil -Gas	Total
Residential - Income Eligible (HEA Program)	895.000	208.884	1,103.884
Residential - All Other	2,023.815	568.733	2,592.548
Commercial & Industrial	2,703.000	570.030	3,273.030
Total Budget	5,621.815	1,347.647	6,969.462
HEA Program % of Total Budget	15.9%	15.5%	15.8%
2016 Estimated Program Budget Difference (\$000's)			
	LU-Gas	Unitil -Gas	Total
Residential - Income Eligible (HEA Program)	(53.887)	(11.758)	(65.645)
Residential - All Other	53.889	(76.189)	(22.300)
Commercial & Industrial	135.650	12.094	147.744
Total Budget	135.652	(75.853)	59.799

II. CORE PROGRAM CHANGES

A. Residential Programs

1. ENERGY STAR Products Program

Lighting

As described in the 2015-2016 New Hampshire Statewide CORE Energy Efficiency Plan, the lighting program design has been centered on offering in-store, bar-coded coupons and mail-in rebate incentives aimed at encouraging consumers to make purchases of qualifying, ENERGY STAR products. In addition, product markdowns have been utilized with retailers for specific ENERGY STAR products. The use of product markdowns allows for greater control over program expenditures and more strategic promotion of efficient measures. It also allows for the program to be easily scaled up or down, as needed.

Following the lead of other efficiency programs across the region, the NH lighting program design for 2016 will continue with an expansion of product mark downs while retaining product coupons in some retail stores. A major New Hampshire retailer will convert to the markdown model in 2016.

Appliances – “White Goods”

The ENERGY STAR Appliance Program is designed to offer mail-in incentives on certain ENERGY STAR rated appliances, encouraging consumers to choose more efficient options than the federal baseline. The program also includes a second refrigerator and freezer pickup and recycling program. The current appliance program design will continue in 2016, with the exception that incentives for Advanced Power Strips will be discontinued as they are no longer ENERGY STAR certified. The NH CORE Utilities continue to review the appliance market for new technologies that can be supported through the CORE programs. The potential for adding new ENERGY STAR products beyond 2016 will be addressed in the next multi-year plan. In the meantime, the NH CORE Utilities reserve the right to make modest changes to measures and incentive levels in response to trends in the marketplace.

2. Home Performance with ENERGY STAR

Program Changes

Given the high demand throughout the state for this residential weatherization program, along with the availability of third party financing for customers, the NH CORE Utilities are proposing that customers pay the full cost of certain non-cost effective or non-energy saving measures. Starting in 2016, customers will pay the full cost, as compared to 50%, for bathroom fans and timer switches, and certain types of basement insulation. Other measures will continue to be incented at the 50% level up to the existing incentive cap.

Third Party Financing

In 2015, the NH Electric Utilities began to offer a third party financing option through local financial institutions, which was based on the third party financing option initiated by the NH Gas Utilities in 2014. In 2016, the third party financing option will continue to facilitate customers' access to capital for energy efficiency investments. All participating customers have access to a 2% loan for up to 7 years with a maximum loan amount of \$15,000 for weatherization and an ENERGY STAR heating system replacement, if recommended by the program's energy auditor. While the NH CORE Utilities determine the energy efficiency

measures that qualify for the third party financing option, the lender will process and service the loan. The lender assumes the risk if a customer defaults on its unsecured loan.

This offering has been enhanced by an agreement with the Community Development Finance Authority (CDFA) which will provide up to \$150,000 statewide per year in 2015 and 2016 from its participation in the federal Better Buildings Program (these funds are not considered part of the CORE programs and are therefore not budgeted in this filing). CORE program funding may be utilized for loan buy downs if an energy efficiency project does not meet the federal Better Buildings project guidelines or if the CDFAs funds are fully expended. Any unused CORE funds budgeted for interest rate buy downs will be utilized within the Home Performance with ENERGY STAR program.

Estimated 2016 Loan Buy Down Budgets and Participation

The following tables summarize the average buy down amounts, the number of loans and the loan buy down budgets by utility and program for 2016. These amounts are included in each utility's Home Performance with ENERGY STAR program budget.²

Natural Gas Utilities

Liberty Utilities

Program	Average Buy Down Amount	No. of Loans	Total Buy Down Amount
HPwES	\$ 545	26	\$ 14,170
ENERGY STAR Products	\$ 851	24	\$ 20,424
Both	\$ 1,163	2	\$ 2,326
TOTAL		52	\$ 36,920

Electric Utilities

Program	Average Buy Down Amount	No. of Loans	Total Buy Down Amount
Eversource	\$ 400	25	\$ 10,000
Liberty Utilities	\$ 478	10	\$ 4,780
NHEC	\$ 500	16	\$ 8,000
Unitil	\$ -	-	\$ -
TOTAL		51	\$ 22,780

B. NHSaves Online Presence

The NH CORE Utilities will continue to make enhancements to NHSaves.com to increase customer usage of the site and deliver energy efficiency education, marketing and information to customers and energy efficiency stakeholders. Additional energy efficiency customer project case studies and blogs covering diverse energy efficiency topics will continue to be added. Brief videos may be incorporated in the site to provide more accessible information about the weatherization process, or to provide an overview of C&I efficiency projects. A stand-alone renewable energy section was launched in 2015 to provide

² Given the availability of Better Buildings funding, Unitil and Unitil-Gas did not budget CORE funding to be used for third party interest rate buy-downs. However, for any customer falling outside of the parameters of the Better Buildings program, Unitil will pay for the interest rate buy down out of its gas or electric Home Performance with ENERGY STAR program budget.

information and links for customers to access information on renewable energy incentives and programs in New Hampshire.

To increase awareness and site traffic to NHSaves.com, social media marketing using targeted promotions will be tested. In addition, an online random survey of visitors to the NHSaves.com website will provide valuable information on the website's current usability while also providing guidance on potential future improvements and designs.

III. UTILITY-SPECIFIC PROGRAM CHANGES

1) Eversource

This section provides information on matters and programs specific to Eversource.

A. 2016 Budget Development

The following process and assumptions were used to develop Eversource's 2016 budget.

1. 2016 Energy Efficiency Program Funding

The total 2016 funding available to Eversource's energy efficiency programs was estimated based on the following:

- a) Eversource's System Benefits Charge (SBC) energy efficiency revenue is based on a forecast of 2016 MWH sales and an SBC energy efficiency rate of 1.8 mills per kilowatt-hour.

2016 Forecasted MWH Sales	SBC Rate (mills/kWh)	Total SBC Revenue (\$000's)
8,034,836	1.8	\$14,462.705

- b) The estimated 2016 RGGI proceeds allocated to the NH CORE Programs of \$2.623 million was provided to the NH Electric Utilities by the Commission's staff and allocated to programs in accordance with RSA 125:O:23.

Of these amounts, \$2.15 million of the RGGI proceeds were allocated to the NH Electric Utilities for municipal and local government energy efficiency projects, including projects by local governments that have their own municipal utilities. In addition, \$473,086 was allocated to the Home Energy Assistance (HEA) program. As shown in Table 1, the \$2.15 million was allocated to each NH Electric Utility based on each utility's proportional share of the total 2014 kWh sales, including the 2014 kWh sales of the NH municipal electric utilities. The kWh sales of the municipal electric utilities were assigned to Eversource and the NHEC based on their geographic location. As shown in Table 2, the HEA program funds were allocated to each NH Electric Utility based on each utility's proportional share of the total 2014 kWh sales delivered by each utility. The final RGGI funds allocated to each NH Electric Utility is the summation of the municipal program funds and the HEA program funds.

Table 1:

Utility	2014 kWh Sales	Allocated to:	Total Allocated kWh Sales	Municipal Percent Allocation	2016 Municipal Allocation (\$000's)
LU-Electric	910,685,196		910,685,196	8.31%	\$178.74
NHEC	769,708,352		878,503,799	8.02%	\$172.42
Eversource	7,886,054,000		7,960,903,337	72.67%	\$1,562.47
Unitil	1,204,303,000		1,204,303,000	11.00%	\$236.56
Ashland	18,716,179	NHEC			
Littleton	71,616,717	Eversource			
New Hampton	3,232,620	Eversource			
Wolfeboro	67,454,017	NHEC			
Woodsville	22,625,251	NHEC			
Total	10,954,395,332		10,954,395,332	100.00%	\$2,150.00

Table 2:

Utility	2014 MWh Sales	HEA Percent Allocation	Municipal Program Allocation (\$000's)	HEA Program Allocation (\$000's)	2016 Final RGGI Funds Allocation (\$000's)
LU-Electric	910,685	8.46%	\$ 178.74	\$ 40.00	\$ 218.74
NHEC	769,708	7.15%	\$ 172.42	\$ 33.81	\$ 206.23
Eversource	7,886,054	73.22%	\$ 1,562.47	\$ 346.38	\$ 1,908.85
Unitil	1,204,303	11.18%	\$ 236.56	\$ 52.90	\$ 289.46
Total	10,770,751	100.00%	\$2,150.00	\$ 473.09	\$ 2,623.09

- c) The ISO-NE Forward Capacity Market (FCM) proceeds for the period January through December 2016 are estimated to be \$1.823 million.
- d) The total carryforward and interest balance from the 2014 program year was \$1,255,827. This amount included a Municipal year-end balance of \$373,131. Eversource has notified the Commission that it plans to transfer this amount to its 2015 Municipal Program budget. In addition, the Commission approved Eversource's request to immediately transfer \$300,663 to the 2015 Home Performance with ENERGY STAR Program budget, and \$445,215 to the 2015 Small Business Energy Solutions Program budget. The remaining balance of \$136,818 is included in the 2016 Home Energy Assistance Program budget.
- e) Eversource transferred \$591,540 from the SBC funds set aside in compliance with RSA 125-O:5 for energy efficiency projects at Eversource's facilities to the 2015 program year budget for the distinct purpose of implementing a Customer Engagement Platform (CEP) described in the 2015-2016 New Hampshire Statewide CORE Energy Efficiency Plan (pages 66-70). Eversource estimates that approximately \$129,000 of the funding,

including performance incentive, will be expended for Setup, IT/Implementation in 2015. This leaves a funding balance of \$462,540 to be disbursed in 2016.

- f) The total 2016 funding of \$18.794 million is the summation of the SBC revenue, the 2014 carryforward for HEA, the 2015 carryforward for CEP and the RGGI and FCM proceeds.

Source	2016 Amount (\$000's)
SBC Revenues	\$14,462.705
Carryforward (HEA)	\$136.818
RGGI	\$1,908.853
Carryforward (CEP)	\$462.540
FCM	\$1,823.283
Total	\$18,794.199

2. Performance Incentive Budget

A portion of the total 2016 funding is reserved for the performance incentive. The first portion relates to the performance incentive associated with Eversource's Smart Start Program and is calculated based on 6% of the loans repaid³. The second portion relates to the performance incentive associated with all of Eversource's other energy efficiency programs and is calculated based on the method approved by the Commission in its Order No. 25,569 issued on September 6, 2013. Reference Attachment F, page 3 for the total 2016 planned performance incentive budget and the commercial/industrial sector and the residential sector performance incentive budgets.

3. Total Program Budget and Allocation to the Residential and Commercial/Industrial Sectors

- a) The total program budget is equal to the total 2016 program funding less the performance incentive budget and the Smart Start Program expenses.
- b) For 2016, the carryforward and interest budget of \$127,273 was allocated to the Home Energy Assistance program as approved in the Commission's Order No. 25,812, and the carryforward amount of \$430,270 was allocated for CEP.
- c) The Residential Home Energy Assistance (HEA) Program is first allocated 15.5% of the total program budget (excluding the carryforward amount of \$127,273 allocated for HEA and the carryforward amount of \$430,270 allocated for CEP).
- d) The remaining budget amount (total program budget as defined in (a) above less the HEA Program and the CEP carryforward amounts) is allocated to the residential sector and the commercial/industrial sector based on the funding source.
 - a. The SBC, RGGI and carryforward and interest funds are allocated based on each sector's proportional share of the forecasted 2016 total kWh sales (Residential – 40.48%; Commercial/Industrial – 59.52%). Of the C&I funds, \$1.45 million was allocated to the C&I municipal program.
 - b. Seventy percent (70%) of the FCM budget is allocated to the Commercial/Industrial sector and thirty percent (30%) is allocated to the Residential sector. (As stated in Order No. 24,719 dated December 22,

³ Docket DE 01-080, Order No. 23,851, November 29, 2001, Section III, page 19.

2006, the Commission stated “We also believe that it is appropriate, as a preliminary matter, to contribute any payments received by utilities for Core program peak load reduction back to the Core programs.”)

- e) Of the Residential and Commercial/Industrial sector budgets, approximately 2% is allocated to marketing activities and approximately 5% is allocated to monitoring and evaluation activities.

4. Customer Engagement Platform (CEP) Budget

The CEP budget included in the 2015-2016 Plan is shown below:

Budget	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Setup, IT/Implementation	\$400,000			
Software	\$150,270	\$263,777	\$212,703	\$198,392
	(1/2 year)	(full year)	(full year)	(full year)
Total	\$550,270	\$263,777	\$212,703	\$198,392

Eversource estimates that approximately \$120,000 will be expended for Setup, IT/Implementation in 2015, leaving a budget balance of \$430,270 to be disbursed in 2016. The total CEP budget for 2016 is \$580,539, of which \$430,270 will be funded by the 2015 Carryforward from RSA 125-O:5 and \$150,269 is funded from 2016 CORE Program funds.

<u>Budget</u>	<u>2016</u>
Setup, IT/Implementation	\$280,000
Software (for year 1)	<u>\$300,540</u>
Total	\$580,539

5. Factors Influencing Budget Level

There are several factors that may impact the budget level, including:

- a) Eversource will monitor spending in each of the programs and propose adjustments as necessary (e.g. in response to customer demand) in accordance with the guidelines contained in Section IV.C of the 2015-2016 New Hampshire Statewide CORE Energy Efficiency Plan.
- b) Eversource will accrue interest⁴ monthly at the prime rate⁵ on the average net balance of the total of the SBC revenue and RGGI and FCM proceeds received less funds expended for programs and services.
- c) Eversource’s SBC revenue is based on sales projections. Actual sales may differ resulting in proportionately more or less SBC revenue available for energy efficiency programs. In addition, RGGI and FCM proceeds are estimated and are subject to change. The budget will be adjusted to reflect actual sales and actual RGGI and FCM proceeds.
- d) Any unspent dollars at the end of the year will be allocated to future year budgets.

The 2016 program budget detail is presented in Attachment H2.

⁴ DE 96-150, Order 23,574, November 1, 2000, page 25.

⁵ <http://www.moneycafe.com/library/primerate.htm>

B. Residential Home Energy Reports Program

In February 2014, Eversource successfully launched its Home Energy Reports Pilot Program with 25,000 residential participants. Half of the participants received normative (neighbor comparison) messaging whereas the other half earned rewards from saving energy. The one-year pilot program ended in February 2015 with cumulative electric savings of 1.5% for the normative messaging versus 0.31% for rewards messaging. An independent evaluation of the pilot program results is projected to be completed by October 2015. A new program targeting 25,000 high-use residential customers was launched in April 2015. An informational letter on the 2015-2016 Home Energy Reports Program was filed with the Commission on March 27, 2015 in Docket DE 14-216, which provides detailed information on the new program for 2015-2016.

C. Customer Engagement Platform (CEP)

Implementation of the CEP is making great progress at Eversource. The CEP was implemented in both Connecticut and Massachusetts during 2015 and energy usage information for New Hampshire's residential and small business customers has been extracted and verified and is ready to be uploaded into the platform. There are a few key features rolled out in Massachusetts and Connecticut that require additional technical support and testing. These include: improved display of past program participation information, adding the ability to establish energy savings goals, adding role-based access to the product so customers can limit access to certain information and refining customer profile questions. As a result of the additional technical support and testing required, Eversource has delayed the CEP launch in New Hampshire from third-quarter 2015 to first-quarter 2016, in order to ensure these key features are available to New Hampshire customers in the initial product launch.

Please refer to page 12 of Eversource's 2016 budget development summary for detailed CEP program budget information.

2) Unitol Energy Systems, Inc.

This section provides information on matters and programs specific to Unitol.

A. Combined Heat and Power (CHP) C&I Pilot Measure for Electric Commercial, Municipal, and Industrial Customers

Overview

The NHPUC's Order No. 25,555 allowed the incorporation of a Combined Heat and Power (CHP) Pilot Measure within Unitol's C&I electric programs in 2013 and 2014. Due to the unexpected withdrawal by a customer in 2014, no projects went forward during the plan period. However, given continued interest expressed by two customers, the Company proposed to extend the pilot in 2015 and 2016.

The objective of the CHP Pilot Measure is to give C&I customers an opportunity to take advantage of this highly efficient technology and to assist in the upfront installation costs. CHP systems reduce electricity (kWh and kW) requirements while providing waste heat to reduce heating and/or hot water (thermal BTUs) requirements. Typically, CHP systems emit

less greenhouse gas than grid generated power. CHP systems can be fueled by natural gas, diesel fuel, wood pellets, etc. The pilot measure has a number of goals:

1. Market the technology and educate customers - especially those with heat and/or hot water needs for at least 6,000 hours per year.
2. Screen projects to determine if they pass the C&I Field Screening Tool (B/C) with current avoided supply costs.
3. Monitor one (possibly two) projects for performance and compare this to proposed energy savings and fuel usage with a cost up to \$25,000.
4. Assist in the upfront cost of installation via rebates capping the total at \$75,000 for all projects for 2015-2016.
5. Advise customers to participate in ISO-NE programs using the equipment as a critical peak asset.

2016 Plan Update

The Company issued an RFP in 2015 but did not receive any proposals from customers. Feedback from customers and other interested parties included the following:

1. Due to the nature of CHP projects and the magnitude of the investment, the timeframe to submit a proposal was too short; and
2. The incentive amount being offered for the pilot measure RFP was insufficient to incent larger CHP systems.

The Company will continue to offer the pilot CHP measure for 2016 by reissuing the RFP in October or November 2015 with an application deadline in early 2016. The RFP will include a requirement that installation of the CHP system take place prior to the end of 2016. The monitoring study of any pilot measure installed may be conducted and concluded in 2017.

Any expenses incurred for the monitoring study will be paid from the System Benefits Charge funds, Forward Capacity Market funds, RGGI funds, and/or any other mechanism designed to fund energy efficiency programs in NH.

Implementation / Delivery

The CHP Pilot Measure will be included as an allowable measure within the Company's Large, Small, and Municipal business programs. The Company will work with its customers to assure maximum performance from the equipment. For fossil fuel systems above 20kW, the systems must be in compliance with CARB 2007 standards. This is the standard adopted by New Hampshire as referenced in RSA 374-G (Distributed Energy Resources).

Measures of Success

Success factors for this pilot measure include attainment of the participation, estimated savings, high customer satisfaction ratings, and acceptable M&E results, including an analysis comparing results with the most recent evaluation conducted by the MA Program Administrators.

B. Home Performance with ENERGY STAR and On-Bill Financing

Given the evolution of customer lending programs in the NH CORE programs to the third party lending model, the Company did not spend the \$65,000 in new funding that was budgeted for the residential on-bill financing program and approved in its 2014 Plan. Furthermore, the Company projects that it will not be able to spend the \$65,000 for on-bill

financing in 2015 or 2016. It therefore is carrying these funds over into the Residential Sector CORE programs in 2016, and more specifically dedicating them to expanding the Home Performance with ENERGY STAR program.

IV. MONITORING & EVALUATION

A settlement agreement approved by the Commission on March 17, 2006 (Order No. 24,599 in DE 05-157) transferred responsibility for monitoring and evaluation efforts from the NH CORE Utilities to the Commission's Staff. Under that agreement, the Commission receives input and advice from the NH CORE Utilities on monitoring and evaluation activities.

In 2016, no changes are anticipated regarding the responsibilities of the parties. Funding for Monitoring and Evaluation is proposed to remain at approximately five percent of the annual program budgets.

From January to August 2015, the following Monitoring and Evaluation studies were completed:

- The Avoided Energy Supply Costs in New England: 2015 Report, March 27, 2015, Revised April 3, 2015. The updated avoided energy and capacity costs were utilized by the NH CORE Utilities in their energy efficiency program benefit-cost analyses for the 2016 Update. (See Attachment M for the summary of the impacts of this new report as compared to the avoided costs used in the original 2015-2016 program screening.)

Additional research is taking place in the fall of 2015 to determine the value of demand that is offset by energy efficiency programs during 'super peak' summer and winter hours, or those times during which the electric grid is under the most stress. This work is currently being undertaken by Tabors Caramanis Rudkevich, Inc. (TCR), the vendor selected to undertake the 2015 Avoided Cost Study, in conjunction with the multistate avoided cost study group, with the expectation that it will be concluded by the end of 2015.

- Large Commercial & Industrial (C&I) Retrofit and New Equipment & Construction Program Impact Evaluation for the New Hampshire Electric and Gas Utilities, June 2015. The objectives of this study were to verify actual energy and demand savings by metering a representative sample of projects completed as part of the Large Business Solutions program in 2013 for both gas and electric end uses. DNV-GL (formerly known as Kema) was selected from a competitive bid process to undertake the study. In addition to measuring actual savings, DNV-GL was charged with explaining the discrepancies between their findings and the savings originally claimed by the NH CORE Utilities, to evaluate customer satisfaction with the programs, and to recommend any changes to the utilities' practices in estimating or tracking savings going forward.

The evaluation found that there was an extremely close correlation between the savings actually modeled and claimed by the utilities and that measured in the field by DNV-GL. Each of the NH CORE Utilities updated the relevant realization rates for their Large Business Solutions programs based on the findings. Specific customers who received support for snowmaking in one case and parking lot lighting in another were discussed at length with evaluators, and modifications were made by the utilities in how demand savings for these types of customers will be claimed going forward.

Customer satisfaction with the programs was found by evaluators to be very high, with 98 percent of the 63 customers surveyed by the evaluators reported being satisfied or very satisfied with the programs. No substantive changes to program delivery were recommended.

Measurement and Verification of the NH CORE/Utility Specific Energy Efficiency Programs
Eversource's Home Energy Reports Pilot Program's impact evaluation of the first year results is underway and is expected to be completed in October 2015.

The following market assessment, impact and process evaluation studies included in the 2015-2016 Plan are under consideration in conjunction with the Commission's Staff and other interested parties:

- ENERGY STAR Homes Program: a request for proposals for a multi-faceted evaluation has been drafted and is expected to be issued prior to the end of 2015, but is complicated by possible changes to the NH energy codes.
- Municipal Energy Efficiency Program: a process evaluation to examine the effectiveness of program delivery, including review of marketing and promotional activities, project intake and management, technical assistance/audit performance, measure installation, quality assurance processes and customer satisfaction.
- ENERGY STAR Products Program (Appliances): market assessment of current penetration of ENERGY STAR appliances; measurement and verification of energy savings associated with low temperature ductless mini-splits, heat pump water heaters and possibly fossil fuel heating systems; program participant survey to assess customer satisfaction and purchasing behavior.
- ENERGY STAR Products Program (Lighting): focused study to review the adoption, use and program participant satisfaction with LEDs, including measurement and verification of the installation, hours of use and delta watts of LEDs.
- Small Business Energy Solutions Program: impact evaluation to measure and verify energy savings and update hours of use for certain segments; assess the impact of EISA requirements on linear fluorescent lamp savings baseline; impact evaluation will include Municipal projects.

Northeast Energy Efficiency Partnership (NEEP) Regional Evaluation, Measurement & Verification (EM&V) Forum

New Hampshire has elected to participate in the following regional evaluations being facilitated by NEEP's EM&V Forum, which are expected to be completed in either 2015 or 2016.

- Commercial Refrigeration Loadshape Study
- Remaining Useful Life Study
- Incremental Cost Study
- Net Savings Project
- Measure Life Research
- EM&V Methods
- Changing EM&V Paradigm
- Home Energy Management Research
- Loadshape Catalog

Reports and project details are available at <http://www.neep.org/initiatives/emv-forum>.

ATTACHMENT A: Home Energy Assistance Program Implementation Plan

2016 HEA Quarterly Production Schedule

Utility	Total Jobs	1st. Qtr.	2nd. Qtr.	3rd. Qtr.	4th. Qtr.
		22%	32%	32%	14%
LU-Electric	37	9	11	11	6
NHEC	28	6	9	11	2
Eversource	352	89	112	105	46
Unitil	48	8	16	19	5
LU-Gas	306	58	96	100	52
Northern Utilities	32	4	11	14	3
TOTAL Electric	465	112	148	146	59
TOTAL Gas	338	62	107	114	55
Cumulative TOTAL		174	429	689	803

2016 HEA Job Distribution By County and By Utility

BY COUNTY	LU-Electric	NHEC	Eversource	Unitil	LU-Gas	Northern Utilities	Grand Total
Belknap		5	39		35		79
Carroll		3	19				22
Cheshire	5		11				16
Coos		2	26		0		28
Grafton	14	9	12				35
Hillsborough	7		149		233		389
Merrimack		3	32	28	32		95
Rockingham	7	3	36	20	6	21	93
Strafford		0	17			11	28
Sullivan	4	3	11				18
Program Totals	37	28	352	48	306	32	803

Note: Quarterly numbers are benchmarks and are not meant to be used to evaluate production on a monthly basis.

Attachment B: Completed Monitoring & Evaluation Studies

Evaluation Studies Completed since 2014

- 2014 -----
1. ERS, New Hampshire Commercial & Industrial New Construction Program Baseline Evaluation for the NH Monitoring and Evaluation Team, March 2014
 2. TecMarket Works, Six-Year Evaluation Plan for CORE Energy Efficiency Programs for the New Hampshire Public Utilities Commission, September 2014
- 2015 -----
3. Tabors Caramanis Rudkevich (TCR), Avoided Energy Supply Costs in New England: 2015 Report, March 2015, Revised April 2015
 4. DNV GL, New Hampshire Utilities Large Commercial & Industrial (C&I) Retrofit and New Equipment & Construction Program Impact Evaluation, June 2015

For a complete list of the monitoring and evaluation studies, please refer to the Commission's website at:

http://www.puc.state.nh.us/Electric/Monitoring%20and%20Evaluation%20Reports/Monitoring_Evaluation_Report_List.htm

ATTACHMENT C: AVOIDED COSTS

Summary of Avoided Electric Costs

In accordance with Commission Order No. 23,850, in DE 01-057, dated November 29, 2001, the NH Electric Utilities have based their avoided costs on the 2015 *Avoided Energy Supply Costs in New England: 2015 Final Report* (“2015 AESC”). Use of common avoided costs by the utilities ensures that all New Hampshire customers will have access to the programs and services that result in the same calculated avoided cost, regardless of their utility.

The present value of avoided costs over the life of program measures was calculated using a discount rate of 3.25% and a general inflation rate of 1.00%. The use of the 15% adder to represent non-quantified benefits – including environmental and other benefits as recommended by the Energy Efficiency Working Group, originally authorized by the NHPUC in DR 96-150, Order No. 23,574, dated November 1, 2000, has been discontinued because the 2015 AESC avoided costs include market-based price proxies for power plant emissions of NO_x, SO₂, Mercury and CO₂.

The 2015 AESC avoided costs also include a 9% generic retail adder to account for the expected differential between retail and wholesale market prices. In recognition of diversity among states and utilities in energy service procurement and retail pricing policies, the contractor, Tabors Caramanis Rudkevich (TCR), provided the utility sponsors of the report with the option to remove the adder from the avoided cost data. Eversource, Liberty Utilities, Unitil and NHEC have concluded that the 2015 AESC forecasted wholesale prices of energy and capacity represent a better approximation of the cost of energy service avoided by their retail customers than prices that include a 9% increase to the wholesale prices.

Avoided Transmission and Distribution Costs

In accordance with Commission Order No. 23,850, in DE 01-057, dated November 29, 2001, the NH Electric Utilities have based their avoided transmission and distribution costs on the weighted average of NH utility costs and escalated for inflation and reflected in 2015 dollars.

The following table also includes an adjustment to reduce the energy and capacity line loss multipliers by the estimated losses that are accounted for in the 2015 forecast of energy prices.

Marginal T&D Costs and Line Loss Factors (\$2015)									
Line Loss Multipliers									
	<u>MDC (\$/kW-yr)</u>		<u>MTC</u>	<u>Transmission</u>	<u>Summer</u>	<u>Winter</u>	<u>On-Peak</u>	<u>Off-Peak</u>	
	<u>Res.(1)</u>	<u>C&I(2)</u>	<u>(\$/kW-yr)</u>	<u>Capacity</u>	<u>Capacity</u>	<u>Capacity</u>	<u>Energy</u>	<u>Energy</u>	
NHEC	\$138.90	\$138.90	\$114.00	1.0207	1.0916	1.0916	1.0916	1.0916	1.0916
Liberty	\$122.91	\$89.45	\$51.39	1.1220	1.1500	1.1350	1.0630	1.0890	
PSNH	\$67.59	\$67.59	\$4.15	1.0000	1.0820	1.0820	1.0820	1.0840	
Unitil	\$78.79	\$78.79	\$31.30	1.0000	1.1217	1.1217	1.1217	1.0152	
MWh Sales to Ultimate Customers in 2014									
NHEC	760,840.146	7.06%							
Liberty	910,824.519	8.45%							
Eversource	7,886,054.000	73.13%							
Unitil	<u>1,225,254.000</u>	<u>11.36%</u>							
Total	10,782,972.665	100.00%							
Weighted Average Marginal T&D Costs and Line Loss Factors									
(Energy Line Loss Multipliers have been reduced by estimated transmission losses.)									
Line Loss Multipliers									
	<u>MDC (\$/kW-yr)</u>		<u>MTC</u>	<u>Transmission</u>	<u>Summer</u>	<u>Winter</u>	<u>On-Peak</u>	<u>Off-Peak</u>	
	<u>Res.(1)</u>	<u>C&I(2)</u>	<u>(\$/kW-yr)</u>	<u>Capacity</u>	<u>Capacity</u>	<u>Capacity</u>	<u>Energy</u>	<u>Energy</u>	
2015\$	\$78.57	\$75.74	\$18.98	1.012	1.069	1.068	1.062	1.053	

Program Cost-Effectiveness - 2016 PLAN

Present Value											
	Total Resource Benefit/Cost Ratio	Benefits (\$000)	Utility Costs (\$000)	Customer Costs (\$000)	Annual MWh Savings	Lifetime MWh Savings	Winter kW Savings	Summer kW Savings	Number of Customers Served	Annual MMBTU Savings	Lifetime MMBTU Savings
Residential Programs											
ENERGY STAR Homes	2.67	\$ 432.2	\$ 114.7	\$ 47.3	34.8	784.5	10.8	9.1	30	888.9	22,193.2
NH Home Performance with ENERGY STAR	1.30	\$ 395.8	\$ 187.6	\$ 117.1	30.4	571.3	14.2	6.2	46	1,029.3	21,755.8
ENERGY STAR Products ¹	3.75	\$ 1,257.5	\$ 218.9	\$ 116.5	1,010.7	13,337.3	290.7	148.3	11,312	86.2	948.0
Home Energy Assistance	1.26	\$ 417.9	\$ 330.6	\$ -	60.1	989.6	5.7	4.3	37	960.7	21,493.9
ISO NE FCM - Residential	0.00	\$ -	\$ 10.5	\$ -	-	-	-	-	-	-	-
Subtotal Residential	2.19	\$ 2,503.4	\$ 862.2	\$ 280.9	1,136.0	15,682.6	321.5	167.9	11,424	2,965.1	66,390.8
Commercial/Industrial Programs											
Large Business	1.37	\$ 1,797.7	\$ 648.1	\$ 668.5	1,374.4	18,480.6	202.8	246.9	17	-	-
Small Business	1.38	\$ 1,188.7	\$ 421.3	\$ 442.8	861.0	11,568.1	132.7	173.9	69	-	-
C&I Education	0.00	\$ -	\$ 10.8	\$ -	-	-	-	-	-	-	-
Municipal	1.45	\$ 479.4	\$ 163.8	\$ 165.8	344.3	4,549.2	55.7	55.6	41	159.5	3,870.5
ISO NE FCM - C&I	0.00	\$ -	\$ 24.5	\$ -	-	-	-	-	-	-	-
Subtotal C&I	1.36	\$ 3,465.8	\$ 1,268.5	\$ 1,277.1	2,579.6	34,597.9	391.3	476.4	128	159	3,871
Total	1.62	\$ 5,969.2	\$ 2,130.7	\$ 1,558.0	3,715.6	50,280.5	712.8	644.2	11,552	3,125	70,261

Note 1: Plan includes 10,762 customers purchasing a total of 43,047 Energy Star lighting products (estimated at 4/customer) and 550 Energy Star appliances.

Annual kWh Savings	3,715,633	80.2%	kWh > 55%
Annual MMBTU Savings (in kWh)	915,767	19.8%	
Total Annual Energy Savings	4,631,401	100.0%	

Lifetime kWh Savings	50,280,545	70.9%	kWh > 55%
Lifetime MMBTU Savings (in kWh)	20,592,420	29.1%	
Total Lifetime Energy Savings	70,872,965	100.0%	

September 30, 2015

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Present Value Benefits - 2016 PLAN

	CAPACITY					ENERGY				
	Total Benefits	Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	Non Electric Resource
Residential Programs										
ENERGY STAR Homes	\$432,197	\$29,821	\$0	\$3,281	\$13,289	\$13,442	\$18,450	\$6,569	\$7,848	\$339,497
Home Performance w/Energy Star	\$395,787	\$8,296	\$0	\$1,006	\$4,075	\$9,969	\$17,543	\$2,731	\$3,012	\$349,154
ENERGY STAR Products	\$1,257,494	\$274,152	\$0	\$31,767	\$128,663	\$223,821	\$308,844	\$103,607	\$124,812	\$61,828
Home Energy Assistance	\$417,885	\$10,171	\$0	\$1,151	\$4,663	\$16,547	\$24,271	\$6,719	\$8,289	\$346,074
Subtotal Residential	\$2,503,363	\$322,441	\$0	\$37,206	\$150,690	\$263,779	\$369,109	\$119,625	\$143,961	\$1,096,553
Commercial/Industrial Programs										
Large Business	\$1,797,731	\$486,538	\$0	\$56,456	\$228,656	\$340,733	\$375,003	\$159,988	\$150,357	\$0
Small Business	\$1,188,672	\$344,640	\$0	\$39,956	\$161,829	\$213,278	\$234,729	\$100,132	\$94,107	\$0
C&I Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Municipal	\$479,412	\$105,654	\$0	\$12,330	\$49,939	\$83,820	\$92,254	\$39,265	\$36,926	\$59,225
Subtotal C&I	\$3,465,814	\$936,832	\$0	\$108,742	\$440,423	\$637,831	\$701,987	\$299,384	\$281,390	\$59,225
Total	\$5,969,178	\$1,259,273	\$0	\$145,948	\$591,113	\$901,609	\$1,071,095	\$419,009	\$425,351	\$1,155,778

September 30, 2015

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**Performance Incentive Calculation
 2016**

	<u>Planned</u>	<u>Actual</u>
Commercial/Industrial Incentive		
1. Benefit/Cost Ratio	1.31	
2. Threshold Benefit / Cost Ratio ¹	1.00	
3. Lifetime kWh Savings	34,597,909	
4. Threshold Lifetime kWh Savings (65%) ²	22,488,641	
5. Budget	\$1,268,456	
6. Benefit / Cost Percentage of Budget	3.75%	
7. Lifetime kWh Percentage of Budget	3.75%	
8. C/I Incentive	\$95,134	
9. Cap (10%)	\$126,846	
Residential Incentive		
10. Benefit / Cost Ratio	2.07	
11. Threshold Benefit / Cost Ratio ¹	1.00	
12. Lifetime kWh Savings	15,682,636	
13. Threshold Lifetime kWh Savings (65%) ²	10,193,714	
14. Budget	\$862,237	
15. Benefit / Cost Percentage of Budget	3.75%	
16. Lifetime kWh Percentage of Budget	3.75%	
17. Residential Incentive	\$64,668	
18. Cap (12%)	\$86,224	
19. TOTAL INCENTIVE EARNED	\$159,802	

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.

**Benefit / Cost Ratio by Sector
 2016**

	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial:		
1. Benefits (Value) From Eligible Programs	\$ 3,466	
2. Implementation Expenses	\$ 1,268	
3. Customer Contribution	\$ 1,277	
4. Total Costs Excluding Performance Incentive	\$ 2,546	
5. Benefit/Cost Ratio - C&I Sector	1.36	
6. Benefit/Cost Ratio - C&I Sector including Performance Incentive	1.31	
Residential:		
6. Benefits (Value) From Eligible Programs	\$ 2,503	
7. Implementation Expenses	\$ 862	
8. Customer Contribution	\$ 281	
9. Total Costs Excluding Performance Incentive	\$ 1,143	
10. Benefit/Cost Ratio - Residential Sector	2.19	
11. Benefit/Cost Ratio - Residential Sector including Performance Incentive	2.07	

**Lifetime Energy Savings by Sector and Program
 2016**

	Lifetime kWh Savings	
	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial:		
Large Business	18,480,627	
Small Business	11,568,083	
C&I Education	0	
Municipal	4,549,199	
Total Commercial & Industrial Included for Incentive Calculation	34,597,909	
Residential:		
ENERGY STAR Homes	784,460	
NH Home Performance with ENERGY STAR	571,330	
ENERGY STAR Products	13,337,296	
Home Energy Assistance	989,551	
Total Residential Included for Incentive Calculation	15,682,636	
Total	50,280,545	

Total Resource Benefit Cost Analysis
 Summary of Benefit, Costs Program Year 2016

BCR Activity	TRC Benefit/ Cost	TRC Net Benefits	Total Benefits (\$000)	Total Costs (\$000)	PA Costs (\$000)	Participant Costs (\$000)	Annual MMBTU Savings	Lifetime MMBTU Savings	Annual KWH Savings	Lifetime KWH Savings	Participant Goal
Residential											
Home Energy Assistance	1.13	\$118	\$1,013	\$895	\$895	\$0	6,339	123,267	2	47	306
Home Performance with ENERGY STAR	2.23	\$1,382	\$2,505	\$1,124	\$646	\$478	15,258	305,154	-	-	571
ENERGY STAR Products	1.28	\$470	\$2,136	\$1,666	\$995	\$671	15,590	261,654	41	694	1,417
ENERGY STAR Homes	2.75	\$206	\$323	\$118	\$85	\$33	1,599	39,984	-	-	41
Building Practices and Demo	1.39	\$116	\$414	\$298	\$298	\$0	18,440	55,320	-	-	25,000
Subtotal: Residential	1.56	\$2,292	\$6,392	\$4,100	\$2,919	\$1,182	57,226	785,379	43	741	27,335
Commercial & Industrial											
Large Business	1.88	\$2,324	\$4,979	\$2,655	\$1,488	\$1,167	47,471	725,779.800	-	-	270
Small Business	1.18	\$333	\$2,206	\$1,873	\$1,190	\$683	17,647	319,985.500	2,352	42,336	558
Codes, Audit Training & Education	0.00	(\$25)	\$0	\$25	\$25	\$0	-	-	-	-	-
Subtotal: Commercial & Industrial	1.58	\$2,632	\$7,185	\$4,553	\$2,703	\$1,850	65,118	1,045,765	2	42	828
Grand Total	1.57	\$4,924	\$13,577	\$8,653	\$5,622	\$3,032	122,344	1,831,144	46	783	28,163

**Performance Incentive Calculation
 2016**

	<u>Planned</u>	<u>Actual</u>
Commercial/Industrial Incentive		
1. Target Benefit/Cost Ratio	1.51	
2. Threshold Benefit/Cost Ratio ¹	1.00	
3. Target Lifetime MMBTU	1,045,765	
4. Threshold Lifetime MMBTU (65%) ²	679,747	
5. Budget	\$2,703,000	
6. Benefit / Cost Percentage of Budget	4.00%	
7. Lifetime MMBTU Percentage	4.00%	
8. Target C/I Incentive	\$216,240	
9. Cap (12%)	\$324,360	
Residential Incentive		
10. Target Benefit/Cost Ratio	1.47	
11. Threshold Benefit/Cost Ratio ¹	1.00	
12. Target Lifetime MMBTU (65%) ²	785,379	
13. Threshold MMBTU	510,496	
14. Budget	\$2,918,815	
15. Benefit / Cost Percentage of Budget	4.00%	
16. Lifetime MMBTU Percentage	4.00%	
17. Target Residential Incentive	\$233,505	
18. Cap (12%)	\$350,258	
19. TOTAL TARGET INCENTIVE	\$449,745	

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.

Benefit / Cost Ratio by Sector
 2016

	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial:		
1. Benefits (Value) From Eligible Programs	\$7,185,067	
2. Implementation Expenses	\$2,703,000	
3. Customer Contribution	\$1,850,106	
4. Performance Incentive	\$216,240	
5. Total Costs Including Performance Incentive	\$4,769,346	
6. Benefit/Cost Ratio - C&I Sector	1.58	
7. Benefit/Cost Ratio - C&I Sector including PI	1.51	
Residential:		
8. Benefits (Value) From Eligible Programs	\$6,392,021	
9. Implementation Expenses	\$2,918,815	
10. Customer Contribution	\$1,181,527	
11. Performance Incentive	\$233,505	
12. Total Costs Including Performance Incentive	\$4,333,847	
13. Benefit/Cost Ratio - Residential Sector	1.56	
14. Benefit/Cost Ratio - Residential Sector including PI	1.47	

Program Cost-Effectiveness - 2016 PLAN

	Total Resource Benefit/Cost Ratio	Present Value							Number of Customers Served	Annual MMBTU Savings	Lifetime MMBTU Savings
		Benefit (\$000)	Utility Costs (\$000)	Customer Costs (\$000)	Annual MWh Savings	Lifetime MWh Savings	Winter kW Savings	Summer kW Savings			
Residential Programs											
Home Energy Assistance	1.12	\$ 287.3	\$ 255.7	\$ -	33.3	531.3	9.2	1.5	28	732.8	15,042.3
Home Performance w/Energy Star	1.25	\$ 447.0	\$ 229.2	\$ 128.7	32.4	602.9	32.3	16.3	53	1,281.7	25,905.4
Energy Star Homes	2.46	\$ 504.8	\$ 150.4	\$ 54.8	130.9	3,231.9	36.4	16.5	17	587.7	14,605.4
Energy Star Products ¹	2.58	\$ 1,182.6	\$ 349.3	\$ 109.4	787.9	11,969.5	201.8	87.0	7,317	300.2	3,301.8
FCM Reporting		\$ -	\$ 3.0	\$ -	-	-	-	-	-	-	-
Subtotal Residential	1.89	\$ 2,421.7	\$ 987.6	\$ 292.8	984.5	16,335.6	279.7	119.8	7,415	2,169.6	43,812.6
Commercial/Industrial Programs											
Large Business Energy Solutions	2.09	\$ 1,152.6	\$ 202.4	\$ 349.2	978.3	12,737.8	154.2	146.1	37	-	-
Small Business Energy Solutions	2.02	\$ 783.0	\$ 253.0	\$ 134.9	614.1	7,978.3	68.2	113.6	85	-	-
Municipal EE Program (per SB123)	1.16	\$ 343.2	\$ 160.4	\$ 135.1	306.5	3,979.7	19.1	30.0	32	84.6	2,115.0
Other (Education)		\$ -	\$ 39.0	\$ -	-	-	-	-	-	-	-
FCM Reporting		\$ -	\$ 7.0	\$ -	-	-	-	-	-	-	-
Subtotal C&I	1.78	\$ 2,278.8	\$ 661.9	\$ 619.2	1,898.8	24,695.8	241.5	289.7	154	84.6	2,115.0
Smart Start		\$ -	\$ -	\$ -	-	-	-	-	-	-	-
Other		\$ -	\$ -	\$ -	-	-	-	-	-	-	-
Subtotal Other		\$ -	\$ -	\$ -	-	-	-	-	-	-	-
Total	1.84	\$ 4,700.5	\$ 1,649.5	\$ 912.0	2,883.3	41,031.4	521.2	409.6	7,569	2,254.2	45,927.6

Note 1: Plan includes 5,703 members purchasing a total of 22,811 Energy Star lighting products (estimated at 4/customer) and 1,614 Energy Star appliances.

Annual kWh Savings	2,883,291	81.4%	kWh > 55%
Annual MMBTU Savings (in kWh)	660,668	18.6%	
Total Annual Energy Savings	3,543,959	100.0%	

Lifetime kWh Savings	41,031,394	75.3%	kWh > 55%
Lifetime MMBTU Savings (in kWh)	13,460,613	24.7%	
Total Lifetime Energy Savings	54,492,007	100.0%	

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Present Value Benefits - 2016 PLAN

	CAPACITY					ENERGY				
	Total Benefits	Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	Non Electric Resource
Residential Programs										
Home Energy Assistance	\$ 287,285	\$ 2,888	\$ -	\$ 337	\$ 1,365	\$ 9,522	\$ 18,420	\$ 1,360	\$ 1,574	\$ 251,820
Home Performance w/Energy Star	\$ 447,028	\$ 10,600	\$ -	\$ 1,464	\$ 5,930	\$ 10,758	\$ 20,581	\$ 1,858	\$ 2,021	\$ 393,816
Energy Star Homes	\$ 504,810	\$ 55,298	\$ -	\$ 6,116	\$ 24,771	\$ 58,933	\$ 106,036	\$ 13,524	\$ 15,943	\$ 224,189
Energy Star Products	\$ 1,182,613	\$ 180,804	\$ -	\$ 20,888	\$ 84,598	\$ 199,350	\$ 273,664	\$ 94,470	\$ 113,504	\$ 215,336
FCM Reporting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal Residential	\$ 2,421,737	\$ 249,589	\$ -	\$ 28,805	\$ 116,664	\$ 278,564	\$ 418,701	\$ 111,211	\$ 133,041	\$ 1,085,161
Commercial/Industrial Programs										
Large Business Energy Solutions	\$ 1,152,555	\$ 272,528	\$ -	\$ 32,106	\$ 130,034	\$ 267,872	\$ 292,438	\$ 95,339	\$ 62,237	\$ -
Small Business Energy Solutions	\$ 783,049	\$ 211,359	\$ -	\$ 24,910	\$ 100,889	\$ 172,970	\$ 140,023	\$ 77,860	\$ 55,038	\$ -
Municipal EE Program (per SB123)	\$ 343,181	\$ 55,724	\$ -	\$ 6,568	\$ 26,600	\$ 82,579	\$ 75,546	\$ 35,001	\$ 28,754	\$ 32,408
Other (Education)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FCM Reporting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal C&I	\$ 2,278,785	\$ 539,612	\$ -	\$ 63,584	\$ 257,523	\$ 523,421	\$ 508,007	\$ 208,200	\$ 146,030	\$ 32,408
Smart Start	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 4,700,522	\$ 789,201	\$ -	\$ 92,388	\$ 374,187	\$ 801,986	\$ 926,708	\$ 319,412	\$ 279,071	\$ 1,117,569

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**Performance Incentive Calculation
 2016**

	<u>Planned</u>	<u>Actual</u>
Commercial/Industrial Incentive		
1. Benefit/Cost Ratio	1.71	0.00
2. Threshold Benefit / Cost Ratio ¹	1.00	
3. Lifetime kWh Savings	24,695,768	0
4. Threshold Lifetime kWh Savings (65%) ²	16,052,249	
5. Budget	\$661,854	\$0
6. Benefit / Cost Percentage of Budget	3.75%	
7. Lifetime kWh Percentage of Budget	3.75%	
8. C/I Incentive	\$49,639	
9. Cap (10%)	\$66,185	
Residential Incentive		
10. Benefit / Cost Ratio	1.79	0.00
11. Threshold Benefit / Cost Ratio ¹	1.00	
12. Lifetime kWh Savings	16,335,626	0
13. Threshold Lifetime kWh Savings (65%) ²	10,618,157	
14. Budget	\$987,604	\$0
15. Benefit / Cost Percentage of Budget	3.75%	
16. Lifetime kWh Percentage of Budget	3.75%	
17. Residential Incentive	\$74,070	
18. Cap (10%)	\$98,760	
19. TOTAL INCENTIVE EARNED	\$123,709	

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.

Benefit / Cost Ratio by Sector
 2016

	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial:		
1. Benefits (Value) From Eligible Programs	\$ 2,278,785	\$ -
2. Implementation Expenses	\$ 661,854	\$ -
3. Customer Contribution	\$ 619,151	\$ -
4. Estimated Performance Incentive	<u>\$ 49,639</u>	<u>\$ -</u>
5. Total Costs (including Performance Incentive)	\$ 1,330,644	\$ -
6. Benefit/Cost Ratio - C&I Sector	1.71	0.00
Residential:		
7. Benefits (Value) From Eligible Programs	\$ 2,421,737	\$ -
8. Implementation Expenses	\$ 987,604	\$ -
9. Customer Contribution	\$ 292,822	\$ -
10. Estimated Performance Incentive	<u>\$ 74,070</u>	<u>\$ -</u>
11. Total Costs (including Performance Incentive)	\$ 1,354,496	\$ -
12. Benefit/Cost Ratio - Residential Sector	1.79	0.00

Lifetime Energy Savings by Sector and Program
 2016

	Lifetime kWh Savings	
	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial:		
Large Business Energy Solutions	12,737,793	0
Small Business Energy Solutions	7,978,317	0
Municipal EE Program (per SB123)	3,979,658	0
Other (Education)	0	0
FCM Reporting	<u>0</u>	<u>0</u>
Total Commercial & Industrial Included for Incentive Calculation	24,695,768	0
Residential:		
Home Energy Assistance	531,288	0
Home Performance w/Energy Star	602,877	0
Energy Star Homes	3,231,914	0
Energy Star Products	11,969,548	0
FCM Reporting	<u>0</u>	<u>0</u>
Total Residential Included for Incentive Calculation	16,335,626	0

Program Cost-Effectiveness - 2016 PLAN

	Total Resource Benefit/Cost Ratio	Present Value							Number of Customers Served	Annual MMBTU Savings	Lifetime MMBTU Savings
		Benefit (\$000)	Utility Costs (\$000)	Customer Costs (\$000)	Annual MWh Savings	Lifetime MWh Savings	Winter kW Savings	Summer kW Savings			
Residential Programs											
Home Energy Assistance	1.15	\$ 3,167.0	\$ 2,751.3	\$ -	487.6	8,871.0	70.6	46.3	352	8,372.0	168,662.5
Home Performance w/Energy Star	1.17	\$ 4,035.6	\$ 1,860.4	\$ 1,599.2	295.7	5,414.9	107.4	60.0	507	11,650.0	227,821.8
Energy Star Homes	3.77	\$ 4,239.2	\$ 957.3	\$ 166.8	1,143.2	27,881.9	335.2	176.1	303	5,177.4	128,870.6
Energy Star Products ¹	4.18	\$ 11,263.4	\$ 1,853.0	\$ 843.3	6,137.7	91,936.6	1,694.1	761.1	58,752	12,657.9	149,091.8
Home Energy Reports	1.75	\$ 439.3	\$ 251.0	\$ -	1,755.7	5,267.0	184.4	200.4	25,000	-	-
Customer Engagement Platform		\$ -	\$ 235.0	\$ -	-	-	-	-	-	-	-
FCM Reporting		\$ -	\$ 48.0	\$ -	-	-	-	-	-	-	-
Subtotal Residential	2.19	\$ 23,144.5	\$ 7,956.0	\$ 2,609.3	9,819.8	139,371.5	2,391.8	1,243.9	84,914	37,857.2	674,446.6
Commercial/Industrial Programs											
Large Business Energy Solutions	2.62	\$ 22,225.0	\$ 4,704.8	\$ 3,775.0	18,266.0	247,515.0	2,569.7	2,739.4	320	-	-
Small Business Energy Solutions	2.29	\$ 10,428.6	\$ 2,206.0	\$ 2,343.7	7,535.7	98,130.3	955.3	1,659.4	488	-	-
Municipal Education	1.62	\$ 5,082.2	\$ 1,453.5	\$ 1,689.1	3,312.9	44,131.3	412.8	709.1	202	1,242.6	29,444.6
C&I RFP Energy Rewards Program	2.55	\$ 2,429.8	\$ 431.4	\$ 521.5	1,948.2	24,782.5	245.3	367.8	2	-	-
C&I Partnerships		\$ -	\$ 18.9	\$ -	-	-	-	-	4	-	-
Customer Engagement Platform		\$ -	\$ 345.5	\$ -	-	-	-	-	-	-	-
FCM Reporting		\$ -	\$ 112.0	\$ -	-	-	-	-	-	-	-
Subtotal C&I	2.26	\$ 40,165.6	\$ 9,478.6	\$ 8,329.4	31,062.8	414,559.1	4,183.1	5,475.8	1,023	1,242.6	29,444.6
Smart Start		\$ -	\$ 52.0	\$ -	-	-	-	-	-	-	-
Other		\$ -	\$ -	\$ -	-	-	-	-	-	-	-
Subtotal Other		\$ -	\$ 52.0	\$ -	-	-	-	-	-	-	-
Total	2.23	\$ 63,310.1	\$ 17,486.6	\$ 10,938.6	40,882.6	553,930.6	6,574.9	6,719.7	85,937	39,099.8	703,891.2

Note 1: Plan includes 47,302 customers purchasing a total of 189,209 Energy Star lighting products (estimated at 4/customer) and 11,450 Energy Star appliances.

Annual kWh Savings	40,882,649	78.1%	kWh > 55%
Annual MMBTU Savings (in kWh)	<u>11,459,501</u>	<u>21.9%</u>	
Total Annual Energy Savings	52,342,150	100.0%	

Lifetime kWh Savings	553,930,562	72.9%	kWh > 55%
Lifetime MMBTU Savings (in kWh)	<u>206,298,705</u>	<u>27.1%</u>	
Total Lifetime Energy Savings	760,229,267	100.0%	

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Present Value Benefits - 2016 PLAN

September 30, 2015

	CAPACITY					ENERGY				
	Total Benefits	Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	Non Electric Resource
Residential Programs										
Home Energy Assistance	\$ 3,167,025	\$ 117,991	\$ -	\$ 13,358	\$ 54,101	\$ 150,623	\$ 229,678	\$ 56,689	\$ 69,404	\$ 2,475,181
Home Performance w/Energy Star	\$ 4,035,605	\$ 81,734	\$ -	\$ 9,947	\$ 40,286	\$ 91,979	\$ 146,316	\$ 34,861	\$ 39,273	\$ 3,591,209
Energy Star Homes	\$ 4,239,162	\$ 585,177	\$ -	\$ 64,749	\$ 262,245	\$ 504,324	\$ 888,510	\$ 129,471	\$ 151,003	\$ 1,653,684
Energy Star Products	\$ 11,263,404	\$ 1,543,502	\$ -	\$ 178,938	\$ 724,729	\$ 1,527,565	\$ 2,133,853	\$ 723,670	\$ 846,194	\$ 3,584,952
Home Energy Reports	\$ 439,312	\$ 70,987	\$ -	\$ 11,287	\$ 45,714	\$ 96,380	\$ 133,374	\$ 37,210	\$ 44,360	\$ -
Customer Engagement Platform FCM Reporting										
Subtotal Residential	\$ 23,144,508	\$ 2,399,390	\$ -	\$ 278,279	\$ 1,127,075	\$ 2,370,871	\$ 3,531,731	\$ 981,901	\$ 1,150,234	\$ 11,305,026
Commercial/Industrial Programs										
Large Business Energy Solutions	\$ 22,225,002	\$ 5,357,607	\$ -	\$ 626,239	\$ 2,536,366	\$ 4,342,368	\$ 4,507,266	\$ 2,655,617	\$ 2,199,538	\$ -
Small Business Energy Solutions	\$ 10,428,591	\$ 3,093,173	\$ -	\$ 364,259	\$ 1,475,306	\$ 2,193,649	\$ 1,598,613	\$ 1,037,011	\$ 666,580	\$ -
Municipal Education	\$ 5,082,223	\$ 1,353,606	\$ -	\$ 158,836	\$ 643,312	\$ 985,722	\$ 723,684	\$ 465,985	\$ 299,519	\$ 451,559
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
C&I RFP Energy Rewards Program	\$ 2,429,787	\$ 683,642	\$ -	\$ 80,580	\$ 326,360	\$ 353,463	\$ 325,257	\$ 360,354	\$ 300,132	\$ -
C&I Partnerships		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Engagement Platform FCM Reporting										
Subtotal C&I	\$ 40,165,603	\$ 10,488,028	\$ -	\$ 1,229,914	\$ 4,981,344	\$ 7,875,203	\$ 7,154,821	\$ 4,518,967	\$ 3,465,769	\$ 451,559
Smart Start	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 63,310,111	\$ 12,887,418	\$ -	\$ 1,508,193	\$ 6,108,420	\$ 10,246,074	\$ 10,686,551	\$ 5,500,868	\$ 4,616,003	\$ 11,756,584

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**Performance Incentive Calculation
 2016**

	<u>Planned</u>	<u>Actual</u>
Commercial/Industrial Incentive		
1. Benefit/Cost Ratio	2.17	0.00
2. Threshold Benefit / Cost Ratio ¹	1.00	
3. Lifetime kWh Savings	414,559,090	0
4. Threshold Lifetime kWh Savings (65%) ²	269,463,409	
5. Budget	\$9,478,622	\$0
6. Benefit / Cost Percentage of Budget	3.75%	
7. Lifetime kWh Percentage of Budget	3.75%	
8. C/I Incentive	\$710,897	
9. Cap (10%)	\$947,862	
Residential Incentive		
10. Benefit / Cost Ratio	2.07	0.00
11. Threshold Benefit / Cost Ratio ¹	1.00	
12. Lifetime kWh Savings	139,371,472	0
13. Threshold Lifetime kWh Savings (65%) ²	90,591,457	
14. Budget	\$7,955,982	\$0
15. Benefit / Cost Percentage of Budget	3.75%	
16. Lifetime kWh Percentage of Budget	3.75%	
17. Residential Incentive	\$596,699	
18. Cap (10%)	\$795,598	
19. TOTAL INCENTIVE EARNED	\$1,307,595	

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.

Benefit / Cost Ratio by Sector
 2016

	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial:		
1. Benefits (Value) From Eligible Programs	\$ 40,165,603	\$ -
2. Implementation Expenses	\$ 9,478,622	\$ -
3. Customer Contribution	\$ 8,329,392	\$ -
4. Estimated Performance Incentive	\$ 710,897	\$ -
5. Total Costs (including Performance Incentive)	<u>\$ 18,518,911</u>	<u>\$ -</u>
6. Benefit/Cost Ratio - C&I Sector	2.17	0.00
 Residential:		
7. Benefits (Value) From Eligible Programs	\$ 23,144,508	\$ -
8. Implementation Expenses	\$ 7,955,982	\$ -
9. Customer Contribution	\$ 2,609,255	\$ -
10. Estimated Performance Incentive	\$ 596,699	\$ -
11. Total Costs (including Performance Incentive)	<u>\$ 11,161,935</u>	<u>\$ -</u>
12. Benefit/Cost Ratio - Residential Sector	2.07	0.00

**Lifetime Energy Savings by Sector and Program
 2016**

	Lifetime kWh Savings	
	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial:		
Large Business Energy Solutions	247,514,975	0
Small Business Energy Solutions	98,130,331	0
Municipal	44,131,322	0
Education	0	0
C&I RFP Energy Rewards Program	24,782,462	0
C&I Partnerships	0	0
FCM Reporting	<u>0</u>	<u>0</u>
Total Commercial & Industrial Included for Incentive Calculation	414,559,090	0
Residential:		
Home Energy Assistance	8,870,954	0
Home Performance w/Energy Star	5,414,924	0
Energy Star Homes	27,881,919	0
Energy Star Products	91,936,633	0
Home Energy Reports	5,267,042	0
Customer Engagement Platform	0	0
FCM Reporting	<u>0</u>	<u>0</u>
Total Residential Included for Incentive Calculation	139,371,472	0

Program Cost-Effectiveness - 2016 PLAN

	Total Resource Benefit/Cost Ratio	Benefit (\$000)	Utility Costs (\$000)	Customer Costs (\$000)	Annual MWh Savings	Lifetime MWh Savings	Winter kW Savings	Summer kW Savings	Number of Customers Served	Annual MMBTU Savings	Lifetime MMBTU Savings
Residential Programs											
EnergyStar® Homes	1.71	\$ 457.0	\$ 170.0	\$ 96.5	67.6	1,321.3	27.2	11.3	26	894.9	21,691.8
HP w/EnergyStar®	1.64	\$ 1,197.6	\$ 436.631	\$ 292.4	42.3	755.0	46.1	2.7	101	3,211.0	68,632.1
EnergyStar® Products	3.50	\$ 2,088.7	\$ 365.0	\$ 232.4	1,433.4	23,633.4	435.0	177.2	15,066	83.0	912.7
Home Energy Assistance	1.16	\$ 530.3	\$ 455.3	\$ -	52.3	952.7	8.2	2.1	48	1,465.8	28,654.1
Res Education	0.00	\$ -	\$ 52.8	\$ -	-	-	-	-	-	-	-
Res Forward Capacity Market Expenses	0.00	\$ -	\$ 15.0	\$ -	-	-	-	-	-	-	-
Residential Total	2.02	\$ 4,273.6	\$ 1,494.7	\$ 621.3	1,595.5	26,662.4	516.5	193.4	15,241	5,654.7	119,890.7
Commercial/Industrial Programs											
Large Business Energy Solutions	1.80	\$ 3,066.4	\$ 708.1	\$ 997.9	2,778.5	38,416.9	194.5	279.4	23	-	-
Small Business Energy Solutions	2.21	\$ 1,683.3	\$ 455.0	\$ 307.3	990.5	13,468.5	150.0	284.8	54	-	-
Municipal Program	1.08	\$ 328.6	\$ 219.9	\$ 85.2	240.5	3,140.8	17.0	26.0	28	231.0	4,800.6
C&I Education	0.00	\$ -	\$ 44.9	\$ -	-	-	-	-	-	-	-
C&I Forward Capacity Market Expenses	0.00	\$ -	\$ 15.0	\$ -	-	-	-	-	-	-	-
C&I total	1.79	\$ 5,078.4	\$ 1,442.9	\$ 1,390.4	4,009.5	55,026.1	361.5	590.2	105	231.0	4,800.6
Total	1.89	\$ 9,352.0	\$ 2,937.6	\$ 2,011.7	5,605.1	81,688.6	878.0	783.6	15,346	5,885.7	124,691.3

Note 1: Plan includes 13,788 customers purchasing a total of 55,152 Energy Star lighting products (estimated at 4/customer) and 1,278 Energy Star appliances.

Annual kWh Savings	5,605,054	76.5%	kWh > 55%	Lifetime kWh Savings	81,688,552	69.1%	kWh > 55%
Annual MMBTU Savings (in kWh)	<u>1,724,917</u>	<u>23.5%</u>		Lifetime MMBTU Savings (in kWh)	<u>36,543,414</u>	<u>30.9%</u>	
	7,329,971	100.0%			118,231,967	100.0%	

Present Value Benefits - 2016 PLAN

	Total Benefits (\$000)	CAPACITY				ENERGY				Non Electric Resource
		Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	
Residential Programs										
EnergyStar® Homes	\$ 457	\$ 30,310	\$ -	\$ 3,414	\$ 13,826	\$ 36,982	\$ 34,895	\$ 4,107	\$ 2,931	\$ 330,568
HP w/EnergyStar®	\$ 1,198	\$ 5,352	\$ -	\$ 621	\$ 2,517	\$ 15,046	\$ 20,791	\$ 3,878	\$ 4,409	\$ 1,145,020
Res Energy Star Appliance	\$ 359	\$ 76,197	\$ -	\$ 9,180	\$ 37,181	\$ 42,472	\$ 41,774	\$ 20,236	\$ 12,290	\$ 119,938
Res Energy Star Lighting	\$ 1,729	\$ 312,788	\$ -	\$ 35,495	\$ 143,762	\$ 362,213	\$ 496,963	\$ 170,895	\$ 207,272	\$ -
EnergyStar® Products	\$ 2,089	\$ 388,985	\$ -	\$ 44,676	\$ 180,943	\$ 404,684	\$ 538,737	\$ 191,132	\$ 219,562	\$ 119,938
Home Energy Assistance	\$ 530	\$ 4,574	\$ -	\$ 527	\$ 2,135	\$ 17,985	\$ 25,871	\$ 5,815	\$ 5,635	\$ 467,719
Subtotal Residential	\$ 4,274	\$ 429,221	\$ -	\$ 49,238	\$ 199,421	\$ 474,698	\$ 620,294	\$ 204,931	\$ 232,537	\$ 2,063,245
Commercial/Industrial Programs										
Large Business Energy Solutions	\$ 3,066	\$ 577,090	\$ -	\$ 66,899	\$ 270,950	\$ 794,401	\$ 712,910	\$ 366,200	\$ 277,953	\$ -
Small Business Energy Solutions	\$ 1,683	\$ 551,774	\$ -	\$ 64,605	\$ 261,660	\$ 312,856	\$ 231,682	\$ 157,023	\$ 103,726	\$ -
Municipal Program	\$ 329	\$ 48,968	\$ -	\$ 5,761	\$ 23,332	\$ 69,991	\$ 52,049	\$ 32,799	\$ 21,029	\$ 74,712
Subtotal C&I	\$ 5,078	\$ 1,177,833	\$ -	\$ 137,264	\$ 555,942	\$ 1,177,247	\$ 996,641	\$ 556,022	\$ 402,709	\$ 74,712
Total	\$ 9,352	\$ 1,607,054	\$ -	\$ 186,502	\$ 755,363	\$ 1,651,945	\$ 1,616,935	\$ 760,953	\$ 635,245	\$ 2,137,957

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**Performance Incentive Calculation
 2016**

	<u>Planned</u>	<u>Actual</u>
Commercial/Industrial Incentive		
1. Benefit/Cost Ratio	1.7	
2. Threshold Benefit / Cost Ratio ¹	1.0	
3. Lifetime kWh Savings	55,026,142	
4. Threshold Lifetime kWh Savings (65%) ²	35,766,992	
5. Implementation Expenses	\$1,442,916	
6. Benefit / Cost Percentage of Budget	3.75%	
7. Lifetime kWh Percentage of Budget	3.75%	
8. C/I Performance Incentive	\$108,219	
9. Maximum C/I Performance Incentive (110%)	\$144,292	
Residential Incentive		
10. Benefit / Cost Ratio	1.9	
11. Threshold Benefit / Cost Ratio ¹	1.0	
12. Lifetime kWh Savings	26,662,411	
13. Threshold Lifetime kWh Savings (65%) ²	17,330,567	
14. Implementation Expenses	\$1,494,734	
15. Benefit / Cost Percentage of Budget	3.75%	
16. Lifetime kWh Percentage of Budget	3.75%	
17. Residential Performance Incentive	\$112,105	
18. Maximum Residential Performance Incentive (110%)	\$149,473	
19. TOTAL PLANNED / EARNED INCENTIVE	\$220,324	

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. Affirmed by Order 25,569 on Sept 6, 2013.

**Benefit / Cost Ratio by Sector
 2016**

	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial:		
1. Benefits (Value) From Eligible Programs	\$ 5,078,370	\$ -
2. Implementation Expenses	\$ 1,442,916	\$ -
3. Customer Contribution	\$ 1,390,415	\$ -
4. Performance Incentive	<u>\$ 108,219</u>	<u>\$ -</u>
5. Total Costs	\$ 2,941,550	\$ -
6. Benefit/Cost Ratio - C&I Sector	1.7	
Residential:		
6. Benefits (Value) From Eligible Programs	\$ 4,273,584	\$ -
7. Implementation Expenses	\$ 1,494,734	\$ -
8. Customer Contribution	\$ 621,333	\$ -
9. Performance Incentive	<u>\$ 112,105</u>	<u>\$ -</u>
10. Total Costs	\$ 2,228,172	\$ -
11. Benefit/Cost Ratio - Residential Sector	1.9	

**Lifetime Energy Savings by Sector and Program
2016**

	Lifetime kWh Savings	
	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial:		
Large Business Energy Solutions	38,416,850	
Small Business Energy Solutions	13,468,500	
Municipal Program	3,140,791	
Total C&I kWh	55,026,142	
Residential:		
EnergyStar® Homes	1,321,301	
HP w/EnergyStar®	755,036	
EnergyStar® Products	23,633,361	
Home Energy Assistance	952,712	
Total Residential kWh	26,662,411	

Total Resource Benefit Cost Analysis
 Summary of Benefit, Costs Program Year 2016

BCR Activity	TRC Benefit/ Cost	TRC Net Benefits	Total Benefits (\$000)	Total Costs (\$000)	PA Costs (\$000)	Participant Costs (\$000)	Annual MMBTU Savings	Lifetime MMBTU Savings	Participant Goal
Residential									
Home Energy Assistance	1.01	\$3	\$212	\$209	\$209	\$0	1,112	24,183	32
EnergyStar® Homes	1.53	\$58	\$169	\$110	\$69	\$42	610	14,309	11
HP w/EnergyStar®	1.24	\$55	\$283	\$229	\$148	\$81	1,525	34,783	38
EnergyStar® Products	1.26	\$156	\$758	\$602	\$335	\$267	4,977	92,742	509
Res Education				\$17	\$17	\$0			
Subtotal: Residential	1.22	\$272	\$1,421	\$1,167	\$778	\$389	8,225	166,018	590
Commercial & Industrial									
Large Business Energy Solutions	1.76	\$778	\$1,801	\$1,023	\$325	\$698	16,626	258,334	42
Small Business Energy Solutions	1.82	\$380	\$841	\$461	\$232	\$229	5,297	117,452	100
C&I Education				\$13	\$13	\$0			
Subtotal: Commercial & Industrial	1.76	\$1,158	\$2,642	\$1,497	\$570	\$927	21,923	375,786	142
Grand Total	1.53	\$1,430	\$4,064	\$2,664	\$1,348	\$1,316	30,148	541,804	732

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Performance Incentive Calculation 2016

	<u>Planned</u>	<u>Actual</u>
Commercial/Industrial		
1. Benefit/Cost Ratio	1.76	
2. Threshold Benefit/Cost Ratio	1.00	
3. Target lifetime MMBTU savings	375,786	
4. Threshold MMBTU savings (65%)	244,261	
5. Budget	\$570,030	
6. Benefit / Cost Percentage of Budget	4.00%	
7. Lifetime MMBTU Percentage	4.00%	
8. C/I Performance Incentive	\$45,602	
9. Cap (12%)	\$68,404	
Residential		
10. Benefit/Cost Ratio	1.22	
11. Threshold Benefit/Cost Ratio	1.00	
12. Target lifetime MMBTU savings	166,018	
13. Threshold MMBTU savings (65%)	107,912	
14. Budget	\$777,617	
15. Benefit / Cost Percentage of Budget	4.00%	
16. Lifetime MMBTU Percentage	4.00%	
17. Residential Performance Incentive	\$62,209	
18. Cap (12%)	\$93,314	
19. Total Performance Incentive	\$107,812	

Benefit / Cost Ratio by Sector
 2016

	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial:		
1. Benefits (Value) From Eligible Programs	\$ 2,642,271	
2. Implementation Expenses	\$ 570,030	
3. Customer Contribution	\$ 927,063	
4. Performance Incentive	\$ 45,602	
5. Total Costs (Including PI)	\$ 1,542,695	
6. Benefit/Cost Ratio - C&I Sector		1.71
 Residential:		
7. Benefits (Value) From Eligible Programs	\$ 1,421,489	
8. Implementation Expenses	\$ 777,617	
9. Customer Contribution	\$ 389,318	
10. Performance Incentive	\$ 62,209	
11. Total Costs (Including PI)	\$ 1,229,144	
12. Benefit/Cost Ratio - Residential Sector		1.16

NH CORE ENERGY EFFICIENCY PROGRAM - 2016 UTILITY BUDGETS BY ACTIVITY
Residential Programs

Description	Electric Utilities					Gas Utilities			Grand Total	
	LU Electric	NHEC	Eversource	Unitil	Sub-total Electric	LU Gas	Unitil Gas	Sub-total Gas		
Home Energy Assistance	Internal Admin	\$ 6,612	\$ 14,583	\$ 64,847	\$ 37,401	\$ 123,443	\$ 17,900	\$ 14,623	\$ 32,523	\$ 155,966
	External Admin	0	4,732	0	5,000	9,732	0	2,000	2,000	11,732
	Rebate/Services	241,330	198,345	2,408,421	327,779	3,175,875	742,850	148,393	891,243	4,067,118
	Implementation Services	59,506	26,835	135,454	54,173	275,967	80,550	37,602	118,152	394,119
	Marketing	0	1,332	5,000	4,514	10,846	0	3,133	3,133	13,980
	EM&V	23,141	9,876	137,564	26,460	197,041	53,700	3,133	56,833	253,875
	Total	\$ 330,589	\$ 255,703	\$ 2,751,286	\$ 455,327	\$ 3,792,905	\$ 895,000	\$ 208,884	\$ 1,103,884	\$ 4,896,789
HP w/EnergyStar®	Internal Admin	\$ 3,752	\$ 27,083	\$ 43,849	\$ 25,948	\$ 100,633	\$ 12,916	\$ 6,480	\$ 19,396	\$ 120,029
	External Admin	0	8,789	0	5,006	13,795	0	1,000	1,000	14,795
	Rebate/Services	127,577	132,289	1,492,424	333,787	2,086,077	497,278	119,000	616,278	2,702,355
	Implementation Services	33,770	49,836	211,107	43,392	338,105	58,123	18,020	76,143	414,249
	Marketing	9,381	1,332	20,000	11,226	41,939	38,749	2,160	40,909	82,848
	EM&V	13,133	9,876	93,020	17,271	133,300	38,749	1,080	39,829	173,129
	Total	\$ 187,613	\$ 229,205	\$ 1,860,400	\$ 436,631	\$ 2,713,849	\$ 645,815	\$ 147,740	\$ 793,555	\$ 3,507,404
EnergyStar® Homes	Internal Admin	\$ 2,293	\$ 21,396	\$ 22,563	\$ 11,968	\$ 58,220	\$ 1,700	\$ 5,500	\$ 7,200	\$ 65,420
	External Admin	0	6,943	0	5,831	12,774	0	800	800	13,574
	Rebate/Services	77,964	71,508	749,530	128,333	1,027,335	65,450	45,650	111,100	1,138,435
	Implementation Services	20,637	39,371	114,813	13,668	188,490	7,650	10,800	18,450	206,940
	Marketing	5,733	1,332	22,500	1,700	31,265	5,100	1,000	6,100	37,365
	EM&V	8,026	9,876	47,863	8,500	74,265	5,100	5,000	10,100	84,365
	Total	\$ 114,653	\$ 150,426	\$ 957,269	\$ 170,000	\$ 1,392,348	\$ 85,000	\$ 68,750	\$ 153,750	\$ 1,546,098
Energy Star® Products	Internal Admin	\$ 4,378	\$ 47,644	\$ 43,675	\$ 19,209	\$ 114,906	\$ 19,900	\$ 20,934	\$ 40,834	\$ 155,740
	External Admin	0	15,460	0	5,276	20,736	0	0	0	20,736
	Rebate/Services	148,840	153,742	1,511,906	267,482	2,081,970	766,150	289,810	1,055,960	3,137,930
	Implementation Services	39,399	87,672	84,786	35,156	247,013	89,550	20,067	109,617	356,630
	Marketing	10,944	25,000	120,000	20,301	176,245	59,700	2,158	61,858	238,103
	EM&V	15,322	19,752	92,651	17,576	145,301	59,700	2,274	61,974	207,275
	Total	\$ 218,882	\$ 349,270	\$ 1,853,018	\$ 365,000	\$ 2,786,170	\$ 995,000	\$ 335,243	\$ 1,330,243	\$ 4,116,413

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NH CORE ENERGY EFFICIENCY PROGRAM - 2016 UTILITY BUDGETS BY ACTIVITY
Residential Programs (Continued)

Description	Electric Utilities					Gas Utilities			Grand Total
	LU Electric	NHEC	Eversource	Unitil	Sub-total Electric	LU Gas	Unitil Gas	Sub-total Gas	
Other*									
Internal Admin	\$ -	\$ -	\$ 12,587	\$ -	\$ 12,587	\$ 5,960	\$ -	\$ 5,960	\$ 18,547
External Admin	0	3,000	0	30,500	33,500	0	1,200	1,200	34,700
Rebate/Services	0	0	442,993	0	442,993	229,460	10,800	240,260	683,253
Implementation Services	0	0	51,728	9,500	61,228	26,820	0	26,820	88,048
Marketing	0	0	0	20,000	20,000	17,880	5,000	22,880	42,880
EM&V	10,500	0	26,700	7,776	44,976	17,880	0	17,880	62,856
Total	\$ 10,500	\$ 3,000	\$ 534,009	\$ 67,776	\$ 615,285	\$ 298,000	\$ 17,000	\$ 315,000	\$ 930,285
Total Residential									
Internal Admin	\$ 17,035	\$ 110,706	\$ 187,521	\$ 94,526	\$ 409,788	\$ 58,376	\$ 47,537	\$ 105,913	\$ 515,701
External Admin	0	38,924	0	51,612	90,536	0	5,000	5,000	95,536
Rebate/Services	595,711	555,884	6,605,274	1,057,381	8,814,250	2,301,188	613,653	2,914,840	11,729,090
Implementation Services	153,313	203,714	597,888	155,889	1,110,804	262,693	86,489	349,182	1,459,986
Marketing	26,057	28,996	167,500	57,742	280,295	121,429	13,451	134,880	415,175
EM&V	70,122	49,380	397,799	77,583	594,884	175,129	11,487	186,616	781,500
Total	\$ 862,237	\$ 987,604	\$ 7,955,982	\$ 1,494,734	\$ 11,300,557	\$ 2,918,815	\$ 777,617	\$ 3,696,432	\$ 14,996,989
Total %									
Internal Admin	2.0%	11.2%	2.4%	6.3%	3.6%	2.0%	6.1%	2.9%	3.4%
External Admin	0.0%	3.9%	0.0%	3.5%	0.8%	0.0%	0.6%	0.1%	0.6%
Rebate/Services	69.1%	56.3%	83.0%	70.7%	78.0%	78.8%	78.9%	78.9%	78.2%
Implementation Services	17.8%	20.6%	7.5%	10.4%	9.8%	9.0%	11.1%	9.4%	9.7%
Marketing	3.0%	2.9%	2.1%	3.9%	2.5%	4.2%	1.7%	3.6%	2.8%
EM&V	8.1%	5.0%	5.0%	5.2%	5.3%	6.0%	1.5%	5.0%	5.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Other includes company-specific programs, education, forward capacity market administration and loan program administration.

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**NH CORE ENERGY EFFICIENCY PROGRAM - 2016 UTILITY BUDGETS BY ACTIVITY
 C&I and Municipal Programs**

		Electric Utilities					Gas Utilities			Grand Total
		LU Electric	NHEC	Eversource	Unitil	Sub-total Electric	LU Gas	Unitil Gas	Sub-total Gas	
Large Business Energy Solutions	Internal Admin	\$ 12,962	\$ 15,790	\$ 110,891	\$ 50,000	\$ 189,643	\$ 29,760	\$ 25,027	\$ 54,787	\$ 244,431
	External Admin	0	5,789	0	3,300	9,089	0	2,000	2,000	11,089
	Rebate/Services	440,709	139,406	3,738,749	548,574	4,867,438	1,145,760	226,993	1,372,753	6,240,191
	Implementation Services	116,658	29,055	594,910	60,000	800,624	133,920	48,368	182,288	982,912
	Marketing	32,405	1,332	25,000	7,115	65,852	89,280	1,915	91,195	157,047
	EM&V	45,367	11,031	235,240	39,115	330,752	89,280	21,004	110,284	441,037
	Total	\$ 648,101	\$ 202,403	\$ 4,704,790	\$ 708,104	\$ 6,263,398	\$ 1,488,000	\$ 325,308	\$ 1,813,308	\$ 8,076,706
Small Business Energy Solutions	Internal Admin	\$ 8,425	\$ 31,580	\$ 51,994	\$ 35,000	\$ 127,000	\$ 23,800	\$ 21,739	\$ 45,539	\$ 172,539
	External Admin	0	11,578	0	2,000	13,578	0	2,500	2,500	16,078
	Rebate/Services	286,461	139,406	1,679,225	335,250	2,440,342	916,300	169,297	1,085,597	3,525,939
	Implementation Services	75,828	58,111	349,444	60,000	543,383	107,100	27,672	134,772	678,155
	Marketing	21,063	1,332	15,000	4,550	41,945	71,400	2,130	73,530	115,475
	EM&V	29,489	11,031	110,298	18,200	169,018	71,400	8,384	79,784	248,802
	Total	\$ 421,266	\$ 253,038	\$ 2,205,962	\$ 455,001	\$ 3,335,266	\$ 1,190,000	\$ 231,722	\$ 1,421,722	\$ 4,756,988
Municipal	Internal Admin	\$ 3,276	\$ 15,790	\$ 34,258	\$ 15,200	\$ 68,524	\$ -	\$ -	\$ -	\$ 68,524
	External Admin	0	5,789	0	17,500	23,289	0	0	0	23,289
	Rebate/Services	111,376	97,396	1,280,027	151,217	1,640,016	0	0	0	1,640,016
	Implementation Services	29,482	29,055	61,505	18,965	139,006	0	0	0	139,006
	Marketing	8,189	1,332	5,000	6,000	20,521	0	0	0	20,521
	EM&V	11,465	11,031	72,673	10,994	106,163	0	0	0	106,163
	Total	\$ 163,788	\$ 160,393	\$ 1,453,463	\$ 219,876	\$ 1,997,519	\$ -	\$ -	\$ -	\$ 1,997,519
Other*	Internal Admin	\$ -	\$ 2,508	\$ 27,492	\$ 7,500	\$ 37,500	\$ -	\$ -	\$ -	\$ 37,500
	External Admin	0	7,919	0	30,500	38,419	0	0	0	38,419
	Rebate/Services	9,181	30,979	903,823	0	943,984	19,000	6,000	25,000	968,984
	Implementation Services	0	4,614	168,771	2,000	175,385	0	0	0	175,385
	Marketing	1,620	0	8,000	10,000	19,620	6,000	7,000	13,000	32,620
	EM&V	24,500	0	58,320	9,936	92,756	0	0	0	92,756
	Total	\$ 35,302	\$ 46,020	\$ 1,166,407	\$ 59,936	\$ 1,307,664	\$ 25,000	\$ 13,000	\$ 38,000	\$ 1,345,664

* Other includes company-specific programs, education, forward capacity market administration and loan program administration.

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NH CORE ENERGY EFFICIENCY PROGRAM - 2016 UTILITY BUDGETS BY ACTIVITY
C&I and Municipal Program Total and Grand Total (Residential, C&I and Municipal)

		Electric Utilities					Gas Utilities			Grand Total
		LU Electric	NHEC	Eversource	Unitil	Sub-total Electric	LU Gas	Unitil Gas	Sub-total Gas	
Total C&I and Municipal	Internal Admin	\$ 24,663	\$ 65,668	\$ 224,635	\$ 107,700	\$ 422,667	\$ 53,560	\$ 46,767	\$ 100,327	\$ 522,994
	External Admin	0	31,075	0	53,300	84,375	0	4,500	4,500	88,875
	Rebate/Services	847,726	407,187	7,601,825	1,035,042	9,891,780	2,081,060	402,290	2,483,350	12,375,129
	Implementation Services	221,968	120,835	1,174,631	140,965	1,658,398	241,020	76,040	317,060	1,975,458
	Marketing	63,278	3,996	53,000	27,665	147,939	166,680	11,044	177,724	325,663
	EM&V	110,821	33,093	476,531	78,244	698,689	160,680	29,389	190,069	888,758
	Total		\$ 1,268,456	\$ 661,854	\$ 9,530,622	\$ 1,442,916	\$ 12,903,848	\$ 2,703,000	\$ 570,030	\$ 3,273,030
Total C&I and Municipal %	Internal Admin	1.9%	9.9%	2.4%	7.5%	3.3%	2.0%	8.2%	3.1%	3.2%
	External Admin	0.0%	4.7%	0.0%	3.7%	0.7%	0.0%	0.8%	0.1%	0.5%
	Rebate/Services	66.8%	61.5%	79.8%	71.7%	76.7%	77.0%	70.6%	75.9%	76.5%
	Implementation Services	17.5%	18.3%	12.3%	9.8%	12.9%	8.9%	13.3%	9.7%	12.2%
	Marketing	5.0%	0.6%	0.6%	1.9%	1.1%	6.2%	1.9%	5.4%	2.0%
	EM&V	8.7%	5.0%	5.0%	5.4%	5.4%	5.9%	5.2%	5.8%	5.5%
	Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Grand Total (Residential, C&I and Municipal)	Internal Admin	\$ 41,698	\$ 176,374	\$ 412,157	\$ 202,226	\$ 832,455	\$ 111,936	\$ 94,304	\$ 206,240	\$ 1,038,695
	External Admin	0	69,999	0	104,912	174,911	0	9,500	9,500	184,411
	Rebate/Services	1,443,437	963,071	14,207,098	2,092,423	18,706,030	4,382,248	1,015,943	5,398,190	24,104,220
	Implementation Services	375,280	324,549	1,772,519	296,854	2,769,202	503,713	162,530	666,243	3,435,444
	Marketing	89,335	32,992	220,500	85,407	428,234	288,109	24,496	312,604	740,838
	EM&V	180,942	82,473	874,330	155,828	1,293,573	335,809	40,876	376,685	1,670,258
	Total		\$ 2,130,693	\$ 1,649,458	\$ 17,486,604	\$ 2,937,650	\$ 24,204,405	\$ 5,621,815	\$ 1,347,647	\$ 6,969,462
Grand Total % (Residential, C&I and Municipal)	Internal Admin	2.0%	10.7%	2.4%	6.9%	3.4%	2.0%	7.0%	3.0%	3.3%
	External Admin	0.0%	4.2%	0.0%	3.6%	0.7%	0.0%	0.7%	0.1%	0.6%
	Rebate/Services	67.7%	58.4%	81.2%	71.2%	77.3%	78.0%	75.4%	77.5%	77.3%
	Implementation Services	17.6%	19.7%	10.1%	10.1%	11.4%	9.0%	12.1%	9.6%	11.0%
	Marketing	4.2%	2.0%	1.3%	2.9%	1.8%	5.1%	1.8%	4.5%	2.4%
	EM&V	8.5%	5.0%	5.0%	5.3%	5.3%	6.0%	3.0%	5.4%	5.4%
	Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

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NH CORE ELECTRIC PROGRAMS - 2016 UTILITY GOALS BY PROGRAM
Total Customers Served, Program Budgets, Lifetime kWh and MMBtu Savings

	LU Electric		NHEC		Eversource		Unitil Electric		Total	
Home Energy Assistance										
Number of Units / Lifetime kWh Savings	37	989,551	28	531,288	352	8,870,954	48	952,712	465	11,344,505
B/C Ratio / Planned Budget	1.26	\$330,589	1.12	\$255,703	1.15	\$2,751,286	1.16	\$455,327		\$3,792,905
/ Lifetime MMBtu Savings		21,494		15,042		168,662		28,654		233,853
Home Performance w/ENERGY STAR										
Number of Participants / Lifetime kWh Savings	46	571,330	53	602,877	507	5,414,924	101	755,036	706	7,344,167
B/C Ratio / Planned Budget	1.30	\$187,613	1.25	\$229,205	1.17	\$1,860,400	1.64	\$436,631		\$2,713,849
/ Lifetime MMBtu Savings		21,756		25,905		227,822		68,632		344,115
ENERGY STAR Homes										
Number of Homes / Lifetime kWh Savings	30	784,460	17	3,231,914	303	27,881,919	26	1,321,301	376	33,219,594
B/C Ratio / Planned Budget	2.67	\$114,653	2.46	\$150,426	3.77	\$957,269	1.71	\$170,000		\$1,392,348
/ Lifetime MMBtu Savings		22,193		14,605		128,871		21,692		187,361
ENERGY STAR Products										
Number of Participants / Lifetime kWh Savings	11,312	13,337,296	7,317	11,969,548	58,752	91,936,633	15,066	23,633,361	92,446	140,876,838
B/C Ratio / Planned Budget	3.75	\$218,882	2.58	\$349,270	4.18	\$1,853,018	3.50	\$365,000		\$2,786,170
/ Lifetime MMBtu Savings		948		3,302		149,092		913		154,254
Large Business Energy Solutions										
Number of Participants / Lifetime kWh Savings	17	18,480,627	37	12,737,793	320	247,514,975	23	38,416,850	397	317,150,245
B/C Ratio / Planned Budget	1.37	\$648,101	2.09	\$202,403	2.62	\$4,704,790	1.80	\$708,104		\$6,263,398
/ Lifetime MMBtu Savings		0		0		0		0		0
Small Business Energy Solutions										
Number of Participants / Lifetime kWh Savings	69	11,568,083	85	7,978,317	488	98,130,331	54	13,468,500	696	131,145,231
B/C Ratio / Planned Budget	1.38	\$421,266	2.02	\$253,038	2.29	\$2,205,962	2.21	\$455,001		\$3,335,266
/ Lifetime MMBtu Savings		0		0		0		0		0
Municipal										
Number of Participants / Lifetime kWh Savings	41	4,549,199	32	3,979,658	202	44,131,322	28	3,140,791	304	55,800,970
B/C Ratio / Planned Budget	1.45	\$163,788	1.16	\$160,393	1.62	\$1,453,463	1.08	\$219,876		\$1,997,519
/ Lifetime MMBtu Savings		3,871		2,115		29,445		4,801		40,231
Educational Programs										
Number of Participants / Planned Budget	0	\$10,802	0	\$39,020	6	\$206,596	0	\$97,712	6	\$354,130
Company Specific Programs / FCM Expenses										
Number of Participants / Lifetime kWh Savings	0	0	0	0	25,006	30,049,504	0	0	25,006	30,049,504
B/C Ratio / Planned Budget		\$35,000		\$10,000		\$1,441,819		\$30,000		\$1,516,819
/ Lifetime MMBtu Savings		0		0		0		0		0
Smart Start (NHEC/PSNH), RLF (UES)										
Number of Participants / Planned Budget	0	\$0	0	\$0	0	\$52,000	0	\$0	0	\$52,000
Utility Performance Incentive										
Planned Budget		\$159,802		\$123,709		\$1,307,595		\$220,324		\$1,811,430
TOTAL PLANNED BUDGET		\$2,290,495		\$1,773,167		\$18,794,199		\$3,157,974		\$26,015,835

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**NH CORE ELECTRIC PROGRAMS
 SBC and RGGI Funding Allocation
 2016 Budget**

Program Allocation Summary

Program	RGGI	SBC	TOTAL
HEA¹			
LU-Electric	11.2555%	88.7445%	100.0000%
NHEC	12.2992%	87.7008%	100.0000%
Eversource	11.7114%	88.2886%	100.0000%
Unitil	10.8068%	89.1932%	100.0000%
Municipal			
LU-Electric	100.0000%	0.0000%	100.0000%
NHEC	100.0000%	0.0000%	100.0000%
Eversource	100.0000%	0.0000%	100.0000%
Unitil	100.0000%	0.0000%	100.0000%

A	B	C	D	E	F	G	H
Utility	Total Funds	Total SBC	Total RGGI Funds	RGGI HEA ²	RGGI Municipal ³	Total RGGI PI ⁴	SBC HEA ⁵
LU-Electric	\$ 2,290,495	\$2,074,423	\$216,072	\$37,209	\$163,788	\$15,075	\$293,379.53
NHEC	\$ 1,773,167	\$1,566,937	\$206,230	\$31,449	\$160,393	\$14,388	\$224,253.65
Eversource	\$ 18,794,199	\$16,885,346	\$1,908,853	\$322,215	\$1,453,463	\$133,176	\$2,429,071.44
Unitil	\$ 3,157,974	\$2,868,710	\$289,263	\$49,206	\$219,876	\$20,181	\$406,120.65
Total	\$26,015,835	\$23,395,416	\$2,620,419	\$440,080	\$1,997,520	\$182,820	\$3,352,825

Notes:

¹ HEA Allocation

RGGI HEA = RGGI HEA (E) /Total HEA Funds (E + F)

SBC HEA = SBC HEA (H) /Total HEA Funds (E + F)

² RGGI HEA = 15.5% of Total RGGI Funds net of RGGI HEA Performance Incentive

³ LU Electric RGGI Municipal = 2016 RGGI Municipal is net of 2015 negative carryforward.

⁴ RGGI PI = Performance Incentive applied to HEA and Municipal RGGI Funds

⁵ SBC HEA = Utility's total HEA program funds less RGGI HEA (E)

NH CORE ELECTRIC PROGRAMS - 2016 UTILITY GOALS BY PROGRAM
Total Customers Served, Program Budgets, Lifetime kWh and MMBtu Savings
 (System Benefits Charge, Forward Capacity Market and Interest Funds Only)

	LU Electric		NHEC		Eversource		Unitil Electric		Total	
Home Energy Assistance										
Number of Units / Lifetime kWh Savings	33	878,172	25	465,944	311	7,832,040	43	849,754	411	10,025,910
B/C Ratio / Planned Budget	1.12	\$293,380	0.98	\$224,254	1.02	\$2,429,071	1.04	\$406,121		\$3,352,825
/ Lifetime MMBtu Savings		19,075		13,192		148,910		25,557		206,734
Home Performance w/ENERGY STAR										
Number of Participants / Lifetime kWh Savings	46	571,330	53	602,877	507	5,414,924	101	755,036	706	7,344,167
B/C Ratio / Planned Budget	1.30	\$187,613	1.25	\$229,205	1.17	\$1,860,400	1.64	\$436,631		\$2,713,849
/ Lifetime MMBtu Savings		21,756		25,905		227,822		68,632		344,115
ENERGY STAR Homes										
Number of Homes / Lifetime kWh Savings	30	784,460	17	3,231,914	303	27,881,919	26	1,321,301	376	33,219,594
B/C Ratio / Planned Budget	2.67	\$114,653	2.46	\$150,426	3.77	\$957,269	1.71	\$170,000		\$1,392,348
/ Lifetime MMBtu Savings		22,193		14,605		128,871		21,692		187,361
ENERGY STAR Products										
Number of Participants / Lifetime kWh Savings	11,312	13,337,296	7,317	11,969,548	58,752	91,936,633	15,066	23,633,361	92,446	140,876,838
B/C Ratio / Planned Budget	3.75	\$218,882	2.58	\$349,270	4.18	\$1,853,018	3.50	\$365,000		\$2,786,170
/ Lifetime MMBtu Savings		948		3,302		149,092		913		154,254
Large Business Energy Solutions										
Number of Participants / Lifetime kWh Savings	17	18,480,627	37	12,737,793	320	247,514,975	23	38,416,850	397	317,150,245
B/C Ratio / Planned Budget	1.37	\$648,101	2.09	\$202,403	2.62	\$4,704,790	1.80	\$708,104		\$6,263,398
/ Lifetime MMBtu Savings		0		0		0		0		0
Small Business Energy Solutions										
Number of Participants / Lifetime kWh Savings	69	11,568,083	85	7,978,317	488	98,130,331	54	13,468,500	696	131,145,231
B/C Ratio / Planned Budget	1.38	\$421,266	2.02	\$253,038	2.29	\$2,205,962	2.21	\$455,001		\$3,335,266
/ Lifetime MMBtu Savings		0		0		0		0		0
Municipal										
Number of Participants / Lifetime kWh Savings	0	0	0	0	0	0	0	0	0	0
B/C Ratio / Planned Budget	0.00	\$0	0.00	\$0	0.00	\$0	0.00	\$0		\$0
/ Lifetime MMBtu Savings		0		0		0		0		0
Educational Programs										
Number of Participants / Planned Budget	0	\$10,802	0	\$39,020	6	\$206,596	0	\$97,712	6	\$354,130
Company Specific Programs / FCM Expenses										
Number of Participants / Lifetime kWh Savings	0	0	0	0	25,006	30,049,504	0	0	25,006	30,049,504
B/C Ratio / Planned Budget		\$35,000		\$10,000		\$1,441,819		\$30,000		\$1,516,819
/ Lifetime MMBtu Savings		0		0		0		0		0
Smart Start (NHEC/PSNH), RLF (UES)										
Number of Participants / Planned Budget	0	\$0	0	\$0	0	\$52,000	0	\$0	0	\$52,000
Utility Performance Incentive										
Planned Budget		\$144,727		\$109,321		\$1,174,419		\$200,143		\$1,628,610
TOTAL PLANNED BUDGET		\$2,074,423		\$1,566,937		\$16,885,346		\$2,868,710		\$23,395,416

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NH CORE ELECTRIC PROGRAMS - 2016 UTILITY GOALS BY PROGRAM
Total Customers Served, Program Budgets, Lifetime kWh and MMBtu Savings

(Energy Efficiency Fund Only - Regional Greenhouse Gas Initiative)

	LU Electric		NHEC		Eversource		Unitil Electric		Total	
Home Energy Assistance										
Number of Units / Lifetime kWh Savings	4	111,379	3	65,344	41	1,038,914	5	102,958	54	1,318,595
B/C Ratio / Planned Budget	0.14	\$37,209	0.14	\$31,449	0.13	\$322,215	0.13	\$49,206		\$440,080
/ Lifetime MMBtu Savings		2,419		1,850		19,753		3,097		27,119
Home Performance w/ENERGY STAR										
Number of Participants / Lifetime kWh Savings	0	0	0	0	0	0	0	0	0	0
B/C Ratio / Planned Budget	0.00	\$0	0.00	\$0	0.00	\$0	0.00	\$0		\$0
/ Lifetime MMBtu Savings		0		0		0		0		0
ENERGY STAR Homes										
Number of Homes / Lifetime kWh Savings	0	0	0	0	0	0	0	0	0	0
B/C Ratio / Planned Budget	0.00	\$0	0.00	\$0	0.00	\$0	0.00	\$0		\$0
/ Lifetime MMBtu Savings		0		0		0		0		0
ENERGY STAR Products										
Number of Participants / Lifetime kWh Savings	0	0	0	0	0	0	0	0	0	0
B/C Ratio / Planned Budget	0.00	\$0	0.00	\$0	0.00	\$0	0.00	\$0		\$0
/ Lifetime MMBtu Savings		0		0		0		0		0
Large Business Energy Solutions										
Number of Participants / Lifetime kWh Savings	0	0	0	0	0	0	0	0	0	0
B/C Ratio / Planned Budget	0.00	\$0	0.00	\$0	0.00	\$0	0.00	\$0		\$0
/ Lifetime MMBtu Savings		0		0		0		0		0
Small Business Energy Solutions										
Number of Participants / Lifetime kWh Savings	0	0	0	0	0	0	0	0	0	0
B/C Ratio / Planned Budget	0.00	\$0	0.00	\$0	0.00	\$0	0.00	\$0		\$0
/ Lifetime MMBtu Savings		0		0		0		0		0
Municipal										
Number of Participants / Lifetime kWh Savings	41	4,549,199	32	3,979,658	202	44,131,322	28	3,140,791	304	55,800,970
B/C Ratio / Planned Budget	1.45	\$163,788	1.16	\$160,393	1.62	\$1,453,463	1.08	\$219,876		\$1,997,519
/ Lifetime MMBtu Savings		3,871		2,115		29,445		4,801		40,231
Educational Programs										
Number of Participants / Planned Budget		\$0		\$0		\$0		\$0		\$0
Company Specific Programs / FCM Expenses										
Number of Participants / Lifetime kWh Savings	0	0	0	0	0	0	0	0	0	0
B/C Ratio / Planned Budget		\$0		\$0		\$0		\$0		\$0
/ Lifetime MMBtu Savings		0		0		0		0		0
Smart Start (NHEC/PSNH), RLF (UES)										
Number of Participants / Planned Budget	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Utility Performance Incentive										
Planned Budget		\$15,075		\$14,388		\$133,176		\$20,181		\$182,820
TOTAL PLANNED BUDGET		\$216,072		\$206,231		\$1,908,853		\$289,263		\$2,620,419

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NH CORE GAS PROGRAMS - 2016 UTILITY GOALS BY PROGRAM
Total Customers Served, Program Budgets and Lifetime MMBtu Savings

	LU Gas		Unitil Gas		Total	
Home Energy Assistance						
Number of Units / Lifetime MMBtu Savings	306	123,267	32	24,183	338	147,451
B/C Ratio / Planned Budget	1.13	\$895,000	1.01	\$208,884		\$1,103,884
Home Performance w/ENERGY STAR						
Number of Participants / Lifetime MMBtu Savings	571	305,154	38	34,783	609	339,937
B/C Ratio / Planned Budget	2.23	\$645,815	1.24	\$147,740		\$793,555
ENERGY STAR Homes						
Number of Homes / Lifetime MMBtu Savings	41	39,984	11	14,309	52	54,292
B/C Ratio / Planned Budget	2.75	\$85,000	1.53	\$68,750		\$153,750
ENERGY STAR Products						
Number of Participants / Lifetime kWh Savings	1,417	261,654	509	92,742	1,926	354,396
B/C Ratio / Planned Budget	1.28	\$995,000	1.26	\$335,243		\$1,330,243
/ Lifetime MMBtu Savings						
Large Business Energy Solutions						
Number of Participants / Lifetime MMBtu Savings	270	725,780	42	258,334	312	984,114
B/C Ratio / Planned Budget	1.88	\$1,488,000	1.76	\$325,308		\$1,813,308
Small Business Energy Solutions						
Number of Participants / Lifetime MMBtu Savings	558	319,986	100	117,452	658	437,438
B/C Ratio / Planned Budget	1.18	\$1,190,000	1.82	\$231,722		\$1,421,722
Education						
B/C Ratio / Planned Budget		\$25,000		\$30,000		\$55,000
Company Specific Programs						
Number of Participants / Lifetime MMBtu Savings	25,000	55,320	0	0	25,000	55,320
B/C Ratio / Planned Budget	1.39	\$298,000	0.00	\$0		\$298,000
Utility Performance Incentive						
Planned Budget		\$449,745		\$107,812		\$557,557
Total Program Expenses		\$6,071,560		\$1,455,459		\$7,527,019

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Liberty Utilities Electric Home Energy Assistance Program

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				Installation or Realization Rate		Total Lifetime Savings (kWh)				Annual Savings per Unit (MMBTU)				Total Lifetime MMBTU Savings			
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015 / 2016	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan
	Weatherization Package (Electric Heat)	3	9.0	1	1	2,799.0	1,486	5,418	5,418	19.8	21.7	13	13	86%	86%	143,161	249,715	59,489	59,489	0.0	0.00	-	-	0.0	0	-
Weatherization Package (Kerosene Heat)	13	21.0	3	2	0.0	0	-	-	20.6	22.1	20	19	86%	86%	-	0	-	-	19.5	5.31	19.7	24.0	4,498.6	2,118	1,035	784
Weatherization Package (Liquid Propane Heat)	8	14.0	6	3	0.0	0	-	-	21.4	20.7	20	22	86%	86%	-	0	-	-	19.1	7.32	30.0	12.4	2,809.5	1,832	3,080	693
Weatherization Package (Natural Gas Heat)	0	0.0	-	-	0.0	0	-	-	19.4	19.4	20	20	86%	86%	-	0	-	-	22.0	0.00	9.2	9.2	0.0	0	-	-
Weatherization Package (Wood Heat)	2	0.0	4	2	0.0	0	-	-	20.9	20.9	21	21	86%	86%	-	0	-	-	30.3	0.00	38.4	38.4	1,093.3	0	2,794	1,397
Weatherization Package (Oil Heat)	17	81.0	32	29	0.0	2	-	-	20.0	25.0	21	23	86%	86%	-	3,695	-	-	29.7	10.85	28.0	29.7	8,839.0	18,932	16,320	16,704
Weatherization Package (Other)	0	0.0	-	-	0.0	0	-	-	0.0	0.0	20	20	86%	86%	-	0	-	-	0.0	0.00	-	-	0.0	0	-	-
Electric Svgs on Fossil Heated Homes (Ref, DHW, Lighting)	40	291.0	45	36	1,059.0	179	1,182	1,730	14.31	13.3	12	17	100%	86%	525,972	691,845	539,277	884,566	0.0	(0.11)	-	-	0.0	(432)	-	-
AS = Ancillary Savings on Weatherized Homes																			0.0	0.00	-	-	0.0	0	-	-
Ancillary Savings: Boiler Circulator Pump Savings	46	0.0	-	-	9.0	0		9	20	20.0	20	20	86%	86%	7,159	0	-	-	0.0	0.00	-	-	0.0	0	-	-
Ancillary Savings: Furnace Fan Savings	12	0.0	-	-	86.0	0		86	20	20.0	20	20	86%	86%	17,110	0	-	-	0.0	0.00	-	-	0.0	0	-	-
Ancillary Savings: Furnace w/new ECM Motor	1	0.0	-	-	733.0	0		733	20	20.0	20	20	86%	86%	7,329	0	-	-	0.0	0.00	-	-	0.0	0	-	-
Ancillary Savings: Central AC	1	0.0	-	-	77.0	0		77	20	20.0	20	20	86%	86%	770	0	-	-	0.0	0.00	-	-	0.0	0	-	-
Ancillary Savings: Room AC (per unit)	44	0.0	-	-	23.0	0		23	20	20.0	20	20	86%	86%	17,332	0	-	-	0.0	0.00	-	-	0.0	0	-	-
Mobile Home Furnaces, Kerosene	4	0.0	4	3	0.0	0	102	102	17	17.0	17	17	100%	100%	-	0	6,963	5,222	3.3	0.00	8.8	8.8	225.1	0	600	450
Furnaces, LP	2	0.0	2	2	0.0	0	530	530	18	18.0	18	18	100%	100%	-	0	19,066	19,066	8.4	0.00	5.9	5.9	303.8	0	213	213
Boilers, Oil	5	3.0	5	3	0.0	0	283	283	25	25.0	25	25	100%	100%	-	-	35,345	21,207	5.0	24.70	16.7	16.7	621.3	1,853	2,089	1,253
Boilers, Gas	0	3.0	-	-	0.0	0	109	109	18	18.0	20	20	100%	100%	-	0	-	-	0.0	25.13	-	-	0.0	1,357	-	-

Liberty Utilities Electric Home Performance with ENERGY STAR®

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				Installation or Realization Rate			Total Lifetime Savings (kWh)				Annual Savings per Unit (MMBTU)				Total Lifetime MMBTU Savings			
	2014		2015		2014		2015		2014		2015		2014	2015	2016	2014		2015		2016		2014		2015		2016	
	2014 Plan	Actual	Plan	2016 Plan	2014 Plan	Actual	2015 Plan	2016 Plan	Plan	Actual	Plan	2016 Plan	2014	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	Actual	2015 Plan	2016 Plan	2014 Plan	Actual	2015 Plan	2016 Plan
Baseload SF	5	39	3.42	3.22	138.0	562.1	221.5	221.5	7	16	20	20	100.0%	100.0%	100.0%	4,815.2	360,874.7	15,161	14,247	0.0	-	-	-	0.0	-	-	-
Baseload MF	17	0	14.18	13.33	138.0	0.0	221.5	221.5	7	7	20	20	100.0%	100.0%	100.0%	16,424.5	0.0	62,811	59,025	0.0	-	-	-	0.0	-	-	-
Light Fixtures	10	0	2.44	2.30	23.0	0.0	24.6	24.6	20	20	20	20	100.0%	100.0%	100.0%	4,600.0	0.0	1,203	1,131	0.0	-	-	-	0.0	-	-	-
Refrigerator	4	0	4.89	4.59	586.2	0.0	586.2	586.2	7	7	7	7	100.0%	100.0%	100.0%	16,412.8	0.0	20,063	18,854	0.0	-	-	-	0.0	-	-	-
Hot Water Saving Measures	1	0	9.29	8.73	80.4	0.0	80.4	80.4	4	4	4	4	100.0%	100.0%	100.0%	321.7	0.0	2,989	4,915	0.0	-	-	-	0.0	-	-	-
Fuel Neutral, SF, Electric, CFLs	37	16	48.90	45.95	138.0	315.3	221.5	221.5	8	11	20	20	100.0%	100.0%	100.0%	40,839.1	56,120.0	216,589	203,533	0.0	-	-	-	0.0	-	-	-
SF Fuel Neutral (Oil)	29	33	37.00	35.95	0.0	0.0	-	-	21	21	21	21	100.0%	100.0%	100.0%	0.0	0.0	-	-	28.6	38.9	28.0	23.1	17,542.2	27,249.8	21,735	17,298
SF Fuel Neutral (LP)	5	9	8.90	8.00	0.0	0.0	-	510.8	21	22	21	23	100.0%	100.0%	100.0%	0.0	0.0	-	92,434	22.52	25.9	30.0	23.6	2,077.1	5,041.4	5,472	4,276
SF Fuel Neutral (Wood)	2	2	1.00	1.00	0.0	0.0	-	3,114.5	21	19	21	18	100.0%	100.0%	100.0%	0.0	0.0	-	57,525	19.0	41.5	38.4	9.8	779.9	1,590.3	787	182
SF Fuel Neutral (Kerosene)	0	0	1.00	-	0.0	0.0	-	-	21	21	21	21	100.0%	100.0%	100.0%	0.0	0.0	-	-	32.7	-	19.7	19.7	171.7	-	414	-
SF Fuel Neutral (Electric)	1	7	1.00	1.00	6,552.2	5,356.0	4,803.4	4,865.8	18	20	18	20	100.0%	100.0%	100.0%	118,105.9	764,415.0	86,584	97,998	0.0	-	-	-	0.0	-	-	-
Heating System Replacement	-	1	-	-	0.0	0.0	-	-	20	20	20	-	100.0%	-	-	0.0	0.0	-	-	0.0	13.1	-	-	0.0	262.0	-	-
Aerator	-	5	-	-	0.0	0.0	-	-	4	4	4	4	100.0%	-	-	0.0	0.0	-	-	0.0	1.0	-	-	0.0	19.6	-	-
Pipe Insulation	-	3	-	-	0.0	0.0	-	-	4	4	4	4	100.0%	-	-	0.0	0.0	-	-	0.0	1.8	-	-	0.0	21.6	-	-
Dual Fuel - Electric Secondary	-	2	-	-	0.0	1,078.5	-	-	20	21	20	20	100.0%	-	-	0.0	44,930.3	-	-	0.0	-	-	-	0.0	-	-	-
AS: Boiler Circulator Pump Savings	29	0	40.91	38.60	9.0	0.0	9.0	9.0	20	20	20	20	100.0%	100.0%	100.0%	5,231.4	0.0	7,363	6,948	0.0	0	-	-	0.0	-	-	-
AS: Furnace Fan Savings	7	0	2.92	2.76	86.0	0.0	86.0	86.0	20	20	20	20	100.0%	100.0%	100.0%	12,497.3	0.0	5,026	4,742	-	-	-	-	0.0	-	-	-
AS: Furnace w/new ECM Motor	0	0	0.14	0.13	733.0	0.0	733.0	733.0	20	20	20	20	100.0%	100.0%	100.0%	5,325.9	0.0	2,070	1,953	-	-	-	-	0.0	-	-	-
AS: Central AC	0	0	0.14	0.13	77.0	0.0	77.0	77.0	20	20	20	20	100.0%	100.0%	100.0%	559.5	0.0	217	205	-	-	-	-	0.0	-	-	-
AS: Room AC (per unit)	15	0	18.02	17.00	23.0	0.0	23.0	23.0	20	20	20	20	100.0%	100.0%	100.0%	6,754.2	0.0	8,288	7,821	-	-	0.0	-	0.0	-	-	-
ES Furnace w/ECM (LP), AFUE >=97%	-	-	2.00	-	-	-	168.00	168.0	-	-	18	18	100.0%	100.0%	100.0%	-	-	6,048	-	-	-	5.9	5.9	-	-	212	-
ES Boiler (LP), AFUE >=90%	-	-	-	-	-	-	-	-	-	-	20	20	100.0%	100.0%	100.0%	-	-	-	-	-	-	10.4	10.4	-	-	-	-
ES Boiler (Oil), AFUE >=85%	-	-	4.00	-	-	-	-	-	-	-	20	20	100.0%	100.0%	100.0%	-	-	-	-	-	-	5.4	5.4	-	-	430	-

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				In-Service / Realization Rate		Total Lifetime Savings (kWh)				Annual Savings per Unit (MMBTU)				Total Lifetime MMBTU Savings			
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015 / 2016	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan
ASHP Heated Home	6	0.0	2	2	2,313	-	5,355	5,355	25	25	25	25	100%	100%	325,208	0	267,750	267,750	-	-	-	0.00	-	-	-	-
Central AC	0	0	-	-	-	-	110	110	14	14	14	14	100%	100%	0	0	-	-	-	-	-	0.00	-	-	-	-
CFL / Screw In Bulb	266	18			23	2			5	20			100%		30,625	554			-	-	-	0.00	-	-	-	-
Clothes Washer	4	0	4	3	166	-	182	182	11	11	11	11	100%	100%	7,286	0	7,666	5,901	0.7	-	0.7	0.7	32	-	31	24
Dishwasher	19	1	25	-	31	33	31	31	10	11	10	10	100%	100%	5,856	363	7,826	-	0.2	-	0.2	0.2	35	-	47	-
Elec Baseboard Heated Home (5%)	2	0			7,323	-			25	25			100%		366,150	0			-	-			-	-		
Gas Heated Home (55%)	0	0			481	-			25	25			100%		0	0			25.0	-			-	-		
Interior HW Fixtures	27	0	38	30	62	-	25	25	20	20	20	20	100%	100%	33,172	0	18,873	14,527	-	-	-	0.0	-	-	-	-
LEDs			383	295			25	25			20	20		100%			188,716	145,262	-	-	-	0.0	-	-	-	-
LP Heated Home (35%)	17	1	34	27	506	46	463	463	25	25	25	25	100%	100%	215,050	1,150	397,189	306,643	44.0	84.7	31.8	31.8	18,700	2,118	27,304	21,079
Oil Heated Home (5%)	2	0	2	1	520	-	411	411	25	25	25	25	100%	100%	25,991	0	20,540	10,270	50.0	-	43.6	43.6	2,500	-	2,180	1,090
Refrigerator	21	1	35	27	114	107	107	107	12	12	12	12	100%	100%	28,728	1,284	44,310	34,107	-	-			-	-	-	-
Thermostat	20	1	29	22	-	18	-	-	12	12	15	15	100%	100%	0	216	-	-	-	-			-	-	-	-

Liberty Utilities Electric ENERGY STAR® Lighting Program

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				In-Service & Realization Rate			Total Lifetime Savings (kWh)			
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan
Catalog: CFLs	330	2,521	-	-	23.0	23.0	29.0	28.98	5	5	5	5	62%	62%	62%	23,638	180,578	-	-
Catalog: Interior Fixtures (Lamps and HW Fixtures)	44	62	-	-	62.3	62.3	29.0	28.98	8	8	8	8	96%	100%	100%	21,130	29,774	-	-
Catalog: Exterior Fixtures	21	48	-	-	62.3	62.3	29.0	28.98	5	5	5	5	100%	94%	94%	6,538	14,945	-	-
Catalog: Torchieres	13	5	-	-	69.4	69.4	29.0	28.98	8	8	8	8	94%	95%	95%	6,744	2,594	-	-
Catalog: LED Bulbs	21	1,671	4,498	299	27.7	27.7	24.6	24.61	20	20	20	20	95%	95%	95%	11,040	878,495	2,103,075	139,799.75
Catalog: LED Bulbs (Multipack Bulbs)			284	-			24.6	24.61			20	20		95%	95%			132,786	-
Catalog: LED Interior Fixtures	4	10	-	-	27.7	27.7	24.6	24.61	20	8	8	8	95%	62%	96%	2,103	2,103	-	-
Retail: CFLs	637	879	-	-	23.0	23.0	29.0	28.98	5	5	5	5	62%	100%	62%	45,628	62,962	-	-
Retail: CFLs (Multipack Bulbs)	24,686	3,605	20,500	370	23.0	23.0	28.98	28.98	5	5	5	5	62%	94%	62%	1,768,244	258,224	2,777,466.59	33,402
Retail: Interior Fixtures (Lamps and HW Fixtures)	247	35	-	-	62.3	62.3	29.0	28.98	8	8	8	8	96%	95%	95%	118,614	16,808	-	-
Retail: Exterior Fixtures	16	2	-	-	62.3	62.3	29.0	28.98	5	5	5	5	100%	100%	100%	4,982	623	-	-
Retail: Torchieres	4	0	-	-	69.4	69.4	29.0	28.98	8	8	8	8	94%	100%	100%	2,075	-	-	-
Retail: LED Bulbs	986	7,532	25,363	460	27.7	27.7	24.6	24.61	20	20	20	20	95%	100%	95%	518,445	3,959,369	12,482,802	215,077
Retail: LED Bulbs (Multipack Bulbs)			1,900	225			24.6	24.61			20	20		100%	95%			935,115	105,200
Retail: LED Interior Fixtures	164	479	1,550	100	27.7	27.7	24.6	24.61	20	20	8	8	95%	100%	96%	86,210	251,797	305,143	18,978
Markdown: CFLs (Multipack Bulbs)			900	20,554			29.0	28.98			5	5		100%	62%			130,415	1,855,529
Markdown: LED Bulbs			900	11,037			24.6	24.61			20	20		100%	95%			442,949	5,160,640
Markdown: LED Bulbs (Multipack Bulbs)			750	10,000			24.6	24.61			20	20		100%	95%			369,125	4,675,577

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				In-Service or Realization Rate			Total Lifetime Savings (kWh)				Annual Savings per Unit (MMBTU)				Total Lifetime MMBTU Savings			
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan
NEW EQUIPMENT TRACK																											
NC - Chiller			0.0	0.0			120,658	120,658			20	20		100%	99.86%			-	-			-	-			-	-
NC - Compressed Air			4.9	3.0			13,095	13,095			15	15		100%	99.86%			953,747	588,450			-	-			-	-
NC - Custom	3.4	1.0	2.6	1.9	45,117	271,992	66,102	66,102	15	15	15	15	93%	100%	99.86%	2,121,321	3,773,895	2,543,326	1,893,186			-	-			-	-
NC - HVAC	-	7.0	1.5	1.0	-	43,299	43,613	43,613	15	17	15	15	93%	100%	99.86%	-	4,705,512	953,747	653,273			-	-			-	-
NC - Lighting	3.5	7.0	1.2	1.0	46,059	944	71,150	71,150	15	15	15	15	93%	100%	99.86%	2,204,787	91,674	1,271,663	1,065,756			-	-			-	-
NC - Motor			0.0	0.0			5,933	5,933			20	20		100%	99.86%			-	-			-	-			-	-
NC - VFD	-	4.0	1.6	1.0	-	31,479	26,922	26,922	15	15	15	15	93%	100%	99.86%		1,747,105	635,832	403,265			-	-			-	-
Lighting (Occ Sensors Only)	-	-			-	-			10	10				93%		-	-			-	-			-	-		
Cooling	1.5	-			13,186	-			15	21				93%		274,434	-			-	-			-	-		
Process	0.8	-			7,099	-			15	14				93%		73,874	-			-	-			-	-		
RETROFIT TRACK																											
Retro - Compressed Air			2.6	1.5			32,960	32,960			13	13		100%	99.86%			1,102,108	641,820			-	-			-	-
Retro - Custom	8.1	4.0	3.6	2.0	74,672	317,119	117,570	117,570	13	13	13	13	94%	100%	99.86%	7,391,184	15,500,784	5,510,540	3,052,540			-	-			-	-
Retro - Lighting	29.3	62.0	7.4	5.0	26,433	18,280	143,713	143,713	13	13	13	13	94%	100%	99.86%	9,453,409	13,849,368	13,776,350	9,328,247			-	-			-	-
Retro - Motor			0.0	0.0			23,730	23,730			15	15		100%	99.86%			-	-			-	-			-	-
Retro - VFD			1.9	1.0			65,791	65,791			13	13		100%	99.86%			1,653,162	854,090			-	-			-	-
Fuel Neutral Heating, Hot Water and Controls																											
ENERGY STAR Qualified Freestanding Water Heater >= 0.67 EF	4.8	-			-	-			13	13				100%		-	-			3	-			187	-		
Furnace, Oil (forced hot air) ≥ 85% AFUE w/ECM (up to 150 MBH)	4.8	-			-	-			18	18				100%		-	-			16	-			1,384	-		
Furnace, Oil (forced hot air) ≥ 95% AFUE w/ECM (up to 150 MBH)	4.6	-			-	-			18	18				100%		-	-			16	-			1,343	-		
Furnace, LP (forced hot air) ≥ 97% AFUE w/ECM (up to 150 MBH)	4.8	-			-	-			18	18				100%		-	-			19	-			1,590	-		
7-Day Programmable Thermostats (Gas)	4.8	-			-	-			15	15				100%		-	-			8	-			552	-		
Boiler Reset Controls, LP, After Market, 1 shift operation	4.8	-			-	-			15	15				100%		-	-			19	-			1,383	-		
Boiler Reset Controls, LP, After Market, >1 shift operation	4.8	-			-	-			15	15				100%		-	-			36	-			2,543	-		
Steam Traps, Oil (greater than 10 steam traps requires pre-approval)	4.8	-			-	-			3	3				100%		-	-			26	-			368	-		

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				In-Service or Installation Rate		Total Lifetime Savings (kWh)				Annual Savings per Unit (MMBTU)				Total Lifetime MMBTU Savings				
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015 / 2016	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	
RETROFIT TRACK																											
Retro - Compressed Air			0.3	1.0			65,755.2	65,755			13.0	13		100%			284,504	854,818									
Retro - Custom	-	2	2.9	2.0	-	6,159	19,087.6	19,088	13	13	13.0	13	100.0%	100%	-	160,134	711,260	496,278									
Retro - Lighting	101	29	60.2	38.6	7,665	29,387	12,713.3	12,713	13	13	13.0	13	100.0%	100%	10,074,947	11,078,835	9,957,640	6,387,554									
Retro - Motor			0.9	1.0			11,865.0	11,865			15.0	15		100%			164,137	177,975									
Retro - Other	-	306			-	287			13	13			100.0%		-	1,140,125											
Retro - VFD			0.7	1.0			77,887.0	77,887			13.0	13		100%			711,260	1,012,531									
Lighting - Direct Install	-	385			-	188			13	13			100.0%	100%	3,906,002	938,704											
Process	2	-			7,665	-			13	13			100.0%	100%	174,379	-											
NEW EQUIPMENT TRACK																											
NC - Chiller			0.0	0.0			2,966.3	30,165			20.0	20		100%													
NC - Compressed Air	-	2	0.3	1.0	-	8,311	32,877.6	32,878	-	13	15.0	15	100.0%	100%	-	216,076	167,324	493,164									
NC - Custom	2	2	11.7	8.0	3,557	19,337	4,771.9	4,772	15	16	15.0	15	92.5%	100%	98,707	578,065	836,620	572,628									
NC - HVAC	0	2	4.1	3.0	-	60,811	13,594.0	13,594	15	15	15.0	15	92.5%	100%	-	1,687,500	836,620	611,729									
NC - Lighting	22	7	17.5	12.0	3,557	7,141	3,178.3	3,178	15	15	15.0	15	92.5%	100%	1,061,098	693,209	836,620	572,099									
NC - Motor			0.0	0.0			2,966.3	2,966			20.0	20		100%													
NC - VFD	-	5	0.4	1.0	-	10,387	25,953.9	25,954	15	15	15.0	15	100.0%	100%	-	778,616	167,324	389,308									
Cooling	1	-			3,557				15	16			92.5%	92.5%	26,848												
Lighting (Occ Sensors Only)	0	-			-				10	10			92.5%	92.5%	-												
Process	1	-			3,557				15	14			92.5%	92.5%	26,231												
Fuel Neutral Heating, Hot Water and Controls																											
ENERGY STAR Qualified Freestanding Water Heater >= 0.67 EF	6				-				13				100.0%		-				3				215	-			
Furnace, Gas (forced hot air) >= 95% AFUE w/ECM (up to 150 MBH)	5				-				18				100.0%		-				16				1,558	-			
Furnace, Oil (forced hot air) >= 85% AFUE w/ECM (up to 150 MBH)	6				-				18				100.0%		-				16				1,599	-			
Furnace, Gas (forced hot air) >= 97% AFUE w/ECM (up to 150 MBH)	6				-				18				100.0%		-				19				1,837	-			
7-Day Programmable Thermostats (Gas)	6	1			-	14			15	15			100.0%		-	216			8	7.70			637	116			
Boiler Reset Controls, Gas, After Market, 1 shift operation	6				-				15				100.0%		-				19				1,597	-			
Steam Traps, Gas (greater than 10 steam traps requires pre-approval)	6				-				3				100.0%		-				26				425	-			
Air Source or Ductless Mini Split Heat Pump (Energy Star >= 14.5 SEER), >= 8.2	-	1			-	15			12	12			100.0%		-				-	15.43			-	185			
Air Source or Ductless Mini Split Heat Pump (Energy Star >= 19.0 SEER >=10.0H	-	1			-	171			12	12			100.0%		-				-	171.40			-	2,057			

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life			In-Service or		Total Lifetime Savings (kWh)				Annual Savings per Unit (MMBTU)				Total Lifetime MMBTU Savings			
	2014		2015		2014		2015		2014		2015		2014		2015		2014		2015		2014		2015		
	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	
Custom - New			5	3			4,772	4,772			15	15		100%			345,272	214,622					-	-	
Custom - Retrofit	-	2	2	1	-	5,032	19,088	19,088	0	13	13	13	100%	100%		130,832	598,471	248,139					-	-	
HVAC - New	-	1	-	-	-	-	13,594	13,594	0	12	15	15	100%	100%		-	-	-			0	171	-	2,057	
Cooling - New	1				11,684				15	15			100%		87,630					0	0			-	
Lighting - New	2	5	7	7	40,812	18,415	3,178	3,178	15	14	15	15	100%	100%	918,270	1,333,299	345,272	333,725			0	0	-	-	
Lighting - Retrofit	6	2	14	12	40,812	115,192	20,526	20,526	13	13	13	13	100%	100%	3,139,504	2,994,998	3,735,782	3,202,099			0	0	-	-	
Lighting - Direct Install	-	21	-	-	-	183	-	-	13	13	-	-	100%		-	49,920	-	-			-	-	-	-	
Motor - New							2,966	2,966			20	20	100%	100%									-	-	
Motor - Retrofit							25,954	11,865			15	15	100%	100%									-	-	
VFD - New							77,887	25,954			13	15	100%	100%									-	-	
Other - New	1	-			39,978	-			15	15			100%		680,865	-					0	0	-	-	
Other - Retrofit	-	38			-	347			0	10			100%		-	132,895							-	-	
VFD - Retrofit			0	0.5			77,887	77,887			13	13		100%			59,847	506,266					-	-	
Energy Star DMSHP (Any, SEER >=20, HSPF >=10, Cooling)			4	4			124	124			12	12		100%			5,970	5,970					-	-	
Energy Star DMSHP (Oil, SEER >=20, HSPF >=10, Heating)			2	2			536	536			12	12		100%			12,874	12,874					-	-	
Energy Star DMSHP (LP, SEER >=20, HSPF >=10, Heating)			2	2			536	536			12	12		100%			12,874	12,874					-	-	
Energy Star Wifi TSTAT for DMSHP			4	4			110	110			15	15		100%			6,582	6,582					-	-	
Furnace: Oil, w/ECM, AFUE >= 85%, up to 150 MBH			1	1			168	168			18	18		100%			3,024	3,024			8	8		143	
Furnace: Oil, w/ECM, AFUE >= 87%, up to 150 MBH			1	1			168	168			18	18		100%			3,024	3,024			9	9		157	
Boiler: LP, Condensing, AFUE >= 90%, up to 301-499 MBH			1	1			-	-			25	25		100%			-	-			58	58		1,659	
Boiler: Oil, AFUE >= 85%, up to 301-499 MBH			2	2			-	-			25	25		100%			-	-			42	42		2,110	
On Demand Tankless Water Heater, Gas, >= .82 EF w/Electronic Ignition	5				-				15	15			100%		-						7	-		558.69	
On Demand Tankless Water Heater, Gas, >= .95 EF w/Electronic Ignition	5				-				15	15			100%		-						10	-		754.62	
Boilers (up to 300 MBH), Condensing (for homes with LP heat)	6				-				25	25			100%		-						23	0		3,185.16	
Boilers (up to 300 MBH) (for homes with oil heat)	6	1			-				25	25			100%		-						23	68		3,185.16	
Boiler Reset Controls, LP, After Market, 1 shift operation	5	1			-				15	15			100%		-						19	36		1,518.69	
7-Day Programmable Thermostats		2			-				-	15			100%		-						-	8			231

Liberty Utilities Gas Home Energy Assistance Program

Measure	Quantity				Annual Savings per Unit (mmbtu)				Measure Life				Installation or Realization Rate		Total Lifetime Savings (mmbtu)			
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015 / 2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan
Low Income	181.6	422.0			32.0	19.1			20.0	18.0			100.0%		116,239.3	144,998.9		
Low Income - Single Family			108.2	82.7			27.7	31.9	20.0	20.0	20.0	20.5	100.0%	100.0%			59,875.6	54,228.7
Low Income - Multifamily			216.0	223.0			16.9	16.6	20.0	20.0	20.0	18.7	100.0%	100.0%			73,137.6	69,038.7

Liberty Utilities Gas Home Performance with ENERGY STAR®

Measure	Quantity				Annual Savings per Unit (mmbtu)				Measure Life				Installation or Realization Rate		Total Lifetime Savings (mmbtu)			
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015 / 2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan
Single Family (1-4 Units)	50.6	135.0	92	121.0	32.9	27.4	32.9	27.5	20.0	22.0	20.0	20.0	100%	100%	33,290.7	81,536.9	60,536.0	66,547.1
Multi-Family (5+ Units)	471.0	399.0	376	450.0	32.9	26.9	23.0	26.5	20.0	22.0	20.0	20.0	100%	100%	309,918.0	235,769.1	173,087.8	238,606.9

Liberty Utilities Gas ENERGY STAR® Homes Program

Measure	Quantity				Annual Savings per Unit (mmbtu)				Measure Life				In-Service / Realization Rate		Total Lifetime Savings (mmbtu)			
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015 / 2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan
Energy Star Homes	37.2	10.0	15.2	40.8	27.2	30.9	65.0	39.2	25.0	24.1	25.0	25.0	100%	100%	25,314.5	7,462.0	24,741.5	39,983.6

Liberty Utilities Gas ENERGY STAR® Products Program

Measure	Quantity				Annual Savings per Unit (mmbtu)				Measure Life				In-Service / Realization Rate		Total Lifetime Savings (mmbtu)				
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015 / 2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	
Water Heater - Tankless, On-Demand >=.82	45.0	50.0	60	-	9.7	9.7	10.2	10.2	20.0	20.0	19	19	100%	100%	8,730.0	9,700	11,628	-	
Water Heater - Tankless, On-Demand >=.94	35.0	79.0	47	86	10.3	10.3	10.5	10.5	20.0	20.0	19	19	100%	100%	7,210.0	16,274	9,377	17,157	
Water Heater - Indirect (attached to ES FHW Boiler; Combined eff rating >=85% (EF=.82)	70.0	67.0	65	66	8.0	8.0	8.0	8.0	8	20.0	20.0	20	20	100%	100%	11,200.0	10,720	10,400	10,560
Water Heater - Condensing (EF 0.95)	4.0	1.0	2	2	8.5	8.5	8.5	8.5	15.0	15.0	15	15	100%	100%	510.0	128	255	255	
Water Heater - Stand Alone Storage Tank (EF 0.67)	3.0	21.0	25	-	3.7	3.7	4.2	4.2	13.0	13.0	13	13	100%	100%	144.3	1,010	1,365	-	
Water Heater - Integrated w/Condensing Boiler >= 90% AFUE	55.0	239.0	155	156	17.8	17.8	23.8	23.8	20.0	20.0	17	17	100%	100%	19,580.0	85,084	62,713	63,228	
Water Heater - Integrated w/Condensing Boiler >= 95% AFUE			19	20			23.8	23.8			20	20	100%	100%			9,044	9,520	
Furnace 95+ AFUE (<150) w/ECM Motor	265.0	122.0	155	156	4.5	4.5	15.9	15.9	18.0	18.0	17	17	100%	100%	21,465.0	9,882	41,897	42,167	
Furnace 97+ AFUE (<150) w/ECM Motor	42.4	56.0	88	89	5.9	5.9	17.3	17.3	18.0	18.0	17	17	100%	100%	4,501.7	5,947	25,881	26,175	
Condensing Boiler >= 90% AFUE (Up to 300 MBH)	75.0	72.0	69	70	10.4	10.4	12.0	12	20.0	20.0	18	18	100%	100%	15,600.0	14,976	14,817	15,120	
Condensing Boiler >= 95% AFUE (Up to 300 MBH)	52.0	88.0	63	64	13.1	13.1	13.9	13.9	20.0	20.0	19	19	100%	100%	13,624.0	23,056	16,638	16,902	
Boiler Reset Controls	8.0	3.0	4	4	4.5	4.5	4.5	4.5	15.0	15.0	15	15	100%	100%	540.0	203	270	270	
Thermostat - Standard, 7-Day Programmable	910.0	367.0	380	342	3.2	3.2	3.2	3.2	15.0	15.0	15	15	100%	100%	43,680.0	17,616	18,240	16,416	
Thermostat - WiFi (Heating Only)	100.0	0.0	65	310	6.6	6.6	6.9	6.9	15.0	15.0	15	15	100%	100%	9,900.0	-	6,728	32,085	
Thermostat - WiFi (Cooling & Heating)	72.0	144.0	-	-	6.6	6.6	6.9	6.9	15.0	15.0	15	15	100%	100%	7,128.0	14,256	-	-	
Heat Recovery Ventilator (-133 kWh penalty)	5.0	1.0	2	2	7.7	7.7	7.7	7.7	20.0	20.0	20	20	100%	100%	770.0	154	308	308	
Boiler - Early Replacement, Steam - Retirement: 82%+ AFUE	4.0	3.0	4	6	43.9	43.9	43.9	43.9	10.0	10.0	10	10	100%	100%	1,756.0	1,317	1,756	2,634	
Boiler - Early Replacement, Steam - EE: 82%+ AFUE	4.0	3.0	4	6	3.5	3.5	3.5	3.5	20.0	20.0	20	20	100%	100%	280.0	210	280	420	
Boiler - Early Replacement, FHW - Retirement: 90 AFUE (65%-90%)	16.0	16.0	16	19	23.6	23.6	23.6	23.6	10.0	10.0	10	10	100%	100%	3,776.0	3,776	3,776	4,484	
Boiler - Early Replacement, FHW - EE 90 AFUE (80%-90%)	16.0	16.0	16	19	10.4	10.4	10.4	10.4	20.0	20.0	20	20	100%	100%	3,328.0	3,328	3,328	3,952	

Liberty Utilities Gas Large Business Energy Solutions Program

Measure	Quantity				Annual Savings per Unit (mmbtu)				Measure Life				Installation or Realization Rate		Total Lifetime Savings (mmbtu)			
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015 / 2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan
Large Retrofit Custom	10	14	6	13	3041.4	2,634.5	2,338.7	2,787.0	15	15	9	16	100%	100%	443,436.1	542,875	131,904	561,581
Large New Equipment Custom	4	13	21	10	785.5	719.7	777.0	463.0	19	19	21	18	100%	100%	61,043.3	178,966	341,084	84,266
Furnace 95+ AFUE (<150) w/ECM Motor	10	0	0	0	4.3	0	9.0	9.0	18	18	18	18	100%	100%	774.0	-	-	-
Furnace 97+ AFUE (<150) w/ECM Motor	3	0	0	0	5.9	0	9.9	9.9	18	18	18	18	100%	100%	318.6	-	-	-
Condensing Boiler >= 90% AFUE (Up to 300 MBH)	0	3	1	12	0.0	22.8	30.6	30.6	25	25	25	25	100%	100%	-	1,710	765	9,180
Condensing Boiler >= 96% AFUE (Up to 300 MBH)			0	26			27.8	27.8			25	25		100%				18,070
Condensing Boiler >= 90% thermal efficiency (301 to 499 MBH)	8	0	2	3	56.1	0	58.4	58.4	25	25	25	25	100%	100%	11,699.3	-	2,920	4,380
Condensing Boiler >= 90% thermal efficiency (500 to 999 MBH)	2	3	0	0	103.0	103.0	107.3	107.3	25	25	25	25	100%	100%	5,150.0	7,725	-	-
Condensing Boiler >= 90% thermal efficiency (1000 to 1700 MBH)	3	1	0	0	189.2	189.2	197.2	197.2	25	25	25	25	100%	100%	14,190.0	4,730	-	-
Condensing Boiler >= 90% thermal efficiency (1701 to 2000 MBH)	4	0	2	3	331.2	0	345.1	345.1	25	25	25	25	100%	100%	33,120.0	-	17,255	25,883
Infrared Heater, Low Intensity (all sizes)	12	0	0	0	48.3	0	12.0	12.0	17	17	17	17	100%	100%	9,853.2	-	-	-
Water Heater - Indirect (attached to ES FHW Boiler; Combined eff rating >=85% (EF=.82)	12	1	0	0	20.7	20.7	19.0	19.0	15	15	15	15	100%	100%	3,726.0	311	-	-
Water Heater - Stand Alone Storage Tank (EF 0.67)			3	0			3.0	3.0			13	13		100%			117	-
Condensed Unit Heater >= 90% thermal efficiency (up to 300 MBH)	0	0	0	0	40.9	0	40.9	40.9	18	18	18	18	100%	100%	-	-	-	-
Kitchen - Fryer	2	0	0	3	58.6	0	58.6	58.6	12	12	12	12	100%	100%	1,406.4	-	-	2,110
Kitchen - Steamer (ES >= 38% efficiency)	1	0	0	0	106.6	0	106.6	106.6	12	12	12	12	100%	100%	1,279.2	-	-	-
Kitchen - Convection Oven (>= 44% efficiency)	1	0	0	4	30.6	0	30.6	30.6	12	12	12	12	100%	100%	367.2	-	-	1,469
Kitchen - Combination Oven (>= 44% efficiency)	1	0	0	0	110.3	0	110.3	110.3	12	12	12	12	100%	100%	1,323.6	-	-	-
Kitchen - Conveyor Oven (>= 44% efficiency)	1	0	0	0	84.5	0	84.5	84.5	12	12	12	12	100%	100%	1,014.0	-	-	-
Kitchen - Rack Oven (>= 50% efficiency)	1	0	0	0	211.3	0	211.3	211.3	12	12	12	12	100%	100%	2,535.6	-	-	-
Kitchen - Griddle	1	0	0	0	18.5	0	18.5	18.5	12	12	12	12	100%	100%	222.0	-	-	-
Kitchen - Pre Rinse Sprayers	34	0	0	0	12.6	0	12.6	12.6	5	5	5	5	100%	100%	2,142.0	-	-	-
Boiler Reset Controls	16	0	2	4	35.5	0	35.5	35.5	15	15	15	15	100%	100%	8,520.0	-	1,065	2,130
Steam Trap	42	189	129	134	25.7	110.2	25.7	25.7	3	3	3	3	100%	100%	3,238.2	62,480	9,946	10,331
Thermostat - Standard, 7-Day Programmable	20	0	48	52	7.7	0	7.7	7.7	15	15	15	15	100%	100%	2,310.0	-	5,544	6,006

Liberty Utilities Gas Small Business Energy Solutions Program

Measure	Quantity				Annual Savings per Unit (mmbtu)				Measure Life				In-Service & Realization Rate		Total Lifetime Savings (mmbtu)			
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015 / 2016	2014 Plan	2014 Actual	2015 Plan	2016 Plan
Small Retrofit Custom	28.9	21.0	5.0	45.0	115.4	65.6	230.3	55.0	21	23	19	19	100%	100%	71,228.1	32,179	21,532	46,778
Small New Equipment Custom	12.0	12.0	24.0	38.0	280.0	208.5	276.7	191.0	18	21	22	16	100%	100%	60,481.5	52,896	148,098	119,031
Furnace 95+ AFUE (<150) w/ECM Motor	50.0	4.0	3.0	4.0	4.3	4.3	9.0	9.0	18	18	18	18	100%	100%	3,870.0	309.60	486	648
Furnace 97+ AFUE (<150) w/ECM Motor	16.1	1.0	9.0	10.0	5.9	5.9	9.9	9.9	18	18	18	18	100%	100%	1,715.0	106.20	1,604	1,782
Boiler >=95% AFUE, <= 300 mbh	11.0	1.0	60.0	62.0	29.3	29.3	30.6	30.6	25	25	25	25	100%	100%	8,057.5	732.50	45,900	47,430
Condensing Boiler >= 96% AFUE (Up to 300 MBH)	65.0	50.0	3.0	11.0	22.8	22.8	27.8	27.8	25	25	25	25	100%	100%	37,050.0	28,500.00	2,085	7,645
Condensing Boiler >= 90% thermal efficiency (301 to 499 MBH)	22.0	11.0	5.0	6.0	56.1	56.1	58.4	58.4	25	25	25	25	100%	100%	30,855.0	15,427.50	7,300	8,760
Condensing Boiler >= 90% thermal efficiency (500 to 999 MBH)	13.0	7.0	42.8	7.0	103.0	103.0	107.3	107.3	25	25	25	25	100%	100%	33,475.0	18,025.00	114,737	18,778
Condensing Boiler >= 90% thermal efficiency (1000 to 1700 MBH)	-	2.0	2.0	3.0	189.2	189.2	197.2	197.2	25	25	25	25	100%	100%	-	9,460.00	9,860	14,790
Condensing Boiler >= 90% thermal efficiency (1701 to 2000 MBH)	-	-	1.0	3.0	-	-	345.1	345.1	-	-	-	25	25	100%	-	-	8,628	25,883
Infrared Heater, Low Intensity (all sizes)	25.0	29.0	5.0	4.0	48.3	48.3	12.0	12.0	17	17	17	17	100%	100%	20,527.5	23,811.90	1,020	816
Water Heater - Tankless, On-Demand >=.82	18.0	-	1.0	-	7.1	7.1	7.1	7.1	20	20	20	20	100%	100%	2,556.0	-	142	-
Water Heater - Tankless, On-Demand >=.94	12.0	11.0	2.0	2.0	9.4	9.4	9.4	9.4	20	20	20	20	100%	100%	2,256.0	2,068.00	376	376
Water Heater - Indirect (attached to ES FHW Boiler; Combined eff rating >=85% (EF=.82)	55.0	33.0	16.0	18.0	20.7	20.7	19.0	19.0	15	15	15	15	100%	100%	17,077.5	10,246.50	4,560	5,130
Water Heater - Condensing (EF 0.95)	12.0	1.0	-	-	25.0	25.0	25.0	25.0	15	15	15	15	100%	100%	4,500.0	375.00	-	-
Water Heater - Stand Alone Storage Tank (EF 0.67)	12.0	-	3.0	-	24.6	24.6	3.0	3.0	20	20	13	13	100%	100%	5,904.0	-	117	-
Water Heater - Integrated w/Condensing Boiler >= 90% AFUE	-	3.0	-	-	24.6	24.6	24.6	24.6	20	20	20	20	100%	100%	-	1,476.00	-	-
Condensed Unit Heater >= 90% thermal efficiency (up to 300 MBH)	10.0	-	2.0	2.0	40.9	40.9	40.9	40.9	18	18	18	18	100%	100%	7,362.0	-	1,472	1,472
Kitchen - Fryer	15.0	10.0	5.0	5.0	58.6	58.6	58.6	58.6	12	12	12	12	100%	100%	10,548.0	7,032.00	3,516	3,516
Kitchen - Steamer (ES >= 38% efficiency)	5.0	-	-	-	106.6	106.6	106.6	106.6	12	12	12	12	100%	100%	6,396.0	-	-	-
Kitchen - Convection Oven (>= 44% efficiency)	5.0	7.0	10.0	10.0	30.6	30.6	30.6	30.6	12	12	12	12	100%	100%	1,836.0	2,570.40	3,672	3,672
Kitchen - Combination Oven (>= 44% efficiency)	3.0	-	-	-	110.3	110.3	110.3	110.3	12	12	12	12	100%	100%	3,970.8	-	-	-
Kitchen - Conveyor Oven (>= 44% efficiency)	3.0	-	-	-	84.5	84.5	84.5	84.5	12	12	12	12	100%	100%	3,042.0	-	-	-
Kitchen - Rack Oven (>= 50% efficiency)	3.0	-	-	-	211.3	211.3	211.3	211.3	12	12	12	12	100%	100%	7,606.8	-	-	-
Kitchen - Griddle	3.0	-	-	-	18.5	18.5	18.5	18.5	12	12	12	12	100%	100%	666.0	-	-	-
Kitchen - Pre Rinse Sprayers	100.0	85.0	141.0	14.0	12.6	33.6	12.6	12.6	5	5	5	5	100%	100%	6,300.0	14,280.00	8,883	882
Boiler Reset Controls	8.0	1.0	5.0	8.0	35.5	35.5	35.5	35.5	15	15	15	15	100%	100%	4,260.0	532.50	2,663	4,260
Steam Trap	12.0	32.0	25.0	29.0	25.7	23.2	25.7	25.7	3	3	3	3	100%	100%	925.2	2,226.70	1,928	2,236
Thermostat - Standard, 7-Day Programmable	30.0	61.0	9.0	15.0	7.7	7.7	7.7	7.7	15	15	15	15	100%	100%	3,465.0	7,045.50	1,040	1,733
Aerator	-	1,248.0	-	257.0	1.7	1.7	1.7	1.7	10	10	10	10	100%	100%	-	21,216.00	-	4,369
Shower Head	-	244.0	-	-	5.2	5.2	5.2	5.2	10	10	10	10	100%	100%	-	12,688.00	-	-
Shower Head Hand Handle	-	157.0	-	-	5.2	5.2	5.2	5.2	10	10	10	10	100%	100%	-	8,164.00	-	-

NHEC Home Energy Assistance Program

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				Installation or Realization Rate		Total Lifetime Savings (kWh)				Annual Savings per Unit (MMBTU)				NEB Realization Rate	Total Lifetime MMBTU Savings			
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan
	Baseload (Lighting) CFL	34	32	13		427	382	232	232	5.00	8	20	20	88.80%	88.8%	64,460	86,782	54,321									
Baseload (Lighting) LED		6		13		579		232		20	20	20	88.80%	88.8%		61,734		51,567									
Baseload (Lighting) Fixtures		16				227				20			88.80%			64,558											
Baseload (Refrigerators)	17	11	15	14	776	793	776	776	19.00	19	12	12	88.80%	88.8%	222,575	147,159	121,130	114,989									
Baseload (HW Measures)	24	29	25	24	241	274	269	269	7.00	7	7	7	88.80%	88.8%	35,953	49,410	41,640	39,529									
Weatherization - Electric Heat	8				2,799				22.19				88.80%	88.8%	441,228												
Weatherization - Kerosene Heated	4	21							13.85	21			88.80%	88.8%					22	20			88.8%	1,176	7,801		
Weatherization - Propane Heated		3								24			88.80%	88.8%						13			88.8%		833		
Weatherization - Wood Heated	3	6							9.99	17			88.80%	88.8%					47	20			88.8%	1,388	1,772		
Weatherization - Oil Heated	19	15							12.88	19			88.80%	88.8%					32	20			88.8%	7,797	5,192		
Weatherization for Fossil Heated Homes			29	28			605	605			21	20	88.80%	88.8%			330,532	298,834			27	27	88.8%			13,809	13,109
Insulation		34				347				25			88.80%	88.8%		261,720											
Air Sealing		34				188				15			88.80%	88.8%		85,235											
Water Heater Replacement		2				(697)				15			88.80%	88.8%		(18,555)											
Custom Heating Repair		3				151				20			88.80%	88.8%		8,063											
Thermostat		16				32				10			88.80%	88.8%		4,564											
AS: Boiler Circulator Pump Savings	19		9	8	9		9	9	20.0		20	20	88.80%	88.8%	3,037		1,386	1,316					88.8%				
AS: Furnace Fan Savings			4	3			86	86			20	20	88.80%	88.8%			5,370	5,097					88.8%				
AS: Furnace w/new ECM Motor			0	0			733	733			20	20	88.80%	88.8%			2,288	2,172					88.8%				
AS: Room AC (per unit)	26		7	7	23		23	23	20.0		20	20	88.80%	88.8%	10,620		2,992	2,840					88.8%				
Heating System Replacements:																											
- Mobile Home Furnaces, Kerosene	3								17				100.00%	100.0%					3.31				100.00%	165.6			
- Furnaces, LP	2	10							18	18			100.00%	100.0%					8.44	16.52			100.00%	298.07	2,974		
- Boilers, Oil	3	1	7	5					25	25	25	25	100.00%	100.0%					5	26	15	15	100.00%	366	646	2,832	1,933

NHEC Home Performance with Energy Star Program

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				Installation or Realization Rate		Total Lifetime Savings (kWh)				Annual Savings per Unit (MMBTU)				Total Lifetime MMBTU Savings				
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	
CFL Lighting	70	14			294	225.14			6.0	8			100.00%	100.00%	123,409	25,216											
LED Lighting		16	52	43		401	221	221		20	20	20	100%	100%		128,240	228,651	191,922									
Fixtures		27				286				20			100%	100%		154,499											
Hot Water Measures		28	32	27		75	52	80		4	4	4	100%	100%		8,368	6,667	8,604									
Air Sealing		57				357				15				100%		305,252											
Insulation		55				181				25			100%			248,573											
Weatherization: Electric Heat					4,388				11				100%	100%													
Weatherization: LP Heat	10	17		53					19	21		20	100%	100%						23	22		8	4,319	4,620		8,652
Weatherization: Oil Heat	45	32		53					20	20		20	100%	100%						27	25		12	23,972	22,500		12,567
Weatherization: Kerosene	5	1		53					20	17		20	100%	100%						21	13		0	2,050	1,105		531
Weatherization: Wood Heat	5	18		53					22	20		20	100%	100%						23	13		3	2,539	1,300		3,112
Electric Savings for Fossil Heated Homes			47	39			499	499				20	20	100%	100%		453,804	380,907									
Electric Baseload: Single Family	70				128				8.3				100%	100%	73,631												
Fuel Neutral Weatherization			64									20	20	100%	100%					29	23	23					29,620
Thermostat		17				579				17			100%	100%		167,467											
AS: Boiler Circulator Pump Savings	45	4	19	16	9.0	9	9	9	20	20	20	20	100%	100%	8,100	720	3,350	2,812									
AS: Furnace Fan Savings	5	3	3	3	86.0	86	86	86	20	20	20	20	100%	100%	8,600	5,160	5,601	4,701									
AS: Furnace w/New ECM Motor			0	0			733	733				20	20	100%	100%		2,387	2,004									
AS: Room AC (per unit)	52	1	16	13	23.0	23	23	23	20	20	20	20	100%	100%	23,920	460	7,329	6,152									
Heating System Replacements:													100%	100%													
ES Furnace w/ECM (LP), AFUE >=95%			3	1			168	168				18	18	100%	100%		8,591	2,749			5	5				230	74
ES Furnace w/ECM (LP), AFUE >=96%			0	0			168	168				18	18	100%	100%						6	6					
ES Furnace w/ECM (LP), AFUE >=97%			1	0			168	168				18	18	100%	100%		4,127	1,321			6	6				145	46
ES Furnace w/ECM (Oil), AFUE >=85%			1	0			168	168				18	18	100%	100%		3,682	1,178			18	18				394	126
ES Furnace w/ECM (Oil), AFUE >=90%			1	0			168	168				18	18	100%	100%		1,651	528			21	21				203	65
ES Boiler (LP), AFUE >=90%		3	1									20	20	100%	100%						10	10				645	206
ES Boiler (LP), AFUE >=96%			1	0								20	20	100%	100%						13	13				217	69
ES Boiler (Oil), AFUE >=85%			10	3								20	20	100%	100%						5	5				1,058	339
ES Boiler (Oil), AFUE >=90%			1	0								20	20	100%	100%						11	11				133	43
BRC: Oil, Boiler Reset Controls			2	1								15	15	100%	100%						10	10				233	74

September 30, 2015

NHEC Energy Star® Homes Program

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				In-Service / Realization Rate		Total Lifetime Savings (kWh)				Annual Savings per Unit (MMBTU)				Total Lifetime MMBTU Savings				
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015/2016	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	
	LED Bulbs		48	128	103		28	25	25		20	20	20	100%	100%		26,592	63,091	50,529								
ES CFL Lights	29	18			23	23			5.00	5	5	5	80%		2,667	1,656											
ES Light Fixture (Interior)	68	39			62	62			20.00	20	20	20	100%	100%	84,686	48,570											
ES Clothes Washer	19	5	11	9	166	166	182	182	11.00	11	11	11	100%	100%	34,610	9,108	21,358	17,106	0.74		0.738	0.738	154		87	69	
ES Dishwasher	27	8	20	0	31	31	31		10.00	10	10	10	100%	100%	8,478	2,512	6,239		0.19		0.189	0.189	51		38		
ES Refrigerator	27	9	17	14	114	114	107	40	12.00	12	12	12	100%	100%	36,936	12,312	21,672	6,429									
ES Central AC	2	5			110	(166)			14.00	14	14	14	100%	100%	3,088	(11,620)											
Oil Heated Homes																											
Wood Heated Homes																											
Electric Heated Homes																											
GSHP (Heating)			5	4		13,401	11,029	11,029		25	25	25	100%	100%			1,472,716	1,179,496									
GSHP (Cooling)			5	4		141	90	90		25	25	25	100%	100%			12,018	9,625									
GSHP (Hot Water)			5	4		2,292	1,627	1,627		25	25	25	100%	100%			217,255	174,000									
GSHP (Lights & Appliances)			5	4			(533)	(533)		19	25	25		100%			(71,172)	(57,002)									
Propane Home (Heating)	26	2	9	7	757		129	129	25.00	25	25	25	100%	100%	491,966		27,561	22,073	66	102	80	80	42,751	5117	17,173	13,754	
Propane Home (Cooling)			9	7							25	25		100%													
Propane Home (Hot Water)		2	9	7						10	25	25		100%							4.57	4.57			975	781	
Propane Home (Lights & Appliances)			9	7			(236)	(236)			25	25		100%			(50,421)	(40,382)									
Split Sys HP (Heating)			7	6			10,937	10,937			25	25		100%			2,044,604	1,637,520									
Split Sys HP (Cooling)			7	6			(42)	(42)			25	25		100%			(7,852)	(6,288)									
Split Sys HP (Hot Water)			7	6			1,792	1,792			25	25		100%			335,003	268,304									
Split Sys HP (Lights & Appliances)			7	6			(197)	(197)			25	25		100%			(36,828)	(29,495)									
ASHP		5				12,818				25																	
Hot Water		5								10			100%								5.8				290		
Ventilation		7				(156)				19																	

NHEC Energy Star® Products Program - Lighting

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				In-Service & Realization Rate			Total Lifetime Savings (kWh)			
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015	2016	2014 Plan	2014 Actual	2015 Plan	2016 Plan
Catalog Sales: CFLs	1,118	1,085			23	23			5.00	5			62%			80,082	77,718		
Catalog Sales: LED Bulbs		1,402				28				20			95%				737,073		
Retail Sales: CFLs	1,883	499			23	23			5.00	5			62%			134,878	35,743		
Retail Sales: Multipacks	19,903	10,473	9,243	1,597	23	23	29	29	5.00	5	5	5	62%	62%	62%	1,425,640	750,175	834,399	144,151
Retail Sales: Interior Fixture	492	103			62	62			8.00	8			96%			236,268	49,463		
Retail Sales: Exterior Fixture		5			62	62			5.00	5			100%				1,557		
Retail Sales: Torchieres		1			69	69			8.00	8			94%				519		
Retail Sales: LED Fixtures	224		2,054	1,141	28	28	25	25	20.00	20	8	8	95%	90%	96%	117,751		363,918	216,455
Retail Sales: LED Multipacks			3,081	456			25	25			20	20	95%	95%	95%			1,440,510	213,311
Retail Sales: LED Bulbs	3,354	11,449	5,135	6,615	28	28	25	25	20	20	20	20	95%	94%	95%	1,763,107	6,018,430	2,362,942	3,093,010
Markdown: CFLs (Multipack Bulbs)			8,000	2,509			29	29			5	5		96%	62%			1,117,507	226,523
Markdown: LEDs				11,634				25				20		95%	95%				5,439,431
Markdown: LEDs (Multipack Bulbs)				684				25				20		95%	95%				319,967

September 30, 2015

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Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				In-Service / Realization Rate		Total Lifetime Savings (kWh)				Annual Savings per Unit (MMBTU)				Total Lifetime MMBTU Savings			
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan
Energy Star Clothes Washer	712	840	803	662	166	261	182	182	11	11	11	11	100%	100%	1,296,979	2,408,683	1,605,029	1,323,056	0.74	0.74	0.45	0.45	5,777	6,815	4,006	3,302
Energy Star Room A/C	415	341	468	339	16	16	16	16	9	9	9	9	100%	100%	60,344	49,584	68,092	49,285								
Smartstrip Power Strip	60	9			75	75			5	5	5	5	100%	100%	22,469	3,377										
Energy Star Refrigerator	692	745	780	484	107	107	107	40	12	12	12	12	100%	100%	888,528	956,580	1,002,126	230,266								
2nd Refrigerator/Freezer Pickup	79	121	111	81	835	835	835	755	8	8	8	8	100%	100%	527,720	808,280	744,793	487,428								
2nd Freezer Pickup	4	45	62	32	663	663	663	658	8	8	8	8	100%	100%	21,216	238,680	331,170	169,922								
Energy Star Room Air Purifiers	4	15	4	16	391	391	391	391	9	9	9	9	100%	100%	14,063	52,735	15,679	56,743								
Room AC Pickup																										
Energy Star Central Air Conditioner																										
Energy Star Mini Split Heat Pump-Cooling																										
Energy Star Mini Split Heat Pump-Fossil Retrofit																										
Energy Star Mini Split Heat Pump-Electric Retrofit																										
Energy Star Mini Split Heat Pump, SEER 14.5, HSPF 8.2 cooling	57				34,370				8				100%	100%	15,673											
Energy Star Mini Split Heat Pump, SEER 14.5, HSPF 8.2 heating	57				142,210				8				100%	100%	64,848				4.90				2,234			
Energy Star Mini Split Heat Pump, SEER 19, HSPF 10 cooling	57				104,930	123			8				100%	100%	47,848											
Energy Star Mini Split Heat Pump, SEER 19, HSPF 10 heating	57				751,000	(2,158)			8				100%	100%	342,456				4.90				2,234			
Furn: LP, Furnace, FHA, AFUE >=95% w/ECM	11	4			168	168			18	18			100%	100%	32,041	12,096			4.50	4.50			858	324		
Furn: LP, Furnace, FHA, AFUE >=96% w/ECM	5				168	168			18	18			100%	100%	16,020	0			5.55	5.55			529	0		
Furn: LP, Furnace, FHA, AFUE >=97% w/ECM	5	5			168	168			18	18			100%	100%	16,020	15,120			5.90	5.90			563	531		
Furn: Oil, Furnace, FHA, AFUE >=85% w/ECM	5	2			168	168			18	18			100%	100%	16,020	6,048			18.00	18.00			1,716	648		
Furn: Oil, Furnace, FHA, AFUE >=90 w/ECM	5				168	168			18	18			100%	100%	16,020	0			20.70	20.70			1,974	0		
Boil: LP Boiler, FHW, AFUE >= 90%	5	7							20	20			100%	100%					10.40	10.40			1,102	1,456		
Boil: LP Boiler, FHW, AFUE >=96%	11	8							20	20			100%	100%					13.10	13.10			2,776	2,096		
Boil: Oil Boiler, FHW, AFUE >=85%	21	49							20	20			100%	100%					5.38	5.38			2,279	5,269		
Boil: Oil Boiler, FHW, AFUE >=90%	11	2							20	20			100%	100%					10.75	10.75			2,279	430		
Boil: LP, Combo condensing boiler w/ On-Demand DWH 90%	11	6							20	20			100%	100%					17.80	17.80			3,772	2,136		
Boil: Oil, Combo condensing boiler w/ On-Demand DWH 90%	11	2							20	20			100%	100%					17.80	17.80			3,772	712		
DHW: LP, Tankless Water Heaters (EF>= 0.82)	5	32							20	20			100%	100%					9.70	9.70			1,028	6,208		
DHW: LP, Indirect Water Heater (attached to LP Energy Star FHW boiler)	11	1							20	20			100%	100%					8.00	8.00			1,695	160		
DHW: Oil, Indirect Water Heater (attached to oil Energy Star FHW boiler)	21	43							20	20			100%	100%					8.00	8.00			3,391	6,880		
DHW: LP, Stand Alone Storage Water Heater (EF>=0.67)	5								13	13			100%	100%					3.70	3.70			255	0		
DHW: Energy Star Heat Pump 50 Gal Water Heater, EF>=2.3 (ES=EF>=2.0)	32	88			1,775	1,775			10	10			100%	100%	564,208	1,562,000							0	0		
DHW: Energy Star Heat Pump 80 Gal Water Heater, EF>=2.3 (ES=EF>=2.0)	11	4			2,672	2,672			10	10			100%	100%	283,110	106,880							0	0		
BRC: Gas, Boiler Reset Controls	5	13							15	15			100%	100%									0	0		
BRC: LP, Boiler Reset Controls	5								15	15			100%	100%	0	0			9.60	9.60			763	0		
BRC: Oil, Boiler Reset Controls	5								15	15			100%	100%	0	0			9.60	9.60			763	0		
TSTAT: LP, 7-Day Programmable Thermostats	5	2			14	14			15	15			100%	100%	1,144	432			7.70	7.70			612	231		
TSTAT: Oil, 7-Day Programmable Thermostats	5	41			14	14			15	15			100%	100%	1,144	8,855			7.70	7.70			612	4,736		
TSTAT: LP, WiFi Enabled 7-Day Programmable Thermostats		1							15	15			100%	100%	0	0			6.60	6.60			0	99		
TSTAT: Oil, WiFi Enabled 7-Day Programmable Thermostats		207							15	15			100%	100%	0	0			6.60	6.60			0	20,493		
															0	0							0	0		

NHEC Large Business Energy Solutions Program

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				In-Service or Realization Rate			Total Lifetime Savings (kWh)				Annual Savings per Unit (MMBTU)				Total Lifetime MMBTU Savings			
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015	2016	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan
	Snowmaking-Retrofit	2	3	1	2	33,129	141,052	150,767	150,767	13	13	13	13	89.0%	89%	99.86%	7,708,605	4,895,915	2,429,826	3,594,115							
Lighting-Retrofit	13	2	15	6	29,141	98,245	18,812	18,812	13	13	13	13	89.0%	89%	99.86%	4,383,098	2,273,389	3,335,005	1,345,370								
VFD-Retrofit	1	1	1	2	38,743	24,496	25,544	25,544	13	13	13	13	89.0%	89%	99.86%	448,257	283,419	411,686	608,951								
Refrigeration-Retrofit																											
Motors-Retrofit	2				5,870				13		13	13				135,832											
Lighting-Retrofit Occupancy Sensors		2				3,861				13	13	13	89.0%				89,344										
Compressed Air - Retrofit		1				38,625				13	13	13	89.0%				446,891										
Compressed Air - New		1				99,864				15			89.0%				1,333,184										
Lighting-New			1	2			5,497	5,497			15	15		100%	99.86%			114,856	151,203								
Lighting Retrofit -LED		5	8	26		32,263	21,088	21,088		13	13	13	89.0%	89%	99.86%		1,866,415	2,039,225	7,038,154								
Parking Lot Lights		2				32,436				13			89.0%				750,569										
Catalog Sales		8				7,182				6			89.0%				306,815										

NHEC Small Business Energy Solutions Program

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				In-Service or Installation Rate		Total Lifetime Savings (kWh)				Annual Savings per Unit (MMBTU)				Total Lifetime MMBTU Savings			
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan
Lighting-Retrofit	28	16	19	25	13,604	6,264	7,884	7,884	13	13	13	13	100%	100%	1,302,820	1,302,820	1,950,076	2,604,703								
Refrigeration-Retrofit	5	1	3	4	19,101	2,611	2,462	2,462	13	13	13	13	100%	100%	33,937	33,937	101,493	135,563								
Refrigeration Controls -Retrofit		1				8,139							100%		105,807											
VFD-Retrofit		1				3,366							100%	100%	43,758	43,758										
Lighting-New Construction												15	15		0	0										
Lighting LED-New Construction		2				25,467						15		100%	764,001											
HVAC-New Construction	3	2			6,925	54,387			15	15	15	15	100%	100%	1,631,595	1,631,595										
Refrigeration-New Construction		2				4,716						15	15	100%	141,480	141,480										
Compressed Air												13		100%	0	0										
Catalog CFL		24				1,829						6		100%	263,376	263,376										
Catalog LED												20		100%	0	0										
Lighting Retrofit LED		24	25	34		11,482	9,299	9,299	13	13	13		100%	3,582,493		3,066,720	4,096,197									
Lighting Controls - Retrofit		2				257						13		100%	6,682											
Parking Lot Lights - Retrofit		17	6	8		6,234	9,251	9,251	13	13	13		100%	1,377,692		762,741	1,018,787									
Parking Lot Lights - New		3				4,260						15		100%	191,715											
EMS New		1				137,463						15		100%	2,061,945											
Insulation Retrofit		1				17,726						13		100%	230,438											
Motors - Retrofit		1				4,401						13		100%	57,213											
Energy Star Mini Split Heat Pump (SEER>=19, HSPF>=10)			6	8			105	105	12	12	12		100%	0		7,986	10,667									
Energy Star Mini Split Heat Pump (SEER>=19, HSPF>=10)			6	8			751	751	12	12	12		100%	0		57,155	76,342									
Energy Star Mini Split Heat Pump (SEER>=14.5, HSPF>=8.2)			3	4			34	34	12	12	12		100%	0		1,308	1,747									
Energy Star Mini Split Heat Pump (SEER>=14.5, HSPF>=8.2)			3	4			142	142	12	12	12		100%	0		5,412	7,228									
Energy Star Wifi TSTAT for ASHP			10	13			142	142	15	15	15		100%	0		20,275	27,082									
Heat Pump Water Heater		3				1,775			10				100%	53,250												

NHEC Municipal Program

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				In-Service or Installation Rate		Total Lifetime Savings (kWh)				Annual Savings per Unit (MMBTU)				Total Lifetime MMBTU Savings			
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2014 Plan	2014 Actual	2015 Plan	2016 Plan
	SCI Interior Lighting LED			12	13			9,299	9,299			13	13		100%			1,473,197	1,561,841							
Parking Lot Lights			6	6			14,233	14,233			13	13		100%			1,127,394	1,195,231								
Refrigeration			3	3			1,799	1,799			13	13		100%			71,257	75,544								
Refrigeration Controls			2	2			8,752	8,752			13	13		100%			173,316	183,744								
LCI Interior Lighting LED			8	8			8,687	8,687			13	13		100%			765,563	911,941								
Boilers (up to 300 MBH)			2	2							25	25		100%						42.30	42.30				2,115	2,115
Energy Star Mini Split Heat Pump (SEER>=19, HSPF>=10)			5	5			105	105			12	12		100%			6,296	6,296								
Energy Star Mini Split Heat Pump (SEER>=19, HSPF>=10)			5	5			751	751			12	12		100%			45,060	45,060								

Eversource Home Energy Assistance Program

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				Installation or Realization Rate		Total Lifetime Savings (kWh)				Annual Savings Per Unit (MMBTU)				Total Lifetime MMBTU Savings			
	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update
	Electric Savings for Fossil Heated Homes	334.8	350.0	272.6	336.3	1214.7	0.0	1181.6	1399.98	12	0	12	18	86.20%	86.20%	4,120,384	0	3,263,748	7,307,139	0.0	0.0	0.0	0.0	0	0	0
Baseload (Lighting & Appliances-Refs)	0.0	274.0	0.0		0.0	791.7			0	19			86.20%		0	3,512,329	0	0	0.0	0.0			0	0	0	0
Weatherization - Electric Heat	8.6	13.0	6.9	16.0	3931.6	5464.8	5417.8	4506.8	13	19	13	19.3	86.20%	86.20%	370,607	1,161,741	410,302	1,199,156	0.0	0.0			0	0	0	0
Weatherization - Kerosene Heated	83.7	74.0	14.3	73.1	0.0	1272.8			20	12	20	18.5	86.20%	86.20%	0	997,883	0	0	19.5	0.0	19.7	22.4	28,536	0	4,921	26,016
Weatherization - LP Heated	40.2	49.0	22.4	44.0	0.0	1573.6			20	16	20	20.0	86.20%	86.20%	0	1,081,733	0	0	19.1	0.0	28.0	21.4	12,997	0	10,659	16,215
Weatherization - NG Heated	63.6	88.0	21.2	72.5	0.0	892.6			20	18	20	21.6	86.20%	86.20%	0	1,239,189	0	0	8.0	0.0	9.2	21.9	8,975	0	3,435	29,563
Weatherization - Wood Heated	16.7	21.0	21.5	20.1	0.0	1856.1			21	14	21	22.0	86.20%	86.20%	0	481,133	0	0	30.3	0.0	38.4	31.8	9,217	0	15,043	12,116
Weatherization - Oil Heated	130.6	118.0	193.2	126.6	0.0	1405.4			21	16	21	20.7	86.20%	86.20%	0	2,269,363	0	0	29.7	0.0	28.0	27.2	70,613	0	98,543	61,206
Primary Fuel Heating Savings (NG)	0.0	88.0			0.0	0.0			0	22			86.20%		0	0	0	0	0.0	17.7			0	28,986	0	0
Primary Fuel Heating Savings (Kerosene)	0.0	74.0			0.0	0.0			0	20			86.20%		0	0	0	0	0.0	20.5			0	25,940	0	0
Primary Fuel Heating Savings (Oil)	0.0	118.0			0.0	0.0			0	21			86.20%		0	0	0	0	0.0	30.6			0	64,296	0	0
Primary Fuel Heating Savings (Propane)	0.0	49.0			0.0	0.0			0	21			86.20%		0	0	0	0	0.0	17.2			0	15,063	0	0
Primary Fuel Heating Savings (Wood)	0.0	21.0			0.0	0.0			0	20			86.20%		0	0	0	0	0.0	40.4			0	14,960	0	0
Secondary Fuel Savings (Kerosene)	0.0	7.0			0.0	0.0			0	18			86.20%		0	0	0	0	0.0	7.2			0	764	0	0
Secondary Fuel Savings (NG)	0.0	230.0			0.0	0.0			0	8			86.20%		0	0	0	0	0.0	0.6			0	1,008	0	0
Secondary Fuel Savings (Oil)	0.0	15.0			0.0	0.0			0	23			86.20%		0	0	0	0	0.0	5.1			0	1,560	0	0
Secondary Fuel Savings (LP)	0.0	56.0			0.0	0.0			0	11			86.20%		0	0	0	0	0.0	1.2			0	657	0	0
Secondary Fuel Savings (Wood)	0.0	16.0			0.0	0.0			0	21			86.20%		0	0	0	0	0.0	6.9			0	2,017	0	0
Third Fuel Savings (LP)	0.0	2.0			0.0	0.0			0	4			86.20%		0	0	0	0	0.0	1.0			0	7	0	0
Third Fuel Savings (Wood)	0.0	2.0			0.0	0.0			0	15			86.20%		0	0	0	0	0.0	-1.3			0	-32	0	0
AS = Ancillary Savings on Weatherized Homes:																										
AS: Boiler Circulator Pump Savings (80%)	267.8	0.0			9.0	0.0			20	0			86.20%		41,560	0	0	0	0.0	0.0			0	0	0	0
AS: Furnace Fan Savings (20%)	67.0	0.0			86.0	0.0			20	0			86.20%		99,281	0	0	0	0.0	0.0			0	0	0	0
AS: Furnace w/new ECM Motor (5% of 20%)	3.3	0.0			733.0	0.0			20	0			86.20%		42,310	0	0	0	0.0	0.0			0	0	0	0
AS: Central AC (5% of 20%)	3.3	0.0			77.0	0.0			20	0			86.20%		4,445	0	0	0	0.0	0.0			0	0	0	0
AS: Room AC (per unit) (75% of those w/o CAC)	255.0	0.0			23.0	0.0			20	0			86.20%		101,127	0	0	0	0.0	0.0			0	0	0	0
Heating System Replacements:																										
- Boilers, NG	0.0	7.0			336.0				0	20			100.00%		0	47,040	0	0	0.0	20.0			0	2,798	0	0
- Boilers, Oil	19.7	14.0			446.8				25	20			100.00%		0	125,100	0	0	5.0	13.5			2,443	3,791	0	0
- Furnaces, K1	84.3	19.0			125.0	102.4	102.4		17	18	17	17	100.00%	100.00%	0	42,750	0	0	3.3	8.3	8.8	9.2	4,746	2,840	0	0
- Furnaces, NG	0.0	8.0			197.8				0	18			86.20%		0	24,546	0	0	0.0	21.5			0	2,672	0	0
- Furnaces, Oil	0.0	17.0			217.1	109.3	109.3		0	18	20	20	86.20%	100.00%	0	57,254	0	0	0.0	15.4	18.9	14.3	0	4,063	0	0
- Furnaces, LP	23.6	23.0			77.1				18	18			86.20%		0	27,510	0	0	8.4	24.1			3,092	8,598	0	0
Heating System Replacements																										
- Kerosene Mobile Home Furnaces			34.3	20.1			102.4	117.0			17	18.0		100.00%	0	0	59,696	42,343			8.8	9.2	0	0	5,140	3,332
- LP Furnace/Boiler			13.5	10.3			529.6	105.6			18	18.2		100.00%	0	0	129,120	19,839			5.9	21.2	0	0	1,445	3,986
- Oil Furnace/Boiler			39.8	55.6			282.8	272.6			25	18.8		100.00%	0	0	281,498	284,923			16.7	14.3	0	0	16,635	14,956
- NG Furnace/Boiler			8.0	4.4			109.3	217.9			20	18.2		100.00%	0	0	17,514	17,554			18.9	15.8	0	0	3,025	1,271

Notes:

- For 2015-2016 Planning, combined Furnace and Boilers quantities (for 2014 they were listed separately).

Planning Assumptions

- All Annual Energy Savings and Measure Lives were updated for 2016 to reflect more current information based on Jan - Aug 2015 participation results.
 - average electric savings associated with fossil heated homes increased from 1,181.6 to 1,399.9 kWh/year
 - average electric savings for electric heat weatherization projects decreased from 5,417.8 to 4,506.8 kWh/year
 - average MMBTU savings for Kerosene (19.7->22.4) and Natural Gas (9.2->21.9) weatherization projects increased, while savings for Liquid Propane (28.0->21.4), Wood (38.4->31.8) and Oil (28.1->27.2) decreased.
 - average modeled kWh savings for heating systems were updated as follows: Kerosene (102.4->117.0), LP (529.6->105.6), Oil (282.8->272.6), Natural Gas (109.3->217.9)
 - average modeled MMBtu savings for heating systems were updated as follows: Kerosene (8.8->9.2), LP (5.9->21.2), Oil (16.7->14.3), Natural Gas (18.9->15.8)
- US DOE WAP Collaboration: Weatherization Assistance Program funding is expected to pay for additional MMBTU Savings.
- Heating System Replacements: Measure lives updated to reflect the expected mix of furnaces (measure life=18) and boilers (measure life=20).
- For gas heated homes, customer may be served by both gas and electric utilities in this program, but gas companies will pay for the weatherization project up to their cap first and will claim associated MMBTU savings.
- Ancillary kWh Savings are not separately added to HEA as they are in HPwES as these savings are modeled by CAAs in Performance Systems Development's TREAT auditing software.

Eversource Home Performance with ENERGY STAR®

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				Installation or Realization Rate		Total Lifetime Savings (kWh)				Annual Savings Per Unit (MMBTU)				Total Lifetime MMBTU Savings			
	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update
Electric Baseload: Single Family	77.2	90.0	27.9	103.5	138.0	524.9	221.5	369.1	7	17	20	20	100.00%	100.00%	74,317	798,633	123,454	763,992	0.0	0.0	0.0	0.0	0	0	0	0
Electric Baseload: Multi-Family	273.2	384.0	111.5	0.0	138.0	192.4	221.5	369.1	7	20	20	20	100.00%	100.00%	263,070	1,456,908	493,817	0	0.0	0.0	0.0	0	0	0	0	
Light Fixtures	115.1	0.0	19.4	19.5	23.0	87.5	24.6	36.9	20	20	20	20	100.00%	100.00%	52,941	0	9,535	14,431	0.0		0.0	0.0	0	0	0	0
Refrigerator	86.3	0.0	38.7	39.1	586.2	586.2	586.2	586.2	7	7	7	7	100.00%	100.00%	354,248	0	158,982	160,415	0.0		0.0	0.0	0	0	0	0
Hot Water Saving Measures	115.1	0.0	77.5	78.2	80.4	80.4	80.4	80.4	4	4	4	7	100.00%	100.00%	37,031	0	24,928	44,018	0.0		0.0	0.0	0	0	0	0
Fuel Neutral, SF, Electric, LEDs	587.3	537.0	399.0	403.0	138.0	578.1	221.5	369.1	8	16	20	20	100.00%	100.00%	648,254	5,052,718	1,767,522	2,975,485	0.0	0.0	0.0	0.0	0	0	0	0
SF Fuel Neutral (Oil) Primary fuel	463.4	388.0	290.9	287.2	0.0	0.0		0.0	21	20	19	19	100.00%	100.00%	0	0	0	0	29.0	28.9	28.0	29.6	281,936	224,567	158,666	165,312
SF Fuel Neutral (LP) Primary fuel	70.5	91.0	30.7	62.2	0.0	0.0		0.0	21	19	19	19	100.00%	100.00%	0	0	0	0	23.0	24.6	30.0	30.0	33,230	42,717	17,836	36,087
SF Fuel Neutral (Gas) Primary fuel	2.3	0.0	2.0	2.0	0.0	0.0		0.0	19	19	21	21	100.00%	100.00%	0	0	0	0	15.5	0.0	9.2	9.2	680	0	377	382
SF Fuel Neutral (Wood) Primary fuel	37.0	55.0	55.9	37.6	0.0	0.0		0.0	21	21	21	21	100.00%	100.00%	0	0	0	0	28.0	28.1	38.4	26.5	21,238	32,021	44,535	20,666
SF Fuel Neutral (Kerosene) Primary fuel	2.3	3.0	8.0	2.0	0.0	0.0		0.0	21	19	21	21	100.00%	100.00%	0	0	0	0	29.0	24.3	19.7	19.7	1,431	1,420	3,363	864
SF Fuel Neutral (Electric) Primary fuel	11.7	83.0	11.6	12.1	6,552.2	3,581.5	4,803.4	4,803.4	18	17	18	18	100.00%	100.00%	1,387,306	5,050,889	1,002,205	1,047,187	0.0	0.0	0.0	0.0	0	0	0	0
SF Fuel Neutral (Oil) Secondary fuel	0.0	28.0			0.0	0.0			0	20			100.00%		0	0	0	0	0.0	10.4			0	5,816	0	0
SF Fuel Neutral (LP) Secondary fuel	0.0	39.0			0.0	0.0			0	21			100.00%		0	0	0	0	0.0	8.2			0	6,737	0	0
SF Fuel Neutral (Gas) Secondary fuel	0.0	6.0			0.0	0.0			0	18			100.00%		0	0	0	0	0.0	5.2			0	569	0	0
SF Fuel Neutral (Wood) Secondary fuel	0.0	131.0			0.0	0.0			0	21			100.00%		0	0	0	0	0.0	9.8			0	27,259	0	0
SF Fuel Neutral (Kerosene) Secondary fuel	0.0	4.0			0.0	0.0			0	21			100.00%		0	0	0	0	0.0	13.6			0	1,125	0	0
SF Fuel Neutral (LP) Third fuel	0.0	5.0			0.0	0.0			0	4			100.00%		0	0	0	0	0.0	0.7			0	14	0	0
AS = Ancillary Energy Savings³																										
AS: Boiler Circulator Pump Savings	495.0	0.0	271.2	254.1	9.0	0.0	9.0	9.0	20		20	20	100.00%	100.00%	89,098	0	48,820	45,742	0.0	0.0	0.0	0.0	0	0	0	0
AS: Furnace Fan Savings	34.5	0.0	38.7	97.7	86.0	0.0	86.0	86.0	20		20	20	100.00%	100.00%	59,399	0	66,644	168,111	0.0	0.0	0.0	0.0	0	0	0	0
AS: Furnace w/new ECM Motor	1.7	0.0	1.9	4.9	733.0	0.0	733.0	733.0	20		20	20	100.00%	100.00%	25,313	0	28,401	71,642	0.0	0.0	0.0	0.0	0	0	0	0
AS: Central AC	1.7	0.0	1.9	9.8	77.0	0.0	77.0	77.0	20		20	20	100.00%	100.00%	2,659	0	2,983	15,052	0.0	0.0	0.0	0.0	0	0	0	0
AS: Room AC (per unit)	215.8	0.0	127.8	141.7	23.0	0.0	23.0	23.0	20		20	20	100.00%	100.00%	99,276	0	58,807	65,169	0.0	0.0	0.0	0.0	0	0	0	0
ES Furnace w/ECM (LP), AFUE >=95%	0.0	0.0	3.6	3.3	0.0	0.0	168.0	168.0			18	18	100.00%		0	0	11,023	10,080	0.0	0.0	4.5	4.5	0	0	295	270
ES Furnace w/ECM (LP), AFUE >=96%	0.0	0.0	0.0	0.0	0.0	0.0	168.0	168.0			18	18	100.00%		0	0	0	0	0.0	0.0	5.6	5.6	0	0	0	0
ES Furnace w/ECM (LP), AFUE >=97%	0.0	0.0	1.8	1.1	0.0	0.0	168.0	168.0			18	18	100.00%		0	0	5,295	3,360	0.0	0.0	5.9	5.9	0	0	186	118
ES Furnace w/ECM (Oil), AFUE >=85%	0.0	0.0	1.6	6.7	0.0	0.0	168.0	168.0			18	18	100.00%		0	0	4,724	20,160	0.0	0.0	18.0	18.0	0	0	506	2,160
ES Furnace w/ECM (Oil), AFUE >=90%	0.0	0.0	0.7	2.2	0.0	0.0	168.0	168.0			18	18	100.00%		0	0	2,118	6,720	0.0	0.0	20.7	20.7	0	0	261	828
ES Boiler (LP), AFUE >=90%	0.0	0.0	4.0	1.0	0.0	0.0	0.0	168.0			20	20	100.00%		0	0	0	3,360	0.0	0.0	10.4	10.4	0	0	827	208
ES Boiler (LP), AFUE >=95%	0.0	0.0	1.1	0.7	0.0	0.0	0.0	0.0			20	20	100.00%		0	0	0	0	0.0	0.0	13.1	13.1	0	0	279	175
ES Boiler (Oil), AFUE >=85%	0.0	0.0	12.6	5.0	0.0	0.0	0.0	0.0			20	20	100.00%		0	0	0	0	0.0	0.0	5.4	5.4	0	0	1,358	538
ES Boiler (Oil), AFUE >=90%	0.0	0.0	0.8	1.0	0.0	0.0	0.0	0.0			20	20	100.00%		0	0	0	0	0.0	0.0	10.8	10.8	0	0	171	215
BRC: Oil, Boiler Reset Controls	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0			15	15	100.00%		0	0	0	0			9.6	9.6	0	0	299	0
3rd Party Loan Buydown	0.0	0.0	100.0		0.0	0.0	0.0	0.0			1	1														

Planning Assumptions

- For CFL and LED Annual kWh savings, we assumed the same weighted average energy savings as the lighting program but longer hours use (3 hours/day vs. 2 hours/day as the program requires retrofit lights to be on 3 or more hours/day). As we transition to LEDs, the measure life has been updated for the Lighting Measures for 2015-2016.
- Ancillary kWh Savings are added to HPwES planned savings per the Cadmus Evaluation and recommendations. HPwES uses prescriptive rather than modeled audit recommendations and captures these savings separately.
- Fossil (LP and Oil) heating system replacements are included here (rather than in the ESAppliance Program) and will be incented when a new system is recommended.
- As Eversource works down the list of high use electrically heated homes, we are seeing lower annual kWh savings and that has been accounted for in this plan.

Eversource ENERGY STAR® Homes Program

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				In-Service / Realization Rate		Total Lifetime Savings (kWh)				Annual Savings Per Unit (MMBTU)				Total Lifetime MMBTU Savings			
	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update
	ES CFLs	3,292.9	372.0	0.0	0.0	23.0	23.0	0.0	24.6	5	8		8	100.00%	100.00%	378,599	68,433	0	0	0.00	0.00	0.00	0.00	0	0	0
ES Light Fixture (Interior)	329.3	251.0	243.8	303.3	62.3	62.3	24.6	24.6	20	20	20	20	100.00%	100.00%	410,089	312,590	120,004	149,286	0.00	0.00	0.00	0.00	0	0	0	0
ES Clothes Washer	32.9	49.0	43.9	54.6	165.6	165.6	181.8	181.8	11	11	11	11	100.00%	100.00%	59,983	89,258	87,750	109,162	0.74	0.74	0.74	0.74	267	398	356	443
ES Dishwasher	214.0	297.0	195.1	0.0	31.4	31.4	31.4	31.4	10	10	10	10	100.00%	100.00%	67,208	93,258	61,250	0	0.19	0.19	0.19	0.19	404	561	368	0
ES Refrigerator	296.4	402.0	231.6	288.2	114.0	114.0	107.0	39.6	12	12	12	12	100.00%	100.00%	405,419	549,936	297,421	137,037		0.00	0.00	0.00	0	0	0	0
ES Thermostats	247.0	297.0	207.3	257.8	0.0	0.0	0.0	0.0	12	12	15	15	100.00%	100.00%	0	0	0	0		0.00	0.00	0.00	0	0	0	0
Oil Heated Homes	3.3	1.0	4.9	3.0	519.8	73.0	410.8	410.8	25	25	25	25	100.00%	100.00%	42,793	1,825	50,082	31,151	50.00	27.11	43.60	43.60	4,116	678	5,315	3,306
Natural Gas Heated Homes	62.6	59.0	36.6	78.9	481.5	-138.5	98.3	98.3	25	25	25	25	100.00%	100.00%	753,094	-204,325	89,881	193,809	25.00	15.57	23.10	23.10	39,103	22,960	21,122	45,544
Liquid Propane Heated Homes ¹	148.2	149.0	126.8	100.1	506.0	736.7	462.6	462.6	25	25	25	25	100.00%	100.00%	1,874,472	2,744,175	1,466,331	1,157,623	44.00	38.54	31.80	31.80	162,998	143,543	100,798	79,577
Electric Baseboard Heated Home	0.0	0.0	14.6	0.0	7,323.0	7,323.0	7,935.8	7,935.8	25	25	25	25	100.00%	100.00%	0	0	2,902,451	0		0.00	0.00	0.00	0	0	0	0
ASHP Heated Home (MF) ¹	115.3	162.0	61.0	75.8	2,313.0	4,450.8	5,355.0	5,355.0	25	25	25	25	100.00%	100.00%	6,664,377	18,025,825	8,160,606	10,151,892		0.89	0.00	0.00	0	3,624	0	0
GSHP Heated Home	0.0	34.0			0.0	2,511.8							100.00%		0	2,135,050	0	0		10.19			0	8,660	0	0
Wood Heated Homes	0.0	1.0			0.0	2,148.0							100.00%		0	53,700	0	0		57.00			0	1,425	0	0
LEDs	0.0	558.0	2,438.3	3,033.2	0.0	27.7	24.6	24.6	0	20	20	20	100.00%	100.00%	0	308,764	1,200,037	1,492,860		0.00			0	0	0	0
Geothermal & Air Source Heat Pump Program																										
GSHP (Heating)	33.2	43.0	30.4	30.3	11,583.0	12,486.4	12,250.0	12,250.0	25	25	25	25	100.00%	100.00%	9,611,083	13,422,900	9,296,821	9,289,313	0.00	5.00	0.00	0.00	0	5,375	0	0
GSHP (Cooling)	33.2	43.0	30.4	30.3	90.0	87.4	69.0	69.0	25	25	25	25	100.00%	100.00%	74,678	93,925	52,366	52,323	0.00	0.00	0.00	0.00	0	0	0	0
GSHP (Hot Water)	33.2	43.0	30.4	30.3	1,373.0	1,497.9	1,819.0	1,819.0	25	25	25	25	100.00%	100.00%	1,139,257	1,610,200	1,380,483	1,379,368	0.00	3.77	0.00	0.00	0	4,050	0	0
GSHP (Lights & Appliances)	33.2	43.0	30.4	30.3	-159.0	-87.7	-162.0	-162.0	25	25	25	25	100.00%	100.00%	-131,931	-94,325	-122,946	-122,846	0.00	0.00	0.00	0.00	0	0	0	0
ASHP (Heating)	9.1	0.0	9.0	15.2	4,789.6		9,671.0	9,671.0	25	25	25	25	100.00%	100.00%	1,089,279	0	2,182,030	3,666,814	0.00	0.00	0.00	0.00	0	0	0	0
ASHP (Cooling)	9.1	0.0	9.0	15.2	130.3		71.0	71.0	25	25	25	25	100.00%	100.00%	29,633	0	16,019	26,920	0.00	0.00	0.00	0.00	0	0	0	0
ASHP (Hot Water)	9.1	0.0	9.0	15.2	0.0		520.0	520.0	25	25	25	25	100.00%	100.00%	0	0	117,326	197,161	0.00	0.00	0.00	0.00	0	0	0	0
ASHP (Lights & Appliances)	9.1	0.0	9.0	15.2	80.1		-79.0	-79.0	25	25	25	25	100.00%	100.00%	18,208	0	-17,824	-29,953	0.00	0.00	0.00	0.00	0	0	0	0

Notes:
 1. Includes wood savings.

Planning Assumptions

- The Energy Star Homes Heat Pump Program was merged in to the Energy Star Homes program for 2015-2016. The new single family homes with heat pumps are listed at the bottom of the table above.
- Measure Life Changes:
 - > LEDs have a longer life than CFLs due to longer hours (20 years at 2 hours/day)
- Lighting & Appliance Energy Savings have been updated to per the EPA Energy Star Appliance Calculators and NH evaluation results.

Eversource ENERGY STAR® Products Program - Lighting

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				In-Service & Realization Rate			Total Lifetime Savings (kWh)			
	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014	2015	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update
Catalog CFLs	3,171	23,100			23.0	23.0			5	5			62.30%			227,131	1,654,640	0	0
Catalog Interior Fixtures (Lamps and HW Fixtures)	417	734			62.3	62.3			8	8			96.40%			200,359	352,480	0	0
Catalog Exterior Fixtures	209	108			62.3	62.3			5	5			100.00%			64,950	33,625	0	0
Catalog Torchieres	125	0			69.4	69.4			8	8			93.50%			64,929	0	0	0
Catalog LED Fixtures	42	0		138	27.7	27.7		24.6	20	20		8	95.00%	96.40%		21,932	0	0	26,222
Catalog LED Bulbs	209	20,922	13,144	7,001	27.7	27.7	24.6	24.6	20	20	20	20	95.00%	95.00%	95.00%	109,662	10,998,131	6,145,597	3,273,190
Catalog LED Multi-packs		1,395	830		27.7	27.7	24.6	24.6	20	20	20	20	50.00%	90.00%	95.00%	0	385,955	367,714	0
Retail CFLs	6,144	13,740			23.0	23.0			5	5			62.30%			440,066	984,188	0	0
Retail CFL Multi-packs	237,818	78,976	77,397	13,155	23.0	23.0	29.0	29.0	5	5	5	5	62.30%	62.30%	62.30%	17,034,795	5,657,005	6,987,039	1,187,551
Retail Interior Fixtures (Lamps and HW Fixtures)	2,378	1,236			62.3	62.3			8	8			96.40%			1,142,048	593,550	0	0
Retail Exterior Fixtures	159	6			62.3	62.3			5	5			100.00%			49,362	1,868	0	0
Retail Torchieres	40	0			69.4	69.4			8	8			93.50%			20,561	0	0	0
Retail LED Fixtures	1,585	1,590			27.7	27.7			20	20			95.00%			833,431	835,820	0	0
Retail LED Bulbs	9,513	64,828	71,473	31,034	27.7	27.7	24.6	24.6	20	20	20	20	95.00%	93.50%	95.00%	5,000,588	34,078,329	32,890,272	14,510,122
Retail LED Bulbs Labeled as Retail CFLs																0	0	0	0
Retail LED Bulbs Multi-Packs			5,507	4,223			24.6	24.6			20	20		95.00%	95.00%	0	0	2,574,651	1,974,641
Markdown: CFLs (Multipack Bulbs)		10,602	605	25,756		23.0	29.0	29.0		5	5	5	62.30%	96.40%	62.30%	0	759,415	84,521	2,325,140
Markdown: LED Bulbs (Single)		3,665	2,531	95,512		27.7	24.6	24.6		20	20	20	95.00%	90.00%	95.00%	0	1,926,592	1,121,081	44,657,221
Markdown: LED Bulbs (Multipack Bulbs) ¹		6,126	561	6,132		27.7	24.6	24.6		20	20	20	95.00%	96.40%	95.00%	0	3,220,273	266,124	2,867,237
Retail LED Interior Fixtures			13,342	6,259			24.6	24.6			8	8		90.00%	96.40%	0	0	2,363,878	1,187,795

Notes

Plan to utilize lighting product markdowns rather than rebate forms for those retailers who no longer allow coupons.

Planning Assumptions

- The Annual kWh Savings for both CFLs and LEDs were adjusted to reflect the weighted average of bulbs they are intended to replace.
 > kWh Savings = (Delta Watts) * (2 hours/days * 386 days/year) / 1000 to convert from watt hours to kWh
- Transitioning to incent more LEDs in 2015-2016, but providing some incentives for lower cost CFLs (e.g., multi-packs).
- Updated "In-service and realization rates" to reflect those identified in the NH CORE Residential Energy Star Lighting Program Impact and Process Evaluation.
 - See page 1-6 in <http://www.puc.state.nh.us/Electric/Monitoring%20and%20Evaluation%20Reports/NH-RESLFinal%20Delivered%20101252012.pdf>

Eversource ENERGY STAR® Products Program - Appliances

Measure	Quantity				Annual Savings per Unit (kWh)				Measure Life				In-Service / Realization Rate		Total Lifetime Savings (kWh)				Annual Savings Per Unit (MMBTU)				Total Lifetime MMBTU Savings			
	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update
	Energy Star Clothes Washer	6,816.0	6,010.0	6,259.5	4,405.7	165.6	165.6	181.8	181.8	11	11	11	11	100.00%	100.00%	12,416,011	10,947,816	12,515,022	8,808,508	0.5	0.5	0.5	0.5	40,187	35,435	31,232
Energy Star Room A/C	1,817.6	2,396.0	3,698.2	2,348.0	16.2	16.2	16.2	16.2	9	9	9	9	100.00%	100.00%	264,294	348,398	537,752	341,424	0.0	0.0	0.0	0.0	0	0	0	0
Smartstrip Power Strip	196.9	349.0	352.2	61.8	79.0	79.0	79.1	79.1	5	5	5	5	100.00%	100.00%	77,778	137,855	139,260	24,431	0.0	0.0	0.0	0.0	0	0	0	0
Energy Star Refrigerator	5,301.3	5,021.0	4,754.9	3,027.7	114.0	114.0	107.0	39.6	12	12	12	12	100.00%	100.00%	7,252,216	6,868,728	6,105,245	1,439,870	0.0	0.0	0.0	0.0	0	0	0	0
2nd Refrigerator Pickup	605.9	517.0	528.3	432.5	835.0	835.0	835.0	755.0	8	8	8	8	100.00%	100.00%	4,047,185	3,453,560	3,529,165	2,612,503	0.0	0.0	0.0	0.0	0	0	0	0
2nd Freezer Pickup	302.9	177.0	176.1	123.6	663.0	663.0	663.0	658.0	8	8	8	8	100.00%	100.00%	1,606,757	938,808	934,067	650,531	0.0	0.0	0.0	0.0	0	0	0	0
Energy Star Freezers	0.0	0.0			41.0	41.0	114.0	114.0	12	12	12	12	100.00%	100.00%	0	0			0.0	0.0	0.0	0.0	0	0	0	0
Energy Star Dishwasher (CEE Tier 2)	0.0	0.0			60.0	60.0			10	10	10	10	100.00%	100.00%	0	0			0.0	0.0	0.0	0.0	0	0	0	0
Energy Star Dishwasher (w/Oil/DHW)	0.0	0.0			35.0	35.0			10	10	10	10	100.00%	100.00%	0	0			0.2	0.2	0.2	0.2	0	0	0	0
Energy Star Dehumidifiers	0.0	0			162.0	162.0			12	12	12	12	100.00%	100.00%	0	0			0.0	0.0	0.0	0.0	0	0	0	0
Energy Star Room Air Purifiers	90.9	98.0	88.1	185.4	390.6	390.6	390.6	390.6	9	9	9	9	100.00%	100.00%	319,502	344,534	309,564	651,702	0.0	0.0	0.0	0.0	0	0	0	0
Room AC Pickup/Turn-in	15.1	10.0	17.6	12.4	16.2	16.2	16.2	16.2	5	5	5	5	100.00%	100.00%	1,224	808	1,423	998	0.0	0.0	0.0	0.0	0	0	0	0
Energy Star Set-top Boxes & Cable Boxes					100.0	100.0			5	5	5	5	100.00%	100.00%					0.0	0.0	0.0	0.0	0	0	0	0
Energy Star Water Coolers			0.0	0.0	361.0	361.0	0.0	0.0	10	10	10	10	100.00%	100.00%			0	0	0.0	0.0	0.0	0.0	0	0	0	0
Energy Star Central AC (3 ton)			70.4	86.5			110.3	142.2				14	14	100.00%	100.00%			108,768	172,162	0.0	0.0	0	0	0	0	0
Energy Star Ductless Mini Split (Cooling Only)			17.6	12.4			30.6	47.4				14	12	100.00%	100.00%			7,554	7,027	0.0	0.0	0	0	0	0	0
Energy Star Wifi TSTAT for Ductless mini-split cooling + ES CAC				49.4			21.6					12		100.00%					12,831				0	0	0	0
Energy Star Air Source Heat Pumps (Cooling, SEER >=14.5/ EER >=12)			52.8				92.0					12		100.00%	100.00%			58,316		0.0	0.0	0	0	0	0	0
Energy Star Air Source Heat Pumps (Cooling, SEER >=15, EER >=12.5)				24.7			77.0					12		100.00%					22,825				0	0	0	0
Energy Star Air Source Heat Pumps (Heating, HSPF >=8.2)			52.8				627.9					12		100.00%	100.00%			398,089		0.0	0.0	0	0	0	0	0
Energy Star Air Source Heat Pumps (Heating, HSPF >=8.5)				24.7			477.2					12		100.00%					141,521				0	0	0	0
Energy Star Air Source Heat Pumps (Cooling, SEER >=18, EER >=12.5)				12.4			256.5					12		100.00%					38,041				0	0	0	0
Energy Star Air Source Heat Pumps (Heating, HSPF >=10)				12.4			2,433.5					12		100.00%					360,879				0	0	0	0
Energy Star Wifi TSTAT for ASHP			38.0				23.4					15		100.00%	100.00%			13,348		0.0	0.0	0	0	0	0	0
Energy Star DMSHP (Any, SEER >=20, HSPF >=10, Cooling)			792.5				124.4					12		100.00%	100.00%			1,182,863		0.0	0.0	0	0	0	0	0
Energy Star DMSHP (Oil, SEER >=20, HSPF >=10, Heating)			396.2				536.4					12		100.00%	100.00%			2,550,662		0.0	0.0	0	0	0	0	0
Energy Star DMSHP (LP, SEER >=20, HSPF >=10, Heating)			396.2				536.4					12		100.00%	100.00%			2,550,662		0.0	0.0	0	0	0	0	0
Energy Star DMSHP (Gas, SEER >=20, HSPF >=10, Heating)							536.4					12		100.00%	100.00%					0.0	0.0	0	0	0	0	0
Energy Star DMSHP (Any, Cooling, HSPF >=8.5, SEER >=15, EER >=12.5)				86.5			22.0					12		100.00%					22,838				0	0	0	0
Energy Star DMSHP (Oil, Heating, HSPF >=8.5, SEER >=15, EER >=12.5)				43.3			77.3					12		100.00%					40,121				8.0	0	0	4,152
Energy Star DMSHP (LP, Heating, HSPF >=8.5, SEER >=15, EER >=12.5)				43.3			77.3					12		100.00%					40,121				0.0	0	0	0
Energy Star DMSHP (Gas, Heating, HSPF >=8.5, SEER >=15, EER >=12.5)				0.0			77.3					12		100.00%					0				0.0	0	0	0
Energy Star Wifi TSTAT for DMSHP				43.3			8.2					12		100.00%					4,278				0.0	0	0	0
Energy Star DMSHP (Any, Cooling, HSPF >=10, SEER >=18, EER >=12.5)				494.3			73.3					12		100.00%					435,005				0.0	0	0	0
Energy Star DMSHP (Oil, Heating, HSPF >=10, SEER >=18, EER >=12.5)				247.2			394.2					12		100.00%					1,169,227				17.8	0	0	52,794
Energy Star DMSHP (LP, Heating, HSPF >=10, SEER >=18, EER >=12.5)				247.2			394.2					12		100.00%					1,169,227				17.8	0	0	52,794
Energy Star DMSHP (Gas, Heating, HSPF >=10, SEER >=18, EER >=12.5)				0.0			394.2					12		100.00%					0				0.0	0	0	0
Energy Star Wifi TSTAT for DMSHP			570.6	247.2			109.7	38.8				15	12	100.00%	100.00%			938,858	115,099	0.0	4.5	0	0	0	0	13,347
DHW: Heat Pump Water Heater 50 Gallon Electric, EF >=2.3 (ES=EF >=2.0)		176.1	74.1				1,775.0	1,775.0				10	10	100.00%					3,125,828	1,316,138	0.0	4.5	0	0	0	3,337
DHW: Heat Pump Water Heater 80 Gallon Electric, EF >=2.3 (ES=EF >=2.0)			17.6	12.4			2,672.0	2,672.0				10	10	100.00%					470,566	330,209	0.0	5.6	0	0	0	686
Energy Star Central AC (385 Hours ON in NH)	30.1	39.0			110.3	110.3			14	14			100.00%		46,496	60,219							0	0	0	0
Energy Star Mini Split Heat Pump (SEER >=19, HSPF >=10)	376.4	386.0			104.9	104.9			12	12			100.00%		473,990	486,079							0	0	0	0
Energy Star Mini Split Heat Pump (SEER >=19, HSPF >=10)	376.4	386.0			751.0	751.0			12	12			100.00%		3,392,141	3,478,652							22,142	22,706		
Energy Star Mini Split Heat Pump (SEER >=14.5, HSPF >=8.2)	135.5	116.0			34.4	34.4			12	12			100.00%		55,898	47,852							0	0	0	0
Energy Star Mini Split Heat Pump (SEER >=14.5, HSPF >=8.2)	135.5	116.0			142.2	142.2			12	12			100.00%		231,247	197,962							0	0	0	0
Energy Star Heat Pump (SEER >=19, HSPF >=10)	0.0	108.0				176.6			12	12			100.00%		0	228,862							2.5	0	3,175	0
ES Furnace w/ECM (LP), AFUE >=95%	0.0	1				855.9			12	12			100.00%		0	10,271							2.5	0	29	0
ES Furnace w/ECM (LP), AFUE >=95%	30.1	50.0			168.0	168.0			18	18			100.00%		91,059	151,200							4.5	4.5	2,439	4,050
ES Furnace w/ECM (LP), AFUE >=96%					168.0	168.0			18	18			100.00%										5.6	5.6	0	0
ES Furnace w/ECM (LP), AFUE >=97%	15.1	34.0			168.0	168.0			18	18			100.00%		45,529	102,816							5.9	5.9	1,599	3,611
ES Furnace w/ECM (Oil), AFUE >=85%				6.0		168.0	168.0		18	18			100.00%			18,144							18.0	18.0	0	1,944
ES Furnace w/ECM (Oil), AFUE >=90%					168.0	168.0																				

Eversource Large Business Energy Solutions Program

Measure	Quantity				Annual Savings per Unit/Project (kWh)				Measure Life				In-Service or Realization Rate			Total Lifetime Savings (kWh)				Annual Savings Per Unit/Project (MMBTU)				Total Lifetime MMBTU Savings			
	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014	2015	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update
	New Equipment Track																										
Cooling	34.1	39.0	28.2	39.6	29,101.0	27,094.5	39,908.4	30,273.5	15	15	15	15	92.50%	92.50%	99.86%	13,775,376	14,600,372	15,993,461	18,391,058	0.0	0.0	0.0	0.0	0	0	0	0
Heating	13.7	5.0	14.3	14.8	92,703.7	203,255.0	94,862.4	71,190.5	15	15	15	15	92.50%	92.50%	99.86%	17,602,467	14,100,816	18,680,114	15,658,436	0.0	0.0	0.0	0.0	0	0	0	0
Lighting	19.3	20.0	17.7	6.5	71,500.6	41,201.4	59,831.5	24,539.5	15	15	15	15	92.50%	92.50%	99.86%	19,161,696	11,433,395	14,714,089	2,407,416	0.0	0.0	0.0	0.0	0	0	0	0
Lighting LED	17.8	8.0		22.4	45,441.8	47,773.1	45,441.8	45,441.8	15	15	15	15	92.50%	92.50%	99.86%	11,228,596	5,302,817	0	15,241,933	0.0	0.0	0.0	0.0	0	0	0	0
Lighting OS	10.1	14.0		4.5	15,758.3	20,961.3	15,758.3	15,758.3	10	10	10	10	92.50%	92.50%	99.86%	1,476,646	2,714,487	0	701,551	0.0	0.0	0.0	0.0	0	0	0	0
Other	0.0	4.0		1.7	131,253.0	188,922.9	131,253.0	131,253.0	15	13	15	15	92.50%	92.50%	99.86%	0	9,284,891	0	3,439,777	0.0	0.0	0.0	0.0	0	0	0	0
Parking Lot Lighting	2.4	2.0	43.9	8.0	109,625.0	13,253.5	2,250.0	80,296.5	15	15	15	15	92.50%	92.50%	99.86%	3,652,850	367,785	1,371,507	9,647,735	0.0	0.0	0.0	0.0	0	0	0	0
Process	23.9	26.0	20.5	20.2	68,414.0	131,095.5	117,825.5	117,825.5	15	17	15	15	92.50%	92.50%	99.86%	22,667,049	54,976,015	32,973,324	35,023,382	0.0	0.0	0.0	0.0	0	0	0	0
Retrofit Track																											
Cooling	28.3	5.0	8.5	18.6	74,036.6	74,760.0	93,521.4	64,463.9	13	13	13	13	94.00%	94.00%	99.86%	24,774,236	4,450,179	9,844,960	15,834,104	0.0	0.0	0.0	0.0	0	0	0	0
Heating	10.1	1.0	5.3	8.5	52,795.8	58,350.0	52,904.1	40,632.3	13	13	13	13	94.00%	94.00%	99.86%	6,712,134	713,037	3,426,090	4,492,313	0.0	0.0	0.0	0.0	0	0	0	0
Lighting	74.1	46.0	93.5	6.9	58,441.6	115,850.9	69,199.6	51,898.3	13	13	13	13	94.00%	94.00%	99.86%	52,766,721	65,122,103	78,892,908	4,610,601	0.0	0.0	0.0	0.0	0	0	0	0
Lighting-LED	23.6	37.0	0.0	74.1	84,061.8	45,474.1		49,884.3	13	13	13	13	94.00%	94.00%	99.86%	24,255,070	20,560,651	0	47,969,880	0.0	0.0	0.0	0.0	0	0	0	0
Lighting-OS Only	18.6	14.0	0.0	14.9	30,130.2	5,746.3		5,131.4	9	9	9	9	94.00%	94.00%	99.86%	4,945,904	680,590	0	694,573	0.0	0.0	0.0	0.0	0	0	0	0
Other	0.0	2.0	15.3	3.6	10,631.7	290,486.8	30,062.7	30,062.7	14	14	13	13	94.00%	94.00%	99.86%	0	7,469,595	5,746,144	1,448,285	0.0	0.0	0.0	0.0	0	0	0	0
Parking Lot Lights	16.9	24.0	36.2	40.7	47,681.1	58,823.4	21,950.7	36,589.0	13	13	13	13	94.00%	94.00%	99.86%	9,867,577	17,208,204	9,702,149	19,313,475	0.0	0.0	0.0	0.0	0	0	0	0
Process	50.7	26.0	67.3	34.7	47,153.0	332,905.3	91,880.3	123,052.5	12	12	12	12	94.00%	94.00%	99.86%	26,320,722	101,117,241	71,833,817	52,640,455	0.0	0.0	0.0	0.0	0	0	0	0
Fuel Neutral Heating, Hot Water and Controls																											
Energy Star Mini Split Heat Pump (SEER>=19, HSPF>=10)	1.5	3.0			104.9	104.9			12	12			100.00%	100.00%		1,889	3,778	0	0	0.0	0.0			0	0	0	0
Energy Star Mini Split Heat Pump (SEER>=19, HSPF>=10)	1.5	3.0			751.0	751.0			12	12			100.00%	100.00%		13,517	27,036	0	0	4.9	0.0			88	0	0	0
Energy Star Mini Split Heat Pump (SEER>=14.5, HSPF>=8.2)	0.4	3.0			34.4	34.4			12	12			100.00%	100.00%		155	1,238	0	0	0.0	0.0			0	0	0	0
Energy Star Mini Split Heat Pump (SEER>=14.5, HSPF>=8.2)	0.4	3.0			0.0	0.0			12	12			100.00%	100.00%		640	5,120	0	0	0.0	0.0			0	0	0	0
Indirect Water Heater (attached to Oil Energy Star FHW boiler)		3.0			0.0	0.0			14	14			100.00%	100.00%		0	0	0	0	20.7	20.7			0	869	0	0
Boilers (301 to 499 MBH), Condensing	0.5	10.0			0.0	0.0			25	25			100.00%	100.00%		0	0	0	0	42.3	42.3			496	10,575	0	0
Boilers (500 to 999 MBH)	0.9	6.0			0.0	0.0			25	25			100.00%	100.00%		0	0	0	0	77.1	77.1			1,807	11,565	0	0
Boilers (1000 to 1700 MBH), Condensing	0.1				0.0	0.0			25	25			100.00%	100.00%		0	0	0	0	142.6	142.6			334	0	0	0
Boilers (1000 to 1700 MBH)	5.6				0.0	0.0			25	25			100.00%	100.00%		0	0	0	0	142.6	142.6			20,052	0	0	0
Boilers (1701 to 2000 MBH)	9.2				0.0	0.0			25	25			100.00%	100.00%		0	0	0	0	249.0	249.0			57,189	0	0	0
7-Day Programmable Thermostats		39.0			0.0	14.4			15	15			100.00%	100.00%		0	8,424	0	0	7.7	7.7			0	4,505	0	0
Boiler Reset Controls, After Market, 1 shift operation	0.6	3.0			0.0	0.0			15	15			100.00%	100.00%		0	0	0	0	19.3	19.3			163	869	0	0
Steam Traps (greater than 10 steam traps requires pre-approval)		101.0			0.0	0.0			3	3			100.00%	100.00%		0	0	0	0	25.7	25.7			0	7,787	0	0
Steam Traps (greater than 10 steam traps requires pre-approval)		438.0			0.0	0.0			3	3			100.00%	100.00%		0	0	0	0	25.7	25.7			0	33,770	0	0
WiFi Enabled 7-Day Programmable Thermostats: WiFi Enabled (Elec)		2.0				14.4				15			100.00%			0	432	0	0		0.0			0	0	0	0
WiFi Enabled 7-Day Programmable Thermostats: WiFi Enabled (OIL)		7.0				14.4				15			100.00%			0	1,512	0	0		6.6			0	693	0	0

Planning Assumptions

- Annual Savings were updated based on recent trends and reflect expected project sizes.
 - The New Construction Track projects are expected to be generally smaller projects - both costs and energy savings. This reflects in a larger number of jobs to be completed in 2016.
- Separated out Lighting (LED) and Lighting Occupancy Sensor projects for 2016 due to the higher quantity expected.
- Fossil Heating System incentives eliminated as a result of SB 268 (no Energy Efficiency Funds (RGGI)).
- "Heating" projects are mostly efficient snowmaking equipment (we use heating because we don't have a snowmaking load shape yet), and we are expecting smaller projects in 2016 than we've seen in 2014.
- Updated In-Service or Realization Rate for 2016 to reflect that found in the DNV-GL Impact Evaluation, final report in 2015.
 - See Table 3, page 4 (avg New Construction + Retrofit): <http://www.puc.state.nh.us/Electric/Monitoring%20and%20Evaluation%20Reports/NH%20LCI%20FINAL%20Report%20-%20June%202015.pdf>

September 30, 2015

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Eversource Small Business Energy Solutions Program

Measure	Quantity				Annual Savings per Project (kWh)				Measure Life				In-Service or Installation Rate		Total Lifetime Savings (kWh)				Annual Savings Per Unit (MMBTU)				Total Lifetime MMBTU Savings				
	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	
	Lighting - New Equipment & Construction	79.6	66.0	62.3	39.3	13,847.0	19,606.0	18,194.1	18,194.1	14	15	15	15	100.00%	100.00%	15,946,149	18,879,402	17,025,896	10,746,945	0.0	0.0	0.0	0.0	0	0	0	0
Lighting - Retrofit	116.9	190.0	138.4	161.5	19,948.0	22,850.0	23,569.9	23,569.9	13	13	13	13	100.00%	100.00%	30,508,520	56,482,915	42,233,041	49,294,302	0.0	0.0	0.0	0.0	0	0	0	0	
Lighting - Direct Install	177.6	172.0	187.6	175.1	14,777.0	15,045.0	16,169.2	16,169.2	12	13	13	13	100.00%	100.00%	32,614,190	32,967,808	38,258,064	35,723,774	0.0	0.0	0.0	0.0	0	0	0	0	
Lighting - Catalog Sales	460.5	8,591.0	120.4	112.4	46.3	46.3	1,618.1	1,618.1	6	6	13	13	100.00%	100.00%	127,929	2,386,838	2,533,108	2,365,310	0.0	0.0	0.0	0.0	0	0	0	0	
SmartStrips	55.7	2.0	57.8	0.0	75.0	75.0	75.0	75.0	5	5	5	5	100.00%	100.00%	20,882	750	21,689	0	0.0	0.0	0.0	0.0	0	0	0	0	
Fuel Neutral Heating, Hot Water and Controls																											
Central Air Conditioner (Energy Star >= 14.5 SEER), 3 ton (Elec)		2.0			110.3	110.3			14	14			100.00%		0	3,088	0	0	0.0	0.0			0	0	0	0	
Central Air Conditioner (Energy Star >= 14.5 SEER), 6 ton		2.0			220.6	220.6			14	14			100.00%		0	6,176	0	0	0.0	0.0			0	0	0	0	
--					0.0								100.00%		0	0	0	0	0.0	0.0			0	0	0	0	
Energy Star Mini Split Heat Pump (SEER>=19, HSPF>=10)	68.9	38.0			104.9	104.9			12	12			100.00%		86,763	47,852	0	0	0.0	0.0			0	0	0	0	
Energy Star Mini Split Heat Pump (SEER>=19, HSPF>=10)	68.9	38.0			751.0	751.0			12	12			100.00%		620,922	342,458	0	0	4.9	4.9			4,053	2,235	0	0	
Energy Star Mini Split Heat Pump (SEER>=14.5, HSPF>=8.2)	34.4	16.0			34.4	34.4			12	12			100.00%		14,211	6,600	0	0	0.0	0.0			0	0	0	0	
Energy Star Mini Split Heat Pump (SEER>=14.5, HSPF>=8.2)	34.4	16.0			142.2	142.2			12	12			100.00%		58,790	27,305	0	0	0.0	0.0			0	0	0	0	
DHW: Heat Pump Water Heater 50 Gallon Electric, EF>=2.3 (ES=EF>=2.0)		40.0			0.0	1,775.0			12	10			100.00%		0	710,000	0	0	0.0	0.0			0	0	0	0	
DHW: Heat Pump Water Heater 80 Gallon Electric, EF>=2.3 (ES=EF>=2.0)		2.0			0.0	2,672.0				10			100.00%		0	53,440	0	0	0.0	0.0			0	0	0	0	
Indirect Water Heater:>40 Gal (attached to LP Energy Star FHW boiler)	4.6	3.0			0.0	0.0			14	14			100.00%		0	0	0	0	20.7	20.7			1,331	869	0	0	
Indirect Water Heater (attached to Oil Energy Star FHW boiler)	23.0	4.0			0.0	0.0			14	14			100.00%		0	0	0	0	20.7	20.7			6,656	1,159	0	0	
On Demand Tankless Water Heater, EF >=0.82 EF w/Electronic Ignition	11.5	1.0			0.0	0.0			20	20			100.00%		0	0	0	0	7.1	7.1			1,631	142	0	0	
Combo condensing boiler w/ On-Demand DWH 90% (LP)		3.0			0.0	0.0			20	20			100.00%		0	0	0	0	24.6	17.8			0	1,068	0	0	
Furnace (forced hot air) ≥ 95% AFUE w/ECM (up to 150 MBH) (LP)	6.9	15.0			0.0	168.0			18	18			100.00%		0	45,360	0	0	16.1	16.1			1,997	4,347	0	0	
Furnace (forced hot air) ≥ 85% AFUE w/ECM (up to 150 MBH) (Oil)		1.0			0.0	168.0			18	18			100.00%		0	3,024	0	0	16.1	16.1			0	290	0	0	
Furnace (forced hot air) ≥ 97% AFUE w/ECM (up to 150 MBH) (LP)		1.0			0.0	168.0			18	18			100.00%		0	3,024	0	0	18.5	18.5			0	333	0	0	
Boilers (up to 300 MBH), Condensing (AFUE>=90%, (LP)		13.0			0.0	0.0			25	25			100.00%		0	0	0	0	22.8	22.8			0	7,410	0	0	
Boilers (up to 300 MBH): AFUE>=85% (Oil)	32.2	4.0			0.0	0.0			25	25			100.00%		0	0	0	0	22.8	22.8			18,327	2,280	0	0	
Boilers (up to 300 MBH), AFUE>=95% (LP) Condensing		6.0			0.0	0.0			25	25			100.00%		0	0	0	0	25.2	25.2			0	3,780	0	0	
Boilers (up to 300 MBH): AFUE>=87% (Oil)		4.0			0.0	0.0			25	25			100.00%		0	0	0	0	25.2	25.2			0	2,520	0	0	
Boilers (301 to 499 MBH), AFUE>=90 (LP) Condensing	11.5	10.0			0.0	0.0			25	25			100.00%		0	0	0	0	42.3	42.3			12,143	10,575	0	0	
Boilers (301 to 499 MBH)	23.0				0.0	0.0			25	25			100.00%		0	0	0	0	42.3	42.3			24,287	0	0	0	
Boilers (500 to 999 MBH), AFUE>=90% Condensing (LP)		4.0			0.0	0.0			25	25			100.00%		0	0	0	0	77.1	77.1			0	7,710	0	0	
7-Day Programmable Thermostats: & or 5-2 Day Programmable (LP)	4.6	12.0			0.0	14.4			15	15			100.00%		0	2,592	0	0	7.7	7.7			531	1,386	0	0	
7-Day Programmable Thermostats (Oil)	9.2	1.0			0.0	14.4			15	15			100.00%		0	216	0	0	7.7	7.7			1,061	116	0	0	
Boiler Reset Controls, After Market, 1 shift operation (LP)		7.0			0.0	0.0			15	15			100.00%		0	0	0	0	19.3	19.3			0	2,027	0	0	
Boiler Reset Controls, After Market, 1 shift operation (Oil)		1.0			0.0	0.0			15	15			100.00%		0	0	0	0	19.3	19.3			0	290	0	0	
Unit Heaters (up to 300 MBH), Condensing (AFUE>=90%, LP)		3.0			0.0	0.0			18	18			100.00%		0	0	0	0	30.0	30.0			0	1,620	0	0	
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WiFi Enabled 7-Day Programmable Thermostats: WiFi Enabled (elec)		34.0				14.4				15			100.00%		0	7,344	0	0	0.0	0.0			0	0	0	0	
WiFi Enabled 7-Day Programmable Thermostats: WiFi Enabled (LP)		1.0				14.4				15			100.00%		0	216	0	0	6.6	6.6			0	99	0	0	
WiFi Enabled 7-Day Programmable Thermostats: WiFi Enabled (Oil)		6.0				14.4				15			100.00%		0	1,296	0	0	6.6	6.6			0	594	0	0	

Planning Assumptions

1. Annual kWh Savings were on track so no changes were made to original 2016 plan. Quantities changes to reflect 2015 trends between New, Retrofit and Direct Install and revised budget.
2. Annual kWh Savings for "Lighting - Catalog Sales" (or online sales) were updated to reflect projects (purchase of more than one bulb) rather than on a per bulb basis, and the measure life updated to reflect the purchase of longer life LEDs.

Eversource Municipal Program

Measure	Quantity				Annual Savings per Unit/Project (kWh)				Measure Life				In-Service or Installation Rate		Total Lifetime Savings (kWh)				Annual Savings Per Unit/Project (MMBTU)				Total Lifetime MMBTU Savings			
	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update
Lighting - New Equipment & Construction	35.0	8.0	31.8	44.7	11,448.4	28,593.5	14,392.9	14,392.9	15	15	15	15	100.00%	100.00%	5,907,616	3,431,220	6,866,580	9,646,727	0.0	0.0	0.0	0.0	0	0	0	0
Lighting - Retrofit	61.0	42.0	44.0	71.7	22,028.2	23,723.2	23,714.9	23,714.9	13	13	13	13	100.00%	100.00%	17,188,909	12,961,825	13,559,009	22,114,561	0.0	0.0	0.0	0.0	0	0	0	0
Lighting - Direct Install	135.7	38.0	35.5	25.3	12,436.5	20,391.4	37,457.3	37,457.3	12	13	13	13	100.00%	100.00%	20,761,366	9,952,999	17,034,410	12,149,021	0.0	0.0	0.0	0.0	0	0	0	0
Lighting - Catalog Sales	0.0	0.0			46.3		0.0		6		0	0	100.00%	100.00%	0	0		0	0.0	0.0	0.0	0.0	0	0	0	0
SmartStrips	0.0	0.0			75.0		0.0		5		0	0	100.00%	100.00%	0	0		0	0.0	0.0	0.0	0.0	0	0	0	0
Energy Star Mini Split Heat Pump (SEER>=19, HSPF>=10)	45.5				104.9				12				100.00%		57,304	0		0	0.0				0	0	0	0
Energy Star Mini Split Heat Pump (SEER>=19, HSPF>=10)	45.5				751.0				12				100.00%		410,103	0		0	4.9				2,677	0	0	0
Energy Star Mini Split Heat Pump (SEER>=14.5, HSPF>=8.2)	22.8				34.4				12				100.00%		9,386	0		0	0.0				0	0	0	0
Energy Star Mini Split Heat Pump (SEER>=14.5, HSPF>=8.2)	22.8				142.2				12				100.00%		38,830	0		0	0.0				0	0	0	0
Indirect Water Heater (attached to LP Energy Star FHW boiler)	3.0				0.0				14				100.00%		0	0		0	20.7				879	0	0	0
Indirect Water Heater (attached to Oil Energy Star FHW boiler)	15.2	1.0			0.0	0.0			14	15			100.00%		0	0		0	22.8	20.7			4,842	311	0	0
On Demand Tankless Water Heater, LP, >=82 EF w/Electronic Ignition	7.6				0.0				20				100.00%		0	0		0	7.1				1,077	0	0	0
Furnace, LP (forced hot air) >= 95% AFUE w/ECM (up to 150 MBH)	4.6	1.0			0.0	168.0			18	18			100.00%		0	3,024		0	16.1	16.1			1,319	290	0	0
Boilers, Oil >= 85% AFUE (up to 300 MBH)	21.2				0.0				25				100.00%		0	0		0	22.8				12,105	0	0	0
Boilers, LP >= 90% thermal efficiency (301 to 499 MBH), Condensing	7.6				0.0				25				100.00%		0	0		0	42.3				8,020	0	0	0
Boilers, Oil >= 85% thermal efficiency (301 to 499 MBH)	15.2				0.0				25				100.00%		0	0		0	42.3				16,041	0	0	0
7-Day Programmable Thermostats (LP)	3.0				0.0				15				100.00%		0	0		0	7.7				350	0	0	0
7-Day Programmable Thermostats (Oil)	6.1				0.0				15				100.00%		0	0		0	7.7				701	0	0	0
Boilers (500 to 999 MBH) AFUE>=85 (Oil)		2.0				0.0				25			100.00%		0	0		0		77.1			0	3,855	0	0
7 Day Programmable Thermostat: 7 or 5-2 Day Programmable (Oil)		3.0				14.4				15			100.00%		0	648		0	7.7				0	347	0	0
Boiler- 1701 to 2000 MBH: AFUE>=85 (Oil)		2.0								25			100.00%		0	0		0	249.0				0	12,450	0	0
Air Source Heat Pump: SEER >= 14.5 EER >= 12 HSPF>= 8.2 (Elec)		3.0				34.4				12			100.00%		0	1,238		0	0.0				0	0	0	0
Air Source Heat Pump: SEER >= 14.5 EER >= 12 HSPF>= 8.2 (Elec)		3.0				142.2				12			100.00%		0	5,120		0	0.0				0	0	0	0
Boiler- 500 to 999 MBH: AFUE>=90 (LP)		2.0								25			100.00%		0	0		0	77.1				0	3,855	0	0
Boiler Reset Controls: (No Efficiency) (LP)		2.0				0.0				15			100.00%		0	0		0	19.3				0	579	0	0
Boiler- up to 300 MBH: AFUE >= 90% (LP)		2.0				0.0				25			100.00%		0	0		0	22.8				0	1,140	0	0
Boiler- up to 300 MBH: AFUE >= 95% (LP)		2.0								25			100.00%		0	0		0	25.2				0	1,260	0	0
Furnace- Forced Hot Air: AFUE >= 90% w/ECM (LP)		4.0				168.0				18			100.00%		0	12,096		0	18.5				0	1,332	0	0
Heat Pump Water Heater 50 Gallon : Energy Factor >= 2.3		8.0				1,775.0				10			100.00%		0	142,000		0	0.0				0	0	0	0
High Effic Indirect Water Heater : >=40 Gallons (LP)		2.0				0.0				15			100.00%		0	0		0	20.7				0	621	0	0
On-Demand Tankless Water Heaters: Energy Factor >= .94 (LP)		2.0				0.0				20			100.00%		0	0		0	9.6				0	384	0	0
Stand Alone Storage Water Heater: Energy Star >= .67 (LP)		1.0				0.0				13			100.00%		0	0		0	3.0				0	39	0	0
LCI Cooling		5.0				7,634.6				14			100.00%		0	550,095		0	0.0				0	0	0	0
LCI Lighting		8.0				50,572.8				13			100.00%		0	5,261,882		0	0.0				0	0	0	0
LCI Lighting LED		4.0				20,231.5				13			100.00%		0	1,052,038		0	0.0				0	0	0	0
LCI Lighting OS		3.0				41,817.7				9			100.00%		0	1,129,077		0	0.0				0	0	0	0
LCI Parking Lot Lights		10.0				67,694.9				13			100.00%		0	8,800,337		0	0.0				0	0	0	0
LCI Process		5.0				197,227.2				14			100.00%		0	13,618,775		0	0.0				0	0	0	0
Wxn (LP Heat)		0.0	5.0	5.2			0.0	0.0		20	20		100.00%		0	0	0	0		28.0	28.0		0	0	2,802	2,892
Wxn (Oil Heat)		0.0	5.0	5.2			0.0	0.0		20	20		100.00%		0	0	0	0		28.0	28.0		0	0	2,802	2,892
Energy Star DMSHP (Any, SEER >=20, HSPF >=10, Cooling)		0.0	11.7	12.1			124.4	124.4		12	12		100.00%		0	0	17,424	17,986		0.0	0.0		0	0	0	0
Energy Star DMSHP (Oil, SEER >=20, HSPF >=10, Heating)		0.0	5.8	6.0			536.4	536.4		12	12		100.00%		0	0	37,572	38,785		0.0	0.0		0	0	0	0
Energy Star DMSHP (LP, SEER >=20, HSPF >=10, Heating)		0.0	5.8	6.0			536.4	536.4		12	12		100.00%		0	0	37,572	38,785		0.0	0.0		0	0	0	0
Energy Star Wifi TSTAT for DMSHP		0.0	11.7	12.1			109.7	109.7		15	15		100.00%		0	0	19,208	19,828		0.0	0.0		0	0	0	0
Heat Pump Water Heater (50 gallons)		0.0	2.1	2.2			1,775.0	1,775.0		10	10		100.00%		0	0	37,297	38,501		0.0	0.0		0	0	0	0
Heat Pump Water Heater (80 gallons)		0.0	2.1	2.2			2,672.0	2,672.0		10	10		100.00%		0	0	57,185	59,030		0.0	0.0		0	0	0	0
Furnace: LP, w/ECM, AFUE >= 95%, up to 150 MBH		0.0	1.6	1.6			168.0	168.0		18	18		100.00%		0	0	4,707	4,859		9.0	9.0		0	0	252	260
Furnace: LP, w/ECM, AFUE >= 97%, up to 150 MBH		0.0	1.0	1.1			168.0	168.0		18	18		100.00%		0	0	3,138	3,239		9.9	9.9		0	0	185	191
Furnace: Oil, w/ECM, AFUE >= 85%, up to 150 MBH		0.0	0.0	0.0			168.0	168.0		18	18		100.00%		0	0		0		8.0	8.0		0	0	0	0
Furnace: Oil, w/ECM, AFUE >= 87%, up to 150 MBH		0.0	0.0	0.0			168.0	168.0		18	18		100.00%		0	0		0		8.7	8.7		0	0	0	0
Boiler: LP, Condensing, AFUE >= 90%, up to 300 MBH		0.0	1.1	1.1			0.0	0.0		25	25		100.00%		0	0	0	0		30.6	30.6		0	0	804	830
Boiler: Oil, AFUE >= 85%, up to 300 MBH		0.0	1.1	1.1			0.0	0.0		25	25		100.00%		0	0	0	0		22.1	22.1		0	0	580	599
Boiler: LP, Condensing, AFUE >= 95%, up to 300 MBH		0.0	1.1	1.1			0.0	0.0		25	25		100.00%		0	0	0	0		27.8	27.8		0	0	757	782
Boiler: Oil, AFUE >= 87%, up to 300 MBH		0.0	1.6	1.7			0.0	0.0		25	25		100.00%		0	0	0	0		22.1	22.1		0	0	903	932

Eversource Company Specific Programs
A. C&I RFP Program
B. Home Energy Reports

Measure	Quantity				Annual Savings per Unit/Project (kWh)				Measure Life				In-Service or Realization Rate			Total Lifetime Savings (kWh)			
	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Update	2014	2015	2016	2014 Plan	2014 Actual	2015 Plan	2016 Update
A. C&I RFP: Lighting	1.3	1.0	13.8	2.0	392,000.0	118,570.0	35,918.8	168,249.3	13	13	13	13	100.00%	100.00%	6,432,278	1,541,410	6,451,384	4,297,441	
A. C&I RFP: Process	5.3	8.0	3.5	3.4	212,000.0	345,569.3	293,068.7	244,267.9	12	15	13	13	100.00%	100.00%	12,904,784	40,668,116	12,639,655	10,777,143	
A. C&I RFP: Cooling	3.6	0.0	9.3	3.1	197,000.0	197,000.0	119,692.5	191,396.1	11	11	13	13	100.00%	100.00%	7,487,151	0	14,528,177	7,671,843	
A. C&I RFP: Lighting (Occ Sensors Only)	4.1	0.0	10.4	2.7	30,767.0	30,767.0	31,799.2	50,599.6	10	10	9	9	100.00%	100.00%	1,262,129	0	2,978,515	1,223,827	
A. C&I RFP: Parking Lot Lights	0.0	2.0		1.7		42,923.0		37,675.0		13		13	100.00%	100.00%	0	1,115,998	0	812,208	
B. Home Energy Reports	25,000.0	25,000.0	25,000.0	25,000.0	75.8	57.1	61.2	70.2	1	1	3	3	100.00%	100.00%	1,896,000	1,427,000	4,589,501	5,267,042	

Planning Assumptions

A. C&I RFP Program

1. PSNH estimated 2016 projects based on trends seen in 2014 and 2015, which resulted in larger projects, but less of them (lighting specifically).

B. Home Energy Reports Program

1. Annual kWh Savings were developed with contractor based on "high use" participants currently in the 2015 program.
2. Average annual kWh savings/participant for 2016 were revised from 90.7 kWh to 70.2 kWh based on an updated forecast.

Unitil ENERGY STAR® Homes Program

Measure	Quantity					Annual Savings per Unit kWh					Measure Life					In-Service / Realization Rate		Total Lifetime Savings kWh					Annual Saving per Unit MMBtu					Lifetime Savings MMBtu						
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update		
E-STAR Homes - CFLs	904	96				23	23				5	5				100%	100%	103,945	11,040															
E-STAR Homes - LEDs (incl. fixtures)	151	86	415	382	312	28	28	25	25	25	20	20	20	20	20	100%	100%	83,370	48,160	204,022	187,806	153,556												
E-STAR Homes - Dishwashers	42	16	7	6		26	33	33	33		10	10	11	11		100%	100%	10,834	5,280	2,508	2,309													
E-STAR Homes - Refrigerators	18	16	14	13	8	114	114	107	107	168	12	12	12	12	12	100%	100%	24,049	21,888	17,742	16,332	16,128												
E-STAR Homes - Clotheswashers	18	4	14	13	8	37	261	261	261	261	11	11	11	11	11	100%	100%	7,155	11,484	39,623	36,473	22,940												
E-STAR Homes - Thermostats	38										15					100%	100%																	
E-STAR Homes - Heating (GSHP and ASHP)	3	5	7	6	3	44,403	10,105	536	536	10,025	25	25	12	12	17	100%	100%	3,713,313	1,263,125	45,060	38,623	511,262												
E-STAR Homes Cooling (electric)	19	9	7	6	3	177	128	600	600	128	25	25	12	12	17	100%	100%	84,075	28,800	50,400	43,200	6,517												
E-STAR Homes Heating (non-electric)	38	12	28	25	26	247	913	791	791	791	25	25	25	25	25	100%	100%	234,270	273,900	546,499	503,064	514,150	50	49	32	32	32	47,833	14,667	21,971	20,224	20,670		
E-STAR Homes Cooling (non-electric)			28	25	26			58	58	58			25	25	25	100%	100%			39,934	36,760	37,570												
E-STAR Homes Water Heating	38	13	28	25	26			152	152	152	15	15	15	15	15	100%	100%			62,902	57,903	59,179	3	5	3	3	3	1,633	1,026	1,086	1,000	1,022		
E-STAR Homes - Water Heating (Elec, GS/ASHP)	4	3				3,234	2,621				15	15				100%	100%	194,040	117,945															

Note: In an effort to better match planning, reporting, and modeling, the Company is adding, amending, and/or updating some measure names from previously filed versions of this attachment.

Unitil Home Performance with ENERGY STAR®

Measure	Quantity					Annual Savings per Unit kWh					Measure Life					In-Service / Realization Rate		Total Lifetime Savings kWh					Annual Saving per Unit MMBtu					Lifetime Savings MMBtu				
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update
Air Sealing, Oil	33	48	45	42	81	0	0	0	0	0	15	15	15	15	15	100%	100%	0	0	0	0	0	5.2	12.0	10	10	10	2,577	8,669	7,045	12,568	
Air Sealing, Electric	6	10	6	6	5	829	1,433	746	746	746	15	15	15	15	15	100%	100%	69,409	214,920	67,614	62,500	56,540										
Air Sealing, Propane	17	9	6	6	15	0	0	0	0	0	15	15	15	15	15	100%	100%	0	0	0	0	0	12.5	7.9	9	9	9	3,119	1,064	847	2,125	
Insulation, Oil	33	48	45	42	81	9	9	0	0	0	25	25	20	20	25	100%	100%	7,493	10,800	0	0	0	23.5	21.9	23	23	19,564	26,220	20,636	46,016		
Insulation, Electric	6	10	6	6	5	1,629	1,741	1,693	1,693	1,693	25	25	20	20	25	100%	100%	227,453	435,180	204,525	189,054	213,783										
Insulation, Propane	17	9	6	6	15	86	86	0	0	0	25	25	20	20	25	100%	100%	35,798	19,350	0	0	0	38.5	19.8	14	14	16,009	4,460	1,716	5,382		
Thermostats, Oil		12	15	15	16		0	14	14	14		15	15	15	15	100%	100%		0	3,240	3,240	3,491		2.3	3	3		416	733	790		
Thermostats, Propane		1	2	2	3		0	14	14	14		15	15	15	15	100%	100%		0	432	432	654		1.3	3	3		20	80	122		
Thermostats Electric		1	3	3	0		315	1,113	1,113	330		15	15	15	15	100%	100%		4,725	50,103	50,103	0										
Refrigerators		2	3	3	3		1,076	714	714	155		14	7	7	12	100%	100%		30,128	14,994	14,994	5,574										
LEDs		494	362	335	505		28	37	37	37		20	20	20	20	100%	100%		276,640	267,503	247,269	372,816										
LED Fixtures		14	60	56	40		28	37	37	37		20	20	20	20	100%	100%		7,840	44,584	41,211	29,825										
Aerators		47	14	13	50		22	37	37	49		7	7	7	7	100%	100%		7,238	3,595	3,323	17,150	0.1	1	3	3	33	116				
showerheads		31			25		17			237		7			7	100%	100%		3,689			41,475	0.3				61				228	
DHW Pipe Wrap					6					64					20	100%	100%					7,680									444	
Boiler - Oil AFUE >=90%			2	2	1			0	0	0			20	20	20	100%	100%			0	0	0			11	11	11		215	215	215	
Boiler - Propane AFUE >=90%			1	1	1			0	0	0			20	20	20	100%	100%			0	0	0			10	10	10		208	208	208	
Furnace w/ECM - Oil AFUE >=85%			1	1	1			168	168	168			18	18	18	100%	100%			3,024	3,024	3,024			18	18	18		324	324	324	
Furnace w/ECM - Propane AFUE >=97%			1	1	1			168	168	168			18	18	18	100%	100%			3,024	3,024	3,024			6	6	6		106		106	
Room AC Ancillary Savings	24		24	22		50		50	50		9		9	9		100%	100%	10,742		10,870	10,048										0	
Central AC Ancillary Savings	13		12	11		77		77	77		15		15	15		100%	100%	14,749		13,950	12,895										0	
CFLs	266	124				23	23	43	43	43	7	7	8	8	8	100%	100%	42,895	19,964													

Note: In an effort to better match planning, reporting, and modeling, the Company is adding, amending, and/or updating some measure names from previously filed versions of this attachment.

Unitil ENERGY STAR® Products Program - Lighting

Measure	Quantity					Annual Savings per Unit kWh					Measure Life					In-Service / Realization Rate		Total Lifetime Savings kWh				
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update
Catalog/Online: CFLs		1,232			0		23					5				62.3%	62.3%		88,267			
Catalog/Online: CFL Multipacks					17					24.61					8		96.4%		0			3,226
Catalog/Online: LED Fixtures (interior and exterior)					871					24.61				20	95.0%	95.0%		1,853,724			407,243	
Catalog/Online: LED Bulbs		3,526					28			24.61				20	98.2%	95.0%		83,774			0	
Catalog/Online: LED Multipacks		137					62			24.61				20	98.2%	95.0%		83,774			0	
Retail/Coupon: CFLs Multipacks	26,518	15,854	12,950	12,950	2,310	23	23	28.99	28.99	28.99	5	5	5	5	62.3%	62.3%	1,899,882	1,135,860	1,169,356	1,169,356	208,590	
Retail/Coupon: CFLs					0					28.99				5	62.3%	62.3%	0	0	0	0	0	
Retail/Coupon: LED Bulbs	5,821	11,441	15,540	15,540	10,138	28	28	24.61	24.61	24.61	20	20	20	20	95.0%	95.0%	3,060,274	6,014,877	7,265,783	7,265,783	4,740,100	
Retail/Coupon: LED Fixtures	194	0	1,295	1,295	1,011	28	28	24.61	24.61	24.61	20	20	20	8	95.0%	96.4%	101,992		614,405	614,405	191,867	
Retail/Coupon: CFL Fixtures (interior and exterior)	265					62					8				93.5%		122,896					
Markdown CFL Bulbs (negotiated)			1,942	1,942				28.99	28.99				5	5	62.3%	62.3%				175,403	175,403	
Markdown CFL Multipacks (negotiated)					8,184					28.99			5	5	62.3%	62.3%					739,003	
Markdown LED multi-packs (negotiated)					2,273					24.61				20		95.0%					1,062,759	
Markdown LEDs (negotiated)			647	647	30,349			24.61	24.61	24.61			20	20	95.0%	95.0%			302,741	302,741	14,189,909	
Markdown LED fixtures (negotiated)								24.61	24.61	24.61			20	20	95.0%	95.0%					0	

Until ENERGY STAR® Products Program - Appliances

Measure	Quantity					Annual Savings per Unit kWh					Measure Life					In-Service / Realization Rate		Total Lifetime Savings kWh					Annual Saving per Unit MMBtu					Lifetime Savings MMBtu										
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update						
Energy Star Clothes Washer	884	967	764	764	430	166	166	182	182	182	11	11	11	11	11	100%	100%	1,609,852	1,765,742	1,530,117	1,530,117	860,860	1	1							5,152	5,638						
Energy Star Room A/C	707	477	287	287	258	16	16	16	16	16	9	9	9	9	9	100%	100%	103,081	68,688	41,675	41,675	37,515																
Energy Star Central AC		12	3	3	4		110	110	110	109		14	14	14	14	100%	100%		18,529	4,632	4,632	6,103																
Energy Star Room A/C Turn-in/Recycle			0	0	5			18	18	16			5	5	5	100%	100%		0	0	0	404																
2nd Refrigerator Pickup (not replaced)	35	96	96	96	52	835	835	835	835	755	8	8	8	8	8	100%	100%	236,140	641,280	638,186	638,186	311,664																
Energy Star Refrigerator	682	817	631	631	430	114	114	107	107	40	12	12	12	12	12	100%	100%	932,642	1,117,656	809,617	809,617	204,491																
2nd Freezer Pickup	8	24	57	57	10	663	663	663	663	663	8	8	8	8	8	100%	100%	40,178	127,296	304,036	304,036	53,040																
Ductless Mini Split (Cooling only)					8					95					12	100%	100%		0	0	0	9,098																
Mini Split Heat Pump HSPF>=10, SEER >=18, EER>=12.5 cooling					25					274				18	18	12	100%	100%		0	0	82,280																
Mini Split Heat Pump HSPF>=10, SEER >=18, EER>=12.5 heating					25					1,148				18	8	12	100%	100%		0	0	344,361																
Mini Split Heat Pump HSPF>=8.5, SEER >=15, EER>=12.5 cooling			35	35	6			600	600	44				18	18	12	100%	100%			378,000	378,000	3,168															
Mini Split Heat Pump HSPF>=8.5, SEER >=15, EER>=12.5 heating			35	35	6			536	536	155				18	18	12	100%	100%			337,680	337,680	11,131															
DHW: Heat Pump Water Heater 50 Gallon Electric, EF>=2.3 (ES=EF>=2.0)	5	10	10	10	7	1,775	1,775	1,775	1,775	1,775	10	10	10	10	10	100%	100%	89,638	177,500	177,500	177,500	124,250																
DHW: Heat Pump Water Heater 80 Gallon Electric, EF>=2.3 (ES=EF>=2.0)	3	0	1	1	1	2,672		2,672	2,672	2,672	10		10	10	10	100%	100%	67,469	0	26,720	26,720	26,720																
Energy Star WiFi Thermostat for Heat Pumps					5					118				12	12	100%	100%					7,082																
Energy Star WiFi Thermostat for Mini Split and CAC					6					118				15	15	100%	100%			14,398	14,398	8,499																
Smartsstrip Power Strip	18	39	29	29	0	79	79	79	79	79	5	5	5	5	5	100%	100%	6,982	15,405	11,321	11,321	0																
Energy Star Room Air Cleaners & Purifiers	25	34	0	0	0	390	390	390	390	390				9	9	100%	100%	88,651	119,340	0	0	0																
Mini Split HP SEER 14.5, EER 12 HSPF 8.2 (Heating)	3	18				142	142				12	12				100%	100%	4,309	30,672																			
Mini Split HP SEER 14.5, EER 12 HSPF 8.2 (Cooling)	3	18				34	34				12	12				100%	100%	1,042	7,344																			
Mini Split HP SEER 19, EER 12.83 HSPF 10 (Heating)	8	50				751	751				12	12				100%	100%	68,267	450,600				5	5														
Mini Split HP SEER 19, EER 12.83 HSPF 10 (Cooling)	8	50				105	105				12	12				100%	100%	9,539	63,000																			
DHW: LP, Tankless Water Heaters (EF>= 0.82)	3	6				0	0				20	20				100%	100%	0	0				10															
DHW: LP, Tankless Water Heaters (EF>= 0.94) (added from Report)		10				0	0				20	20				100%	100%	0	0																			
DHW: LP, Indirect Water Heater (attached to LP Energy Star FHW boiler)	18	6				0	0				20	20				100%	100%	0	0				8															
DHW: Oil, Indirect Water Heater (attached to oil Energy Star FHW boiler)	18	19				0	0				20	20				100%	100%	0	0				8	8														
DHW: LP, Stand Alone Storage Water Heater (EF>=0.67)	5	0				0	0				13					100%	100%	0	0				4															
Boil: Oil, Combo condensing boiler w/ On-Demand DWH 90%		4				0	0				20					100%	100%						18	18														
Furn: LP, Furnace, FHA, AFUE >=95% w/ECM	10	4				168	168				18	18				100%	100%	30,543	12,096				5	5														
Furn: LP, Furnace, FHA, AFUE >=96% w/ECM	10	0				168					18					100%	100%	30,543	0				6															
Boiler, LP, FHW, AFUE >= 90%	18	7				0	0				20	20				100%	100%	0	0				10	10														
Boiler, LP, FHW, AFUE >=96%	3	8				0	0				20	20				100%	100%	0	0				13	13														
Boiler, Oil, FHW, AFUE >=85%	18	25				0	0				20	20				100%	100%	0	0				5	5														
Boiler, Oil, FHW, AFUE >=90%	10	1				0	0				20	20				100%	100%	0	0				11	11														
TSTAT: LP, 7-Day Programmable Thermostats	10	0				14	0				15					100%	100%	2,181	0				3															
TSTAT: Oil, 7-Day Programmable Thermostats	10	15				14	14				15	15				100%	100%	2,181	3,240				3	3														
TSTAT: WiFi Enabled 7-Day Programmable Thermostats		31					24				15	15				100%	100%		11,114				7	8														
BRC: LP, Boiler Reset Controls	3	0				0	0				15					100%	100%	0	0				5															
BRC: Oil, Boiler Reset Controls	3	2				0	0				15	15				100%	100%	0	0				5	5														
Steam Boiler (1 oil and 1 LP)		2					0					20				100%	100%		0				5	5														

Unitil Home Energy Assistance Program

Measure	Quantity					Annual Savings per Unit kWh					Measure Life					In-Service / Realization Rate		Total Lifetime Savings kWh					Annual Saving per Unit MMBtu					Lifetime Savings MMBtu						
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update		
CFLs	583	163				23	23				7	7				91%	100%	85,603	23,934															
LEDs		190	231	209	384		37	37	37	37		20	20	20		91%	100%		127,635	155,768	141,003	283,488												
Refrigerator - SF	67	28	10	9	2	821	859	939	939	762	12	12	12	12	12	91%	100%	597,679	263,225	99,063	89,673	18,288												
Refrigerator - MF					3					645						91%	100%					23,220												
Weatherization - SF	33	19	39	35	22	63	480	1,806	1,806	480	20	20	20	20	20	91%	93%	38,556	166,349	1,374,954	1,244,620	192,845	57	73									12,294	
Weatherization - MF	17	28			26	63	550			550	20	20			20	91%	93%	19,862	281,598			270,072	72	66									12,153	
DHW MF Non-Elec																91%	100%																	
DHW MF Elec	17	10			60	120	240			49	7	7			7	91%	100%	13,154	15,322			20,580												
DHW - Aerators and showerheads			27	24	3					49			7	7		91%	100%			9,036	8,179	10,500						1						
DHW Pipe Wrap										500						91%	100%																	
DHW Elec	1	6				140	86				7	7				91%	100%	903	3,294															
DHW Non-Elec	10	0				0	297				7	7				91%	100%						1											
DHW Gas																91%	100%																	
DHW Oil	10					0					7					91%	100%																	
Thermostats		12	10	9	5		41	126	126	126		9	15	15	15	91%	100%		4,446	16,616	15,041	9,979		2	1	1	1							
Furnace Replacement	7	15	6	5	8	168	168	90	90	248	18	18	18	18	18	91%	100%	18,671	45,360	9,145	8,278	35,661	18	5	23	23	12	2,045	1,133	2,320	2,100	1,673		
Boiler Replacement	7	1	3	3	1	168	0	132	132	132	20	20	15	15	20	91%	100%	21,450		5,797	5,797	2,640	18	0	17	17	18	2,349	0	729	729	368		
AC Ancillary Savings	51				48	39				34	9				20	91%	100%	16,166				32,640												
Heating Ancillary Savings					48					55					20	91%	100%					52,800												
Heat System Tune Up		2					0					5				91%	100%							2										

Unitil C&I Municipal Program

Measure	Quantity					Annual Savings per Unit (kWh)					Measure Life					Realization Rate		Total Lifetime Savings (kWh)					Annual Savings per Unit (MMBTU)					Total Lifetime MMBTU Savings						
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update		
Lighting - Fluorescents - Retro	15	2	5	4	2	30,435	5557	13,093	13,093	13,093	13	13	13	13	13	100%	100%	5,740,979	144,482	794,668	715,049	340,409												
Lighting LEDs - Retro		3	10	9	3		11662	24,732	24,732	24,732		13	13	13	13	100%	100%		454,818	3,098,304	2,787,881	964,548												
Central AC (Energy Star>=14.5 SEER), 3 ton	1	1				110	37,690				14	15				100%	100%	1,868	565,350															
Mini Split HP SEER 14.5, EER 12 HSPF 8.2 (Heating)	1					142					12					100%	100%	2,064																
Mini Split HP SEER 14.5, EER 12 HSPF 8.2 (Cooling)	1					34					12					100%	100%	499																
Mini Split HP SEER 19, EER 12.83 HSPF 10 (Heating)	2					751					12					100%	100%	21,797				5					142							
Mini Split HP SEER 19, EER 12.83 HSPF 10 (Cooling)	2					105					12					100%	100%	3,046																
Mini Split Heat Pump Cooling SEER 20			6	6	4			600	600	66			18	18	18	100%	100%			68,689	61,807	4,752												
Mini Split Heat Pump (+ Oil) SEER 20			3	3	4			536	536	409			18	18	18	100%	100%			30,706	27,629	29,464												
Mini Split Heat Pump (+ LP) SEER 20			3	3				536	536				18	18		100%	100%			30,706	27,629													
Boiler Replacement	6					0					25					100%	100%	-				42					6398							
Furnace Replacement (95% AFUE) w/ECM										168					25	100%	100%															9		
Furnace Replacement (97% AFUE) w/ ECM										168					25	100%	100%															9		
Condensing Boiler <=300 MBH 90% AFUE			3	3	3			0	0	0			25	25	25	100%	100%			0	0			31	31							31		
Condensing Boiler <=301-499 MBH 90% AFUE										0					25	100%	100%																58	
Condensing Boiler <=500-999 MBH 90% AFUE										0					25	100%	100%																107	
Condensing Boiler <=1000-1700 MBH 90% AFUE										0					25	100%	100%																197	
Condensing Boiler >1700 MBH 90% AFUE										0					25	100%	100%																345	
Indirect Water Heater	6					0					15				15	100%	100%	-				21					1879							
weatherization			2	2	4			188	188	188			18	18	18	100%	100%			6,768	6,768	13,536												
VFDs		2	1	1	1		53,269	77,000	77,000	77,000		15	13	13	13	100%	100%	1,598,070	964,618	867,972	1,001,000			35	35	35								
Custom			0	0	3			0	0	20,000			13	13	13	100%	100%			0	0	780,000												
Energy Star WiFi Thermostat for Mini Split only			3	4				110		118			15	15	15	100%	100%			4,937	7,082													
HPWH 50 Gallon Electric, EF>=2.3 (ES=EF>=2.0)			2	0	0			1,775	1,775	1,775			10	10	10	100%	100%			35,500	0	0												
HPWH 80 Gallon Electric, EF>=2.3 (ES=EF>=2.0)			0	0	0					2672					10	100%	100%			0	0	0												

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Unitil Large Business Energy Solutions Program

Measure	Quantity					Annual Savings per Unit (kWh)					Measure Life					Realization Rate		Total Lifetime Savings (kWh)					Annual Savings per Unit (MMBTU)					Total Lifetime MMBTU Savings						
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update		
NEW EQUIPMENT TRACK																																		
Lighting - Fluorescents - New	2				0	55,995					15					100%	100%	1,629,455															0	
Lighting LEDs - New			1	1	2			32,832	32,832				15	15	15	100%	104%			492,480	492,480					0						0	0	
HVAC	1				3	27,693					15			15		100%	104%	402,933														0		
Non-Lighting (Rolled Up)	2					75,529					15					100%	100%	2,469,798														0		
Compressed Air		2					211,443									100%	100%		6,343,290														0	
Motors		2					303,246									100%	100%		9,097,380														0	
VFDs	3	2				117,966					15					100%	100%	4,724,538		2,569,320													0	
Process		3			0	146,755					15					100%	100%		6,603,975														0	
RETROFIT TRACK																																		
Non Lighting (Rolled Up Average)	3				6	68,952					13					89%	100%	2,130,058															0	
Lighting - Fluorescents - Retro	4	2			6	143,306	210,598	130,887	130,887	130,887	13	13	13	13	13	89%	98%	6,831,168	4,873,238	10,677,249	10,677,249												0	
Freezer/Cooler LEDs	2	1			3	83,273	37,404				13	13				89%	100%	2,100,362	432,764															0
Lighting LEDs - Retro	2	7			3	86,473	165,077	109,080	109,080	109,080	13	13	13	13	13	89%	98%	2,181,074	13,369,586	4,591,507	4,591,507	5,536,028												0
Air Compressors - Retro					0		211,443	211,443	100,000			13	13	13	13	89%	98%			0	0	1,271,400											0	
VFD - Retro	5				2	48,606	115,500	115,500	115,500		13	13	13	13	13	89%	98%	2,868,094		3,241,163	3,241,163	4,405,401											0	
CFL Bulbs																89%	100%																0	
Motors																89%	100%																0	
Occupancy Sensors																96%																	0	
Custom - Process	1				0	346,458					15					89%	100%	4,625,214															0	
Custom - Other			5	5	4			246,500	246,500	246,500						189%	100%			19,155,563	19,155,563	14,790,000											0	

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Unitil Small Business Energy Solutions Program

Measure	2014					2015					2016					In-Service / Realization Rate		2016				
	Plan	Actual	Plan	Plan	Update	Plan	Actual	Plan	Plan	Update	Plan	Actual	Plan	Plan	Update	2014	2016	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Plan Update
Lighting Other	54	994			12	15,533	23				13	8			15	96.9%	100%	10,509,393	182,896			
Lighting - LEDs - New					12					18,000					13	100%	100%					3,240,000
Lighting LEDs - Retro	1	33	33	29	18	26,730	22,603	19,662	19,662	31,000	13	13	13	13	13	96.9%	100%	474,101	9,396,090	8,314,095	7,394,148	7,254,000
Lighting - Fluorescents - New					3					20,000					15	96.9%	100%					900,000
Lighting - Fluorescents - Retro		40	26	23	15	13,994	14,760	14,760	7,500	7,500	13	13	13	13	13	96.9%	100%		7,051,297	4,838,271	4,303,920	1,462,500
Non-Lighting	18					12,449					13					100.0%	100%	2,858,041				
Air Compressors		4					7,446			7,400		15			15	100.0%	100%		446,760			
VFD		3					41,540			40,000		13			13	96.9%	100%		1,620,047			
Energy Management System		2			0		10,738			10,000		15			15	96.9%	100%		322,125			
Air Conditioning	1	3			2	110	11,624			10,000	14	15			15	100.0%	100%	1,140	523,080			300,000
ECM		3					33,898			34,000		15			15	100.0%	100%		1,525,410			
Custom		1	6	6	6		9,538	4,276	4,276	4,000		20	13	13	13	100.0%	100%		190,767	333,528	333,528	312,000
Fuel Neutral Heating, Hot Water and Controls																						
Mini Split HP SEER 14.5, EER 12 HSPF 8.2 (Heating)	1					142					12					100.0%	100%	1,263				
Mini Split HP SEER 14.5, EER 12 HSPF 8.2 (Cooling)	1					34					12					100.0%	100%	305				
Mini Split HP SEER 19, EER 12.83 HSPF 10 (Heating)		2					751			750		12			12	100.0%	100%		18,024			
Mini Split HP SEER 19, EER 12.83 HSPF 10 (Cooling)		2					105			100		12			12	100.0%	100%		2,520			
On Demand Tankless Water Heater, EF >=0.82 EF																100.0%	100%					
On Demand Tankless Water Heater >=.95 EF																100.0%	100%					

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Unitil Gas Home Performance with ENERGY STAR®

Measure	Quantity					Annual Savings per Unit (MMBTU)					Measure Life					Installation or Realization Rate		Total Annual MMBTU Savings					Total Lifetime MMBTU Savings				
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014	2015 2016	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update
HPwES Air Sealing	19	27	25	24	38	11.60	16.70	12.27	12.27	8	15	15	15	15	15	100%	100%	220	451	306	297	314	3,306	6,764	4,588	4,448	4,703
HPwES Insulation	19	27	25	24	38	27.87	24.76	25.50	25.50	32	25	25	25	25	25	100%	100%	530	669	636	616	1,197	13,238	16,713	15,893	15,405	29,925
HPwES Thermostats	10	1	5	5	2	5.75	1.68	3.20	3.20	3	15	15	15	15	15	100%	100%	58	2	16	16	6	863	25	239	244	96
HPwES showerheads					4					1					7	100%	100%					5					32
HPwES DHW ISMs (aerators)	4	9	12	13	20	7.01	0.63	1.20	1.20	0.2	7	7	7	7	7.0	100%	100%	28	6	15	15	4	196	40	105	107	28

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Unitil Gas ENERGY STAR Appliances

Measure	Quantity					Annual Savings per Unit (MMBTU)					Measure Life					Installation or Realization Rate		Total Annual MMBTU Savings					Total Lifetime MMBTU Savings					
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	
Boiler Reset Controls	8	1	4	4	4	5	5	5	5	5	15	15	15	15	15	100%	100%	36	5	18	19	18	540	68	275	291	275	
Boiler (forced hot water) >= 95% AFUE	72	68	41	52	58	13	13	12	12	14	20	20	20	20	20	100%	100%	936	891	489	621	793	18,720	17,816	9,775	12,417	15,851	
Boiler (forced hot water) 90% AFUE	20	15	61	56	45	10	10	14	14	11	20	20	20	20	20	100%	100%	208	156	849	779	490	4,160	3,120	16,985	15,581	9,790	
Furnace (forced hot air) >=95% AFUE w/ECM	52	30	33	22	36	5	5	16	16	16	18	18	18	18	18	100%	100%	234	135	518	343	566	4,212	2,430	9,326	6,170	10,189	
Furnace (forced hot air) >= 97% AFUE w/ECM			29	34	27			17	17	17			18	18	18	100%	100%			493	597	462			8,879	10,741	8,314	
Combo water heater/condensing boiler >=90%		10	33	22	27			24	24	24			20	20	20	100%	100%		240	776	513	635			4,800	15,510	10,261	12,709
Combo water heater/condensing boiler >=95%		32	8	9	9			24	24	24			20	20	20	100%	100%		762	194	205	212			15,232	3,878	4,104	4,236
On-Demand Tankless Water Heaters (EF 0.94)	60	45	37	39	61	10	10	11	11	11	20	20	19	19	19	100%	100%	618	464	385	407	642	12,360	9,270	7,313	7,741	12,207	
Indirect Water Heater (attached to EStar FHW boiler)	48	40	41	43	45	8	8	8	8	8	20	20	20	20	20	100%	100%	384	320	326	345	356	7,680	6,400	6,517	6,898	7,120	
Programmable Thermostats (Energy Star)	100	202	57	43	150	3	3	3	3	3	15	15	15	15	15	100%	100%	320	646	182	138	480	4,800	9,696	2,737	2,069	7,200	
Wi-Fi Thermostats (controls gas heat only)	44		41	34	35	7		7	7	7	15	15	15	15	15	100%	100%	290		269	228	231	4,356		4,032	3,415	3,465	
Wi-Fi Thermostats (controls elec cooling & gas heat)		39	4	4	14			7	7	7			15	15	15	100%	100%		257	27	28	92			3,861	403	427	1,386
Heat Recovery Ventilator		2	0	2				8	8				20	20		100%	100%		0	0	15				0	0	308	
Energy Star Storage Water Heater (0.67 EF)	12	116	2	4		4	4	4	4		13	13	12	12		100%	100%	44	429	9	18		566	5,580	103	217		
On-Demand Tankless Water Heaters (EF 0.82)	48	23	61	65		10	10	10	10		20	20	19	19		100%	100%	466	223	623	660		9,312	4,462	11,840	12,533		
Furnace (forced hot air) >= 97% AFUE (6%)	4	11				6	6				18	18				100%	100%	24	65				425	1,168				
Integrated water heater/condensing boiler	24					18					20	20				100%	100%	427					8,544					

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Unitil Gas ENERGY STAR® Homes

Measure	Quantity					Annual Savings per Unit (MMBTU)					Measure Life					Installation or Realization Rate		Total Annual MMBTU Savings					Total Lifetime MMBTU Savings				
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014	2015 2016	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update
RNC ES Homes (Heating)	13	11	13	13	11	45	69	36	36	48	25	25	25	25	25	100%	100%	587	757	462	455	528	14,677	18,934	11,540	11,374	13,200
RNC ES Homes (Cooling)	7	8	6	6	11	0	0	0	0	0	25	25	25	25	25	100%	100%	0	0	0	0	0	0	0	0	0	0
RNC ES Homes (Water Heating)	13	11	13	13	11	12	6	5	5	5	15	15	15	15	15	100%	100%	153	63	58	57	52	2,298	945	868	856	776
RNC Clotheswashers	4	5	3	3	3	10	10	3	3	10	11	11	11	11	11	100%	100%	42	51	11	11	30	465	556	117	116	333
RNC Dishwashers	8	9	4	4	0	2	2	2	2	2	10	10	10	10	0	100%	100%	13	14	6	6	0	127	135	63	62	0
RNS Refrigerators		9	6	6	5								12	12	12	100%	100%										
RNC LEDs			154	151	55									19	19	20	100%	100%									
RNC CFLs		54														100%	100%										

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Unitil Gas Home Energy Assistance Program

Measure	Quantity					Annual Savings per Unit (MMBTU)					Measure Life					Installation or Realization Rate		Total Annual MMBTU Savings					Total Lifetime MMBTU Savings				
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014	2015 2016	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update
Air Sealing (SF or SF+MF)	30	6	45	45	19	13	17	7	7	9	15	15	15	15	15	100%	100%	392	103	316	317	170	5,883	1,547	4,736	4,751	2,553
Insulation (SF or SF+MF)	30	6	45	45	19	30	15	19	19	29	25	25	25	25	25	100%	100%	884	92	857	860	557	22,103	2,309	21,437	21,505	13,920
Air Sealing MF	13	82			13	6	3			4	15	15			15	100%	100%	79	247			49	1,186	3,702			730
Insulation MF	13	82			13	9	14			12	25	25			25	100%	100%	113	1,149			156	2,823	28,721			3,904
DHW ISMs (aerators & pipewrap)	22	24	4	4	32	6	1	4	4	1	7	7	7	7	7	100%	100%	135	26	19	19	17	942	185	134	134	121
Furnace Replacement w/ECM Motor	4		1	1	4	30		23	23	23	20		18	18	18	100%	100%	135		23	23	92	2,695		413	413	1,650
Boiler Replacement		1	2	2	2			31	23	23			20	20	20	100%	100%		31	46	46	46		629	921	921	921
Thermostats	13	4	5	5	8	8	2	7	7	3	15	15	15	15	15	100%	100%	103	9	33	33	26	1,540	133	493	493	384
Non-Energy Saving Measures		64	34	34	32	0	0	0	0	0			1	1	1	100%	100%		0	0	0	0		0	0	0	0
LED bulbs			268	269	0									20	20	100%	100%			0	0	0			0	0	0

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Unitil Gas Small Business Energy Solutions

Measure	Quantity					Annual Savings per Unit (MMBTU)					Measure Life					Installation or Realization Rate		Total Annual MMBTU Savings					Total Lifetime MMBTU Savings				
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update
RETROFIT TRACK																											
Custom HVAC			6	6	5			147	147	300			25	25	25	100%	100%			864	836	1,500			21,609	20,899	37,500
Custom Water			4	4	3			30	30	45			15	15	15	100%	100%			119	115	135			1,791	1,732	2,025
On demand, Tankless Water Heater >=.82		7		2			6	7	7			20	20	20	20	100%	100%		43		15			854		295	
Furnace 95+ AFUE (<150) w/ECM Motor		5					4	9	9			18	18	18	18	100%	100%		22					387			
Custom SCI Weatherization	4	3				141	132					25	25			100%	100%	520	395				13,006	9,868			
Custom Heating / Water Heating Equipment	1					307						15				100%	100%	283					4,244				
Condensing boiler <= 300 mbh (90% AFUE)														20		100%	100%										
Infrared								48	48					17	17	20	100%	100%									
Fryers														20		100%	100%										
Boiler >=96% AFUE, <= 300 mbh								29	29					25	25	20	100%	100%									
High Efficiency Gas Convection Oven (>=44% efficiency)														20		100%	100%										
Boiler Reset Controls (all now in Gas Networks)														20		100%	100%										
NEW EQUIPMENT TRACK (Gas Networks)																											
Thermostat - Standard, 7-Day Programmable	4	20	22	25	22	8	8	8	8	8	15	15	15	15	15	100%	100%	30	154	171	192	171	450	2,310	2,561	2,878	2,561
Steam Trap			4	2	6			26	26	26			3	3	3	100%	100%			91	64	154			274	192	463
On demand, Tankless Water Heater >=.94	7	14	2		10	9	8	9	9		20	20	20	20	20	100%	100%	66	109	19	64	94	1,316	2,170	376	1,880	
Kitchen - Pre Rinse Spray Valve			9	4				13	13	13			5	5	5	100%	100%			112	52				559	262	
Kitchen - Gas Steamer (Energy Star >=38% efficiency)								107	107	107			12	12	12	100%	100%										
Kitchen - Gas Griddle			1	0	1			19	19	19			12	12	12	100%	100%			19	0	19			222	0	222
Kitchen - Gas Conveyer Oven (>=44% efficiency)								85	85	85			12	12	12	100%	100%										
Kitchen - Gas Convection Oven (>=44% efficiency)	7	1	4	3	2	31	31	31	31	31	12	12	12	12	12	100%	100%	214	31	109	102	61	2,570	367	1,303	1,220	734
Kitchen - Gas Combination Oven (>=44% efficiency)								110	110	110			12	12	12	100%	100%										
Kitchen - Fryers	7	3	3	5	4	59	59	59	59	59	12	12	12	12	12	100%	100%	410	176	156	292	234	4,922	2,110	1,871	3,505	2,813
Integrated water heater/condensing boiler (0.9 EF, 0.9 AFUE)		2						25	25	25			20	20	20	100%	100%		49						984		
Infrared Heaters	13	4			2	48	48			48	17	17		17		100%	100%	628	193			97	10,674	3,284		1,642	
Furnace 97+ AFUE (<150) w/ECM Motor								10	10	10			18	18	18	100%	100%										
Furnace 95+ AFUE (<150) w/ECM Motor		5					4			9				18		100%	100%		22						387		
Convection Oven		1					31							12		100%	100%		31						367		
Condensing Unit Heaters		11		8			41	41	41	41			18	18	18	100%	100%		450		340				8,098	6,115	
Condensing Stand Alone >95% TE, >75000 btu			11		12			25	25	25			15	15	15	100%	100%			266		300			3,991	4,500	
Condensing boiler 500-999 mbh 90% AFUE		5	18	21	15		103	107	107	107			25	25	25	100%	100%		515	1,903	2,228	1,610		12,875	47,581	55,706	40,238
Condensing boiler 301-499 mbh 90% AFUE	27	8	2	3	8	56	56	58	58	58	25	25	25	25	25	100%	100%	1,515	449	117	175	467	37,868	11,220	2,920	4,380	11,680
Condensing boiler 1701+ mbh 90% AFUE			1					345	345	345			25	25	25	100%	100%			345	0				8,628	0	
Condensing boiler 1000-1700 mbh 90% AFUE			2	1	1			197	197	197			25	25	25	100%	100%			394	197	197			9,860	4,930	4,930
Condensing boiler <= 300 mbh 90% AFUE	12	10	3	3	6	23	23	31	31	31	25	25	25	25	25	100%	100%	274	228	92	92	184	6,840	5,700	2,295	2,295	4,590
Condensing Boiler <= 300 mbh >=96% AFUE	27	17		2	2	29	29	28	28	28	25	25	25	25	25	100%	100%	791	498		56	56	19,778	12,453		1,390	1,390
Combo Boiler-Water Heater AFUE >=85% (EF=.82)	7	8	9	10	1	21	21	19	19	19	15	15	15	15	15	100%	100%	145	166	169	189	19	2,174	2,484	2,528	2,841	285
Boiler Reset Controls	5		4	2	0	36		36	36	36	15		15	15	15	100%	100%	178		157	88	0	2,663	2,361	1,327	0	

Note: In an effort to better match planning, reporting, and modeling, the Company is adding, amending, and/or updating some measure names from previously filed versions of this attachment.

September 30, 2015

000100

Unitil Gas Large Business Energy Solutions

Measure	Quantity					Annual Savings per Unit (MMBTU)					Measure Life					Installation or Realization Rate		Total Annual MMBTU Savings					Total Lifetime MMBTU Savings								
	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014	2015	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update	2014 Plan	2014 Actual	2015 Plan	2016 Plan	2016 Update				
RETROFIT TRACK																															
C&I Retrofit Custom Multi-Family	5					4,132					18					100%		20,551					369,925								
Custom HVAC		3	1	1	2		1,452	2,373	2,373	2,100		25	15	15	15	100%	91%		4,355	2,820	2,820	3,818		108,880	42,306	42,306	57,267				
Custom Process		5	1	1	3		2,808	9,450	9,450	3,500		15	15	15	15	100%	91%		14,038	9,190	9,190	9,545		210,575	137,855	137,855	143,168				
Custom Hot Water		4	1	1	3		28	6,000	6,000	780		15	20	20	20	100%	91%		110	8,645	8,645	2,127		1,650	172,893	172,893	42,541				
Custom Steam Traps		36					32					3				100%			1,161					3,483							
NEW EQUIPMENT TRACK																															
Furnace 94+ AFUE w/ECM Motor						0					18					100%	100%														
Furnace 95+ AFUE (<150) w/ECM Motor						4		9	9	9	18		18	18	18	100%	102%													0	
Furnace 97+ AFUE (<150) w/ECM Motor								10	10	10			18	18	18	100%	102%					0								0	
Condensing boiler <= 300 mbh 90% AFUE					2			31	31	31			25	25	25	100%	102%					62								1,562	
Condensing boiler 301-499 mbh 90% AFUE								58	58	58			25	25	25	100%	102%					0								0	
Condensing boiler 500-999 mbh 90% AFUE								107	107	107			25	25	25	100%	102%					0								0	
Condensing boiler 1000-1700 mbh 90% AFUE	4		2	2		189		197	197	197	25		25	25	25	100%	102%	757		344	344	0	18,920		8,593	8,593				0	
Condensing boiler 1701+ mbh 90% AFUE	3		2	2	1	331		345	345	345	25		25	25	25	100%	102%	994		752	752	352	24,840		18,798	18,798				8,809	
Condensing Boiler <= 300 mbh >=96% AFUE					2			28	28	28			25	25	25	100%	102%					57								1,419	
Infrared						48		48	48	48	17		17	17	17	100%	102%					0								0	
On demand, Tankless Water Heater >=.82	1					7		7	7	7	20		20	20	20	100%	102%	7				0	142							0	
On demand, Tankless Water Heater >=.94	1					10		9	9	9	20		20	20	20	100%	102%	9				0	180							0	
Combo Boiler-Water Heater AFUE >=85% (EF=.82)			1	1	5			19	19	19	15		15	15	15	100%	102%			25	25	97			373	373				1,455	
Condensing Stand Alone >95% TE, >75000 btu						25		25	25	25	15		15	15	15	100%	102%					0								0	
WATER HEATER TANK 0.67 EF								3	3	3			13	13	13	100%	102%					0								0	
Integrated water heater/condensing boiler (0.9 EF, 0.9 AFUE)								25	25	25			20	20	20	100%	102%					0								0	
Condensing Unit Heaters						41		41	41	41	18		18	18	18	100%	102%					0								0	
Boiler Reset Controls						0		36	36	36	20		15	15	15	100%	102%					0								0	
Kitchen - Fryers								59	59	59			12	12	12	100%	102%					0								0	
Kitchen - Gas Steamer (Energy Star >=38% efficiency)						107		107	107	107	12		12	12	12	100%	102%					0								0	
Kitchen - Gas Convection Oven (>=44% efficiency)	1				1	31		31	31	31	12		12	12	12	100%	102%	31				31	367							375	
Kitchen - Gas Combination Oven (>=44% efficiency)								110	110	110			12	12	12	100%	102%					0								0	
Kitchen - Gas Conveyer Oven (>=44% efficiency)								85	85	85	12		12	12	12	100%	102%					0								0	
Kitchen - Gas Rack Oven (>=50% efficiency)								211	211	211	12		12	12	12	100%	102%					0								0	
Kitchen - Gas Griddle						19		19	19	19	12		12	12	12	100%	102%					0								0	
Steam Trap					18	0		26	26	26	3		3	3	3	100%	102%					472								1,417	
Kitchen - Pre Rinse Spray Valve			4	4	5	13		13	13	13	5		5	5	5	100%	102%			49	49	64			247	247				322	
Thermostats						8				8	0		15	15	15	100%	102%					0								0	
Hydronic Boiler (301-499 mbh)						0					0					100%	100%					0								0	
Custom Projects																100%	100%					0								0	

Note: In an effort to better match planning, reporting, and modeling, the Company is adding, amending, and/or updating some measure names from previously filed versions of this attachment.

Attachment M: Summary of Material Changes

Topic	Description of Change
Program Design, Evolution, Measure and Incentive Changes	
<p>Avoided Energy Supply Costs</p>	<ul style="list-style-type: none"> ▪ Utilized the avoided costs from the <i>Avoided Energy Costs in New England: 2015 Report</i>¹, issued March 27, 2015 and revised April 3, 2015. ▪ Reflects the following avoided energy supply cost changes (on a levelized basis – assuming an average 13 year measure life for electric savings, 18 year measure life for fossil savings): <ul style="list-style-type: none"> • \$/kWh: Winter peak (-1.6%) and winter off-peak energy costs (+0.8%) • \$/kWh: Summer peak (-10.0%) and off-peak energy costs (-12.1%) • \$/kW: Summer generation costs (+46.1%) • \$/MMBtu: Natural Gas for residential buildings (-4.3%) • \$/MMBtu: Natural Gas for residential hot water (+1.6%) • \$/MMBtu: Commercial & Industrial gas heat (+9.1%) • \$/MMBtu: Residential Oil (-31.8%) • \$/MMBtu: Liquid Propane (-35.0%) • \$/MMBtu: Kerosene (-32.3%) • \$/MMBtu: Wood (-33.4%) • \$/Gallon: Water / Sewer costs (-0.2%)
<p>ENERGY STAR Products Program (Lighting, Appliances and Electric Heating/Cooling and Hot Water Systems)</p>	<ul style="list-style-type: none"> ▪ Will utilize lighting product markdowns for those retailers that no longer allow rebates / coupons. ▪ Eliminated incentives for Advanced Power Strips as they are no Energy Star certified, but will continue to market through the online catalog. ▪ Reduced rebate on Energy Star refrigerators from \$30 to \$20 due to a decrease in incremental cost per Energy Star calculations.

¹ <http://www.puc.state.nh.us/Electric/Monitoring%20and%20Evaluation%20Reports/merged%20report.pdf>

Home Performance with ENERGY STAR	<ul style="list-style-type: none"> Increased customer cost from 50% to 100% for certain measures that are not cost-effective, such as bathroom fans for ventilation and certain types/applications of insulation.
ENERGY STAR Homes	<ul style="list-style-type: none"> Eliminated incentives for Energy Star dishwashers as they have become standard practice in new homes.
Changes in Savings Assumptions	
Home Energy Assistance Program	<ul style="list-style-type: none"> Revised annual electric and MMBTU savings to reflect more current projects modeled by the Community Action Agencies in the TREAT software. Measure lives updated to reflect more current projects/measure mix. Average project costs were adjusted to reflect 2014 and 2015 actual project results.
ENERGY STAR Products (Lighting & Appliances)	<ul style="list-style-type: none"> Updated annual energy savings for Central AC and Air Source Heat Pumps to reflect changes in baseline equipment due to changes to the federal standards². Updated annual energy savings for refrigerators based on the new minimum federal standards and the Energy Star calculator.
Large Business Energy Solutions Program	<ul style="list-style-type: none"> Updated annual energy savings by measure to reflect more recent (2014 and 2015) projects. Updated the In-Service or Realization Rate to reflect the average of the New Equipment/Construction and Retrofit Track per DNV-GL's 2015 impact evaluation.
Small Business Energy Solutions Program	<ul style="list-style-type: none"> Updated annual energy savings by measure to reflect more recent (2014 and 2015) projects.
Municipal Program	<ul style="list-style-type: none"> Updated annual energy savings by measure to reflect more recent (2014 and 2015) projects.

² http://www1.eere.energy.gov/buildings/appliance_standards/product.aspx/productid/75#standards

Eversource's RFP Program	<ul style="list-style-type: none"> ▪ Updated annual energy savings by measure to reflect more recent (2014 and 2015) projects.
Changes in Funding Sources	
Third Party Financing	<ul style="list-style-type: none"> ▪ All electric and gas utilities to partner with CDFA on 3rd party loan buy downs through the Better Buildings Program. CORE program funding may be utilized for loan buy downs if an energy efficiency project does not meet the federal Better Buildings project guidelines or if the CDFA funds are fully expended.
Eversource's Customer Engagement Platform Carryover	<ul style="list-style-type: none"> ▪ Carried over the unspent 2015 Customer Engagement Platform (CEP) funding balance of \$462,540 to the 2016 CEP program funding. (The CEP funding was transferred from the SBC funds that were set aside in compliance with RSA 125-O:5 for energy efficiency projects at Eversource's facilities to the 2015 program year for the distinct purpose of implementing the CEP.)
Unitil's On-Bill Financing funding moved to Residential sector	<ul style="list-style-type: none"> ▪ Unitil to transfer \$65,000 from unspent on-bill financing funds from 2014 to the Residential Home Performance with ENERGY STAR Program (electric).

**NH CORE PROGRAMS
 2016 Statewide Goals
 CORE & Company-Specific Programs**

Description	Program Budget ⁽¹⁾	kWh Savings		MMBtu Savings		Customers Count
		Annual	Lifetime	Annual	Lifetime	
<u>Electric Utilities</u>						
CORE Programs						
Municipal Program	\$ 1,997,519	4,204,201	55,800,970	1,718	40,231	304
All Other CORE Programs	20,283,937	45,179,562	641,080,580	49,379	919,583	95,087
Sub-total	\$ 22,281,456	49,383,763	696,881,550	51,097	959,814	95,391
Company Specific Programs ⁽²⁾	1,922,949	3,703,864	30,049,504	-	-	25,012
Total Electric	\$ 24,204,405	53,087,627	726,931,054	51,097	959,814	120,403
<u>Gas Utilities</u>						
CORE Programs	\$ 6,616,462	35,464	777,625	134,052	2,317,628	3,895
Company Specific Programs ⁽²⁾	353,000	-	-	18,440	55,320	25,000
Total Gas	\$ 6,969,462	35,464	777,625	152,492	2,372,949	28,895
Grand Total	\$ 31,173,867	53,123,091	727,708,679	203,589	3,332,762	149,298

Notes:

(1) Program budgets shown in this report exclude the performance incentive (PI).

(2) Company-specific includes company-specific programs, education, forward capacity market administration and loan program administration.

**NH CORE PROGRAMS
 2016 Statewide Goals
 CORE Programs⁽¹⁾**

Description	Program Budget	kWh Savings		MMBtu Savings		Customers Count
		Annual	Lifetime	Annual	Lifetime	
<u>Electric Utilities</u>						
Residential						
Home Energy Assistance	\$ 3,792,905	633,281	11,344,505	11,531	233,853	465
NH Home Performance w/Energy Star	2,713,849	400,760	7,344,167	17,172	344,115	706
EnergyStar® Homes	1,392,348	1,377,458	33,219,594	7,549	187,361	376
EnergyStar® Products	2,786,170	9,369,655	140,876,838	13,127	154,254	92,446
Sub-total	\$ 10,685,273	11,781,154	192,785,104	49,379	919,583	93,994
Commercial & Industrial						
Large Business Energy Solutions	\$ 6,263,398	23,397,144	317,150,245	-	-	397
Small Business Energy Solutions	3,335,266	10,001,264	131,145,231	-	-	696
Municipal Program	1,997,519	4,204,201	55,800,970	1,718	40,231	304
Sub-total	\$ 11,596,183	37,602,609	504,096,446	1,718	40,231	1,397
Total Electric	\$ 22,281,456	49,383,763	696,881,550	51,097	959,814	95,391
<u>Gas Utilities</u>						
Residential						
Home Energy Assistance	\$ 1,103,884	9,792	236,109	7,451	147,451	338
NH Home Performance w/Energy Star	793,555	-	-	16,783	339,937	609
EnergyStar® Homes	153,750	14,291	339,322	2,209	54,292	52
EnergyStar® Products	1,330,243	11,378	202,151	20,568	354,396	1,926
Sub-total	\$ 3,381,432	35,462	777,583	47,011	896,077	2,925
Commercial & Industrial						
Large Business Energy Solutions	\$ 1,813,308	-	-	64,097	984,114	312
Small Business Energy Solutions	1,421,722	2,3520	42,3360	22,944	437,438	658
Sub-total	\$ 3,235,030	2	42	87,041	1,421,552	970
Total Gas	\$ 6,616,462	35,464	777,625	134,052	2,317,628	3,895
Grand Total	\$ 28,897,919	49,419,227	697,659,175	185,149	3,277,442	99,286

Notes:

(1) Amounts shown above pertain only to the CORE programs. The amounts pertaining to the Company-Specific programs are shown on Attachment N, page 3.

**NH CORE PROGRAMS
 2016 Statewide Goals
 Company-Specific Programs ⁽¹⁾**

Description	Program Budget	kWh Savings		MMBtu Savings		Customers Count
		Annual	Lifetime	Annual	Lifetime	
Electric Utilities						
Residential						
Home Energy Reports	\$ 251,006	1,755,681	5,267,042	-	-	25,000
Customer Engagement Platform	235,002	-	-	-	-	-
Education	52,776	-	-	-	-	-
Revolving Loan Fund	-	-	-	-	-	-
Forward Capacity Market Expenses ⁽²⁾	76,500	-	-	-	-	-
Sub-total	\$ 615,285	1,755,681	5,267,042	-	-	25,000
Commercial & Industrial						
Smart Start	\$ 52,000	-	-	-	-	-
C&I Customer Partnerships	18,919	-	-	-	-	4
C&I RFP Program	431,355	1,948,183	24,782,462	-	-	2
Customer Engagement Platform	345,537	-	-	-	-	-
Education	301,354	-	-	-	-	6
Forward Capacity Market Expenses ⁽²⁾	158,500	-	-	-	-	-
Sub-total	\$ 1,307,664	1,948,183	24,782,462	-	-	12
Total Residential and C&I	\$ 1,922,949	3,703,864	30,049,504	-	-	25,012
Gas Utilities						
Residential						
Building Practices & Demonstration	\$ 298,000	-	-	18,440	55,320	25,000
Education	17,000	-	-	-	-	-
Sub-total	\$ 315,000	-	-	18,440	55,320	25,000
Commercial & Industrial						
Building Practices & Demonstration	\$ -	-	-	-	-	-
Education	38,000	-	-	-	-	-
Sub-total	\$ 38,000	-	-	-	-	-
Total Residential and C&I	\$ 353,000	-	-	18,440	55,320	25,000
Grand Total	\$ 2,275,949	3,703,864	30,049,504	18,440	55,320	50,012

Notes:

- (1) Amounts shown above pertain only to the Company-Specific programs. The amounts pertaining to the CORE programs are shown on Attachment N, page 2. Company-specific includes company-specific programs, education, forward capacity market administration and loan program administration.
- (2) Amounts shown are budgeted expenses related to the electric utilities' participation in ISO-NE's Forward Capacity Market.



WHEN NEW HAMPSHIRE SAVES, *we all win.*

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