Cape Light Compact

Term Report on
Energy Efficiency Activities
for 2013–2015

Submitted to the
Massachusetts Department of Public Utilities
and the Massachusetts Department of Energy Resources
August 1, 2016

Cape Light Compact

D.P.U. 16-127

2013–2015 Energy Efficiency Term Report

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INTRODUCTION

The Cape Light Compact ("Compact")[1] is pleased with the results of its 2013-2015 Three-Year Energy Efficiency Plan ("2013-2015 Three-Year Plan"), the second of such plans envisioned by the Green Communities Act ("GCA") and approved by the Department of Public Utilities ("Department" or "DPU"). The Compact and the other Massachusetts Energy Efficiency Program Administrators (the "Program Administrators" or "PAs")[2] diligently implemented their respective plans over the past three years, successfully meeting their three-year goals. Program Year 2015 continued to build on the nationally acclaimed accomplishments of the 2013 and 2014 plan-years and the 2010–2012 Three-Year Energy Efficiency Plan ("2010–2012 Three-Year Plan"). Over the course of the three years, the Compact's programs showed remarkable success with respect to goal attainment and achievement of real benefits for the environment and the economy in the Commonwealth of Massachusetts. The Compact met its planned three-year savings and benefit goals by the end of 2015, while maintaining the balance between meeting the budget for its program and complying with the directives of the GCA in ensuring that it makes available all cost-effective energy efficiency opportunities.[3]

Notable awards and accomplishments for the Compact's energy efficiency programs in 2013 and 2014 are identified in the Compact's 2013 Energy Efficiency Plan-Year Report ("2013 Plan-Year Report") (D.P.U. 14-87) and the Compact's 2014 Energy Efficiency Plan-Year Report ("2014 Plan-Year Report") (D.P.U. 15-49), respectively. For 2015, the Compact enjoyed the following successes:

- Surpassing the 2015 lifetime MWh savings goals for each of its three customer sectors
- Receipt of the ENERGY STAR Partner of the Year 2015 The Lighting & Products Sponsors of Mass Save® Award
- Receipt of the ENERGY STAR Partner of the Year 2015 Sustained Excellence Award

[1] The Compact is an inter-governmental association and municipal aggregator formed pursuant to G.L. c. 164, s. 134. At this time, the Compact is the only municipal aggregator administering energy efficiency in the Commonwealth.

[2] The Massachusetts Program Administrators are: Bay State Gas Company d/b/a Columbia Gas of Massachusetts, The Berkshire Gas Company, Blackstone Gas Company, Cape Light Compact, Fitchburg Gas and Electric Light Company d/b/a Unitil, National Grid, Liberty Utilities, and Eversource.

[3] In previous annual reports, the Compact provided information on its financial reports. The Compact continues to provide its financial reports on its website at: http://www.capelightcompact.org/reports/.

- Receipt of the following 2015 National Energy Education Development Program State and National Youth Awards:
    - Eastham Elementary School: Elementary Level State School of the Year
    - Harwich Cares, Harwich Middle School: Junior Level State School of the Year and National Junior Level Finalist
    - Martha's Vineyard Regional High School: Senior Level State School of the Year
- Completion of its territory-wide LED Streetlight Initiative, which began in 2013 with demonstration installations and moved into full implementation in 2014. When the last installations were completed in 2015, more than 15,000 streetlights had been upgraded to LEDs, with an estimated lifetime energy savings of more than 49 GWh—48 percent greater than originally expected.
- Completion of its first Combined Heat and Power ("CHP") project since the start of the statewide three-year plans.
- Participation of the largest Commercial and Industrial ("C&I") Comprehensive Design Approach ("CDA") New Construction project in its territory to date - the Monomoy Regional High School received more than a half a million dollars in energy efficiency funds from the Compact, and is estimated to deliver 505 MWh of annual energy savings.

The results for all three years of the 2013–2015 Three-Year Plan, presented in this 2013–2015 Term Report ("Term Report"), indicate that the Compact achieved its total three-year goals by the end of 2015. Over the three-year term, the Compact has achieved:

- cost-effective programs with a benefit-cost ratio ("BCR") of 3.23;
- net benefits of $275 million;
- annual energy savings of 132 GWh;
- lifetime energy savings of 1,407 GWh;
- total benefits of $398 million; and
- program costs of $101 million.

PART ONE – DATA TABLES

Energy Efficiency Term Report Data Tables

Overview

D.P.U. 16-127

Cape Light Compact

Part One

August 1, 2016

H.O.s Leupold and Hale

OVERVIEW

The following data tables provide a summary of the Program Administrator's benefits, costs, savings, and cost-effectiveness for 2013 through 2015. The 2013 through 2015 planned values are consistent with each Program Administrator's 2013-2015 Three-Year Plan. The 2013 through 2015 evaluated values are consistent with each Program Administrator's 2013-2015 Term Report.

SELECTIONS

By default, these data tables are set to show 2013-2015 total values, and compare planned to evaluated. These parameters can be adjusted by following the instructions provided on the "Selections" tab and changing the options on that tab.

BENEFIT-COST SCREENING MODEL

The primary supporting models used by the Program Administrators in preparing these data tables are the Benefit-Cost Screening models for each year in 2013 through 2015. The Benefit-Cost Screening models provide measure level savings and benefits, and are provided at Appendix A.

CORRECTIONS TO 2013 AND 2014

In performing a complete data review for this Term Report, the Program Administrators have updated certain limited data from 2013 and 2014 to correct errors. The data tables filed in this Term Report represent the final values for all three years. Additionally, updated Benefit-Cost Screening models for 2013 and 2014 that correspond to the final data tables are included at Appendix A.

Program Administrator Budget

2013-2015 Planned vs. Evaluated

Cape Light Compact

August 1, 2016

D.P.U. 16-127

Part One

H.O.s Leupold and Hale

Planned Budget									
Program Administrator Budget									
Program	PA Costs						Performance Incentive	Total PA Budget	PA Cost per Participant
	Program Planning and Administration	Marketing and Advertising	Participant Incentive	Sales, Technical Assistance & Training	Evaluation and Market Research	Total PA Costs			
Residential	**1,936,701**	**1,774,738**	**31,986,074**	**5,414,966**	**1,493,503**	**42,605,982**	**-**	**42,605,982**	**$ 180**
1. Residential Whole House	1,309,331	550,846	25,961,708	2,741,094	1,204,239	31,767,218	-	31,767,218	$ 1,213
Residential New Construction & Major Renovation	65,438	45,525	1,060,550	380,430	21,186	1,573,129	-	1,573,129	$ 4,696
Residential Multi-Family Retrofit	64,757	45,449	1,326,178	118,811	96,008	1,651,204	-	1,651,204	$ 1,032
Residential Home Energy Services	1,179,136	459,872	23,442,980	2,241,853	1,087,045	28,410,885	-	28,410,885	$ 1,556
Residential Behavior/Feedback Program	-	-	132,000	-	-	132,000	-	132,000	$ 22
2. Residential Products	342,854	482,336	5,814,366	1,506,873	255,095	8,401,524	-	8,401,524	$ 40
Residential Cooling & Heating Equipment	95,655	64,010	1,855,875	272,871	40,912	2,329,323	-	2,329,323	$ 433
Residential Lighting	186,128	329,620	3,070,791	824,537	169,941	4,581,017	-	4,581,017	$ 26
Residential Consumer Products	61,072	88,706	887,700	409,464	44,242	1,491,183	-	1,491,183	$ 56
3. Residential Hard-to-Measure	284,516	741,556	210,000	1,167,000	34,168	2,437,240	-	2,437,240	
Residential Statewide Marketing	-	366,556	-	-	-	366,556	-	366,556	
Residential DOER Assessment	267,402	-	-	-	34,168	301,570	-	301,570	
Residential EEAC Consultants	-	-	-	-	-	-	-	-	
Residential Sponsorship & Subscriptions	17,114	-	-	-	-	17,114	-	17,114	
Residential HEAT Loan	-	-	-	900,000	-	900,000	-	900,000	
Residential Workforce Development	-	-	-	267,000	-	267,000	-	267,000	
Residential R&D and Demonstration	-	-	210,000	-	-	210,000	-	210,000	
Residential Education	-	375,000	-	-	-	375,000	-	375,000	
Low-Income	**597,696**	**212,267**	**7,339,131**	**1,755,688**	**361,925**	**10,266,706**	**-**	**10,266,706**	**$ 4,148**
4. Low-Income Whole House	422,481	78,909	7,339,131	1,755,688	353,015	9,949,225	-	9,949,225	$ 4,020
Low-Income New Construction	6,514	2,723	120,000	17,916	15,336	162,490	-	162,490	$ 2,167
Low-Income Single Family Retrofit	350,283	68,893	5,869,618	1,678,119	289,564	8,256,477	-	8,256,477	$ 6,880
Low-Income Multi-Family Retrofit	65,684	7,293	1,349,513	59,653	48,115	1,530,258	-	1,530,258	$ 1,275
5. Low-Income Hard-to-Measure	175,215	133,357	-	-	8,909	317,482	-	317,482	
Low-Income Statewide Marketing	-	61,093	-	-	-	61,093	-	61,093	
Low-Income DOER Assessment	54,774	-	-	-	8,909	63,683	-	63,683	
Low-Income Energy Affordability Network	120,441	72,265	-	-	-	192,706	-	192,706	
Commercial & Industrial	**1,530,409**	**338,842**	**24,086,214**	**3,673,460**	**1,085,037**	**30,713,963**	**-**	**30,713,963**	**$ 6,965**
6. C&I New Construction	282,427	31,359	4,693,994	806,079	334,044	6,147,902	-	6,147,902	$ 2,693
C&I New Construction	282,427	31,359	4,693,994	806,079	334,044	6,147,902	-	6,147,902	$ 2,693
7. C&I Retrofit	1,081,958	120,133	19,392,221	2,867,381	722,221	24,183,914	-	24,183,914	$ 11,370
C&I Retrofit	504,929	56,064	9,789,306	1,383,045	378,707	12,112,050	-	12,112,050	$ 42,498
C&I Direct Install	577,030	64,069	9,602,915	1,484,337	343,514	12,071,864	-	12,071,864	$ 6,554
8. C&I Hard-to-Measure	166,023	187,351	-	-	28,773	382,147	-	382,147	
C&I Statewide Marketing	-	187,351	-	-	-	187,351	-	187,351	
C&I DOER Assessment	151,612	-	-	-	28,773	180,385	-	180,385	
C&I EEAC Consultants	-	-	-	-	-	-	-	-	
C&I Sponsorships & Subscriptions	14,411	-	-	-	-	14,411	-	14,411	
Grand Total	**4,064,806**	**2,325,847**	**63,411,419**	**10,844,114**	**2,940,464**	**83,586,651**	**-**	**83,586,651**	**$ 343**

Program Administrator Budget

2013-2015 Planned vs. Evaluated

Cape Light Compact

August 1, 2016

D.P.U. 16-127

Part One

H.O.s Leupold and Hale

Evaluated Budget

Program Administrator Budget

Program	PA Costs						Performance Incentive	Total PA Budget	PA Cost per Participant
	Program Planning and Administration	Marketing and Advertising	Participant Incentive	Sales, Technical Assistance & Training	Evaluation and Market Research	Total PA Costs			
Residential	**2,400,181**	**1,411,525**	**47,084,905**	**5,320,071**	**1,664,290**	**57,880,971**	**-**	**57,880,971**	**$ 161**
1. Residential Whole House	1,627,579	433,958	40,096,072	1,745,665	1,083,543	44,986,816	-	44,986,816	$ 2,945
Residential New Construction & Major Renovation	60,762	32,558	740,436	235,823	29,443	1,099,022	-	1,099,022	$ 2,271
Residential Multi-Family Retrofit	67,942	14,210	1,653,544	146,140	74,416	1,956,251	-	1,956,251	$ 1,229
Residential Home Energy Services	1,498,875	380,851	37,524,098	1,175,585	979,684	41,559,092	-	41,559,092	$ 3,188
Residential Behavior/Feedback Program	-	6,340	177,994	188,117	-	372,451	-	372,451	$ 2,257
2. Residential Products	452,726	345,724	6,986,452	1,068,934	571,091	9,424,927	-	9,424,927	$ 27
Residential Cooling & Heating Equipment	126,308	40,123	2,893,863	270,464	152,036	3,482,795	-	3,482,795	$ 616
Residential Lighting	245,775	229,386	3,547,268	453,769	356,559	4,832,757	-	4,832,757	$ 15
Residential Consumer Products	80,643	76,215	545,320	344,701	62,496	1,109,375	-	1,109,375	$ 130
3. Residential Hard-to-Measure	319,876	631,843	2,381	2,505,472	9,656	3,469,228	-	3,469,228	
Residential Statewide Marketing	-	315,826	-	-	-	315,826	-	315,826	
Residential DOER Assessment	287,788	-	-	-	9,656	297,444	-	297,444	
Residential EEAC Consultants	-	-	-	-	-	-	-	-	
Residential Sponsorship & Subscriptions	32,088	-	-	-	-	32,088	-	32,088	
Residential HEAT Loan	-	-	-	2,482,478	-	2,482,478	-	2,482,478	
Residential Workforce Development	-	-	-	19,156	-	19,156	-	19,156	
Residential R&D and Demonstration	-	-	2,381	3,838	-	6,219	-	6,219	
Residential Education	-	316,017	-	-	-	316,017	-	316,017	
Low-Income	**667,825**	**185,038**	**6,469,018**	**1,517,547**	**227,968**	**9,067,396**	**-**	**9,067,396**	**$ 2,216**
4. Low-Income Whole House	557,870	100,560	6,469,018	1,517,547	225,807	8,870,802	-	8,870,802	$ 2,168
Low-Income New Construction	8,602	1,249	172,271	4,071	5,315	191,508	-	191,508	$ 513
Low-Income Single Family Retrofit	462,535	86,716	5,398,135	1,339,988	162,275	7,449,650	-	7,449,650	$ 3,049
Low-Income Multi-Family Retrofit	86,733	12,594	898,612	173,488	58,216	1,229,643	-	1,229,643	$ 964
5. Low-Income Hard-to-Measure	109,955	84,478	-	-	2,161	196,594	-	196,594	
Low-Income Statewide Marketing	-	56,321	-	-	-	56,321	-	56,321	
Low-Income DOER Assessment	63,027	-	-	-	2,161	65,188	-	65,188	
Low-Income Energy Affordability Network	46,928	28,157	-	-	-	75,084	-	75,084	
Commercial & Industrial	**2,084,789**	**470,977**	**26,964,136**	**2,289,779**	**1,984,510**	**33,794,191**	**-**	**33,794,191**	**$ 5,413**
6. C&I New Construction	372,934	54,554	6,282,738	880,063	464,452	8,054,743	-	8,054,743	$ 1,765
C&I New Construction	372,934	54,554	6,282,738	880,063	464,452	8,054,743	-	8,054,743	$ 1,765
7. C&I Retrofit	1,428,683	217,155	20,681,398	1,409,715	1,514,448	25,251,399	-	25,251,399	$ 15,040
C&I Retrofit	666,738	97,186	10,394,939	729,675	745,705	12,634,243	-	12,634,243	$ 39,115
C&I Direct Install	761,945	119,969	10,286,459	680,041	768,743	12,617,156	-	12,617,156	$ 9,305
8. C&I Hard-to-Measure	283,171	199,268	-	-	5,611	488,050	-	488,050	
C&I Statewide Marketing	-	199,268	-	-	-	199,268	-	199,268	
C&I DOER Assessment	246,440	-	-	-	5,611	252,051	-	252,051	
C&I EEAC Consultants	-	-	-	-	-	-	-	-	
C&I Sponsorships & Subscriptions	36,731	-	-	-	-	36,731	-	36,731	
Grand Total	**5,152,795**	**2,067,540**	**80,518,059**	**9,127,397**	**3,876,768**	**100,742,558**	**-**	**100,742,558**	**$ 272**

Program Administrator Budget

2013-2015 Planned vs. Evaluated

Cape Light Compact

August 1, 2016

D.P.U. 16-127

Part One

H.O.s Leupold and Hale

Planned v. Evaluated Budget (%)									
Program Administrator Budget									
Program	PA Costs						Performance Incentive	Total PA Budget	PA Cost per Participant
	Program Planning and Administration	Marketing and Advertising	Participant Incentive	Sales, Technical Assistance & Training	Evaluation and Market Research	Total PA Costs			
Residential	**24%**	**-20%**	**47%**	**-2%**	**11%**	**36%**		**36%**	**-10%**
1. Residential Whole House	24%	-21%	54%	-36%	-10%	42%		42%	143%
Residential New Construction & Major Renovation	-7%	-28%	-30%	-38%	39%	-30%		-30%	-52%
Residential Multi-Family Retrofit	5%	-69%	25%	23%	-22%	18%		18%	19%
Residential Home Energy Services	27%	-17%	60%	-48%	-10%	46%		46%	105%
Residential Behavior/Feedback Program			35%			182%		182%	10160%
2. Residential Products	32%	-28%	20%	-29%	124%	12%		12%	-31%
Residential Cooling & Heating Equipment	32%	-37%	56%	-1%	272%	50%		50%	42%
Residential Lighting	32%	-30%	16%	-45%	110%	5%		5%	-43%
Residential Consumer Products	32%	-14%	-39%	-16%	41%	-26%		-26%	131%
3. Residential Hard-to-Measure	12%	-15%	-99%	115%	-72%	42%		42%	
Residential Statewide Marketing		-14%				-14%		-14%	
Residential DOER Assessment	8%				-72%	-1%		-1%	
Residential EEAC Consultants									
Residential Sponsorship & Subscriptions	87%					87%		87%	
Residential HEAT Loan				176%		176%		176%	
Residential Workforce Development				-93%		-93%		-93%	
Residential R&D and Demonstration			-99%			-97%		-97%	
Residential Education		-16%				-16%		-16%	
Low-Income	**12%**	**-13%**	**-12%**	**-14%**	**-37%**	**-12%**		**-12%**	**-47%**
4. Low-Income Whole House	32%	27%	-12%	-14%	-36%	-11%		-11%	-46%
Low-Income New Construction	32%	-54%	44%	-77%	-65%	18%		18%	-76%
Low-Income Single Family Retrofit	32%	26%	-8%	-20%	-44%	-10%		-10%	-56%
Low-Income Multi-Family Retrofit	32%	73%	-33%	191%	21%	-20%		-20%	-24%
5. Low-Income Hard-to-Measure	-37%	-37%			-76%	-38%		-38%	
Low-Income Statewide Marketing		-8%				-8%		-8%	
Low-Income DOER Assessment	15%				-76%	2%		2%	
Low-Income Energy Affordability Network	-61%	-61%				-61%		-61%	
Commercial & Industrial	**36%**	**39%**	**12%**	**-38%**	**83%**	**10%**		**10%**	**-22%**
6. C&I New Construction	32%	74%	34%	9%	39%	31%		31%	-34%
C&I New Construction	32%	74%	34%	9%	39%	31%		31%	-34%
7. C&I Retrofit	32%	81%	7%	-51%	110%	4%		4%	32%
C&I Retrofit	32%	73%	6%	-47%	97%	4%		4%	-8%
C&I Direct Install	32%	87%	7%	-54%	124%	5%		5%	42%
8. C&I Hard-to-Measure	71%	6%			-81%	28%		28%	
C&I Statewide Marketing		6%				6%		6%	
C&I DOER Assessment	63%				-81%	40%		40%	
C&I EEAC Consultants									
C&I Sponsorships & Subscriptions	155%					155%		155%	
Grand Total	**27%**	**-11%**	**27%**	**-16%**	**32%**	**21%**		**21%**	**-21%**

Notes:

- Where not otherwise indicated, budgets for each year are represented in nominal dollars (2013$, 2014$, 2015$).
- Refer to common definitions for allocation of costs.
- EEAC Consultant fees on the electric side do not get paid out of the PA's budgets, but are instead paid by the DOER out of the RGGI proceeds.

Program Savings

2013-2015 Planned vs. Evaluated

Cape Light Compact

August 1, 2016

D.P.U. 16-127

Part One

H.O.s Leupold and Hale

Planned Savings										
Program	# of Participants	Electric Savings				Natural Gas Savings		Deliverable Fuel Savings		Other Savings
		Annual Capacity (kW)		Energy (MWh)		(Therms)		(Annual, MMBTU)		(Annual, Gallons)
		Summer	Winter	Annual	Lifetime	Annual	Lifetime	Oil	Propane	Water
Residential	**236,957**	**5,608**	**11,661**	**49,331**	**442,480**	**405,104**	**8,685,531**	**89,952**	**15,112**	**4,702,449**
1. Residential Whole House	26,191	1,846	5,016	16,438	195,269	413,357	8,829,403	89,952	15,112	4,702,449
Residential New Construction & Major Renovation	335	94	173	871	10,430	10,833	256,174	-	677	286,036
Residential Multi-Family Retrofit	1,600	249	1,356	3,011	49,369	2,845	52,504	2,252	2,029	2,719,014
Residential Home Energy Services	18,256	1,321	3,237	11,231	134,144	399,678	8,520,725	87,701	12,406	1,697,399
Residential Behavior/Feedback Program	6,000	182	249	1,325	1,325	-		-	-	-
2. Residential Products	210,766	3,763	6,645	32,893	247,211	(8,253)	(143,872)	-	-	-
Residential Cooling & Heating Equipment	5,384	364	495	2,447	32,512	(8,253)	(143,872)	-	-	-
Residential Lighting	178,826	2,731	5,462	25,448	173,390	-		-	-	-
Residential Consumer Products	26,556	667	689	4,998	41,309	-		-	-	-
Low-Income	**2,475**	**638**	**1,189**	**4,448**	**37,931**	**48**	**336**	**30,874**	**4,516**	**3,597,306**
4. Low-Income Whole House	2,475	638	1,189	4,448	37,931	48	336	30,874	4,516	3,597,306
Low-Income New Construction	75	6	13	64	818	-		-	1,144	64,750
Low-Income Single Family Retrofit	1,200	512	991	3,055	30,076	48	336	28,134	3,372	511,556
Low-Income Multi-Family Retrofit	1,200	120	186	1,330	7,037	-		2,741	-	3,021,000
Commercial & Industrial	**4,410**	**14,215**	**9,828**	**64,547**	**701,644**	**(147,834)**	**(1,564,028)**	**5,124**	**776**	**-**
6. C&I New Construction	2,283	5,351	3,514	20,648	236,281	(35,543)	(265,340)	-	100	-
C&I New Construction	2,283	5,351	3,514	20,648	236,281	(35,543)	(265,340)	-	100	-
7. C&I Retrofit	2,127	8,864	6,314	43,899	465,363	(112,291)	(1,298,688)	5,124	677	-
C&I Retrofit	285	4,648	3,355	21,019	235,232	32,464	245,928	-	-	-
C&I Direct Install	1,842	4,217	2,960	22,880	230,131	(144,755)	(1,544,615)	5,124	677	-
Grand Total	**243,842**	**20,462**	**22,678**	**118,325**	**1,182,055**	**257,317**	**7,121,839**	**125,951**	**20,404**	**8,299,755**

Program Savings

2013-2015 Planned vs. Evaluated

Cape Light Compact

August 1, 2016

D.P.U. 16-127

Part One

H.O.s Leupold and Hale

Evaluated Savings											
Program	# of Participants	Electric Savings				Natural Gas Savings		Deliverable Fuel Savings		Other Savings
		Annual Capacity (kW)		Energy (MWh)		(Therms)		(Annual, MMBTU)		(Annual, Gallons)
		Summer	Winter	Annual	Lifetime	Annual	Lifetime	Oil	Propane	Water
Residential	**359,424**	**6,784**	**11,293**	**53,536**	**564,831**	**906,906**	**18,871,565**	**106,399**	**14,408**	**8,949,620**
1. Residential Whole House	15,277	2,907	6,070	25,267	263,841	915,533	19,039,439	106,311	14,395	7,603,785
Residential New Construction & Major Renovation	484	308	396	1,465	23,433	307	6,638	58	2,822	-
Residential Multi-Family Retrofit	1,592	98	1,185	2,513	37,828	4,818	95,155	17	1,175	482,059
Residential Home Energy Services	13,036	2,498	4,484	21,270	202,561	910,408	18,937,645	106,236	10,397	7,121,727
Residential Behavior/Feedback Program	165	3	4	18	18	-	-	-	-	-
2. Residential Products	344,147	3,877	5,223	28,269	300,990	(8,627)	(167,874)	88	13	1,345,834
Residential Cooling & Heating Equipment	5,653	536	1,168	3,711	58,111	(10,333)	(185,743)	-	-	-
Residential Lighting	329,958	2,925	3,761	22,165	221,960	-	-	-	-	-
Residential Consumer Products	8,536	416	294	2,393	20,919	1,706	17,869	88	13	1,345,834
Low-Income	**4,092**	**1,001**	**1,362**	**6,364**	**61,347**	**16,990**	**394,618**	**18,269**	**2,233**	**644,480**
4. Low-Income Whole House	4,092	1,001	1,362	6,364	61,347	16,990	394,618	18,269	2,233	644,480
Low-Income New Construction	373	30	57	198	3,196	16,814	393,386	5	256	-
Low-Income Single Family Retrofit	2,443	845	959	5,151	47,271	176	1,232	18,180	1,662	636,424
Low-Income Multi-Family Retrofit	1,276	126	346	1,014	10,880	-	-	84	316	8,056
Commercial & Industrial	**6,243**	**12,828**	**10,566**	**71,794**	**781,175**	**(210,414)**	**(3,475,812)**	**(15,347)**	**3,845**	**-**
6. C&I New Construction	4,564	6,795	4,800	38,350	370,908	(209,926)	(2,830,718)	(17,369)	-	-
C&I New Construction	4,564	6,795	4,800	38,350	370,908	(209,926)	(2,830,718)	(17,369)	-	-
7. C&I Retrofit	1,679	6,032	5,765	33,444	410,267	(489)	(645,095)	2,022	3,845	-
C&I Retrofit	323	2,471	3,365	17,704	212,276	70,323	352,340	(1,182)	110	-
C&I Direct Install	1,356	3,561	2,400	15,739	197,991	(70,812)	(997,434)	3,204	3,736	-
Grand Total	**369,759**	**20,613**	**23,220**	**131,693**	**1,407,353**	**713,481**	**15,790,370**	**109,321**	**20,486**	**9,594,100**

Program Savings

2013-2015 Planned vs. Evaluated

Cape Light Compact

August 1, 2016

D.P.U. 16-127

Part One

H.O.s Leupold and Hale

Planned v. Evaluated Savings (%)										
Program	# of Participants	Electric Savings				Natural Gas Savings (Therms)		Deliverable Fuel Savings (Annual, MMBTU)		Other Savings (Annual, Gallons)
		Annual Capacity (kW)		Energy (MWh)						
		Summer	Winter	Annual	Lifetime	Annual	Lifetime	Oil	Propane	Water
Residential	**52%**	**21%**	**-3%**	**9%**	**28%**	**124%**	**117%**	**18%**	**-5%**	**90%**
1. Residential Whole House	-42%	58%	21%	54%	35%	121%	116%	18%	-5%	62%
Residential New Construction & Major Renovation	44%	229%	129%	68%	125%	-97%	-97%		317%	-100%
Residential Multi-Family Retrofit	-1%	-61%	-13%	-17%	-23%	69%	81%	-99%	-42%	-82%
Residential Home Energy Services	-29%	89%	39%	89%	51%	128%	122%	21%	-16%	320%
Residential Behavior/Feedback Program	-97%	-98%	-98%	-99%	-99%					
2. Residential Products	63%	3%	-21%	-14%	22%	5%	17%			
Residential Cooling & Heating Equipment	5%	47%	136%	52%	79%	25%	29%			
Residential Lighting	85%	7%	-31%	-13%	28%					
Residential Consumer Products	-68%	-38%	-57%	-52%	-49%					
Low-Income	**65%**	**57%**	**15%**	**43%**	**62%**	**35295%**	**117346%**	**-41%**	**-51%**	**-82%**
4. Low-Income Whole House	65%	57%	15%	43%	62%	35295%	117346%	-41%	-51%	-82%
Low-Income New Construction	397%	355%	349%	211%	291%				-78%	-100%
Low-Income Single Family Retrofit	104%	65%	-3%	69%	57%	267%	267%	-35%	-51%	24%
Low-Income Multi-Family Retrofit	6%	5%	86%	-24%	55%			-97%		-100%
Commercial & Industrial	**42%**	**-10%**	**8%**	**11%**	**11%**	**42%**	**122%**	**-399%**	**395%**	
6. C&I New Construction	100%	27%	37%	86%	57%	491%	967%		-100%	
C&I New Construction	100%	27%	37%	86%	57%	491%	967%		-100%	
7. C&I Retrofit	-21%	-32%	-9%	-24%	-12%	-100%	-50%	-61%	468%	
C&I Retrofit	13%	-47%	0%	-16%	-10%	117%	43%			
C&I Direct Install	-26%	-16%	-19%	-31%	-14%	-51%	-35%	-37%	452%	
Grand Total	**52%**	**1%**	**2%**	**11%**	**19%**	**177%**	**122%**	**-13%**	**0%**	**16%**

Program Benefits (2013$)

2013-2015 Planned vs. Evaluated

Cape Light Compact

August 1, 2016

D.P.U. 16-127

Part One

H.O.s Leupold and Hale

Planned Benefits								
Program	Electric Benefits							
	Capacity					Energy		
	Summer Generation	Trans.	Distrib.	Electric Capacity DRIPE	Total Capacity Benefits	Electric	Electric Energy DRIPE	Total Energy Benefits
Residential	**4,255,940**	**1,261,039**	**4,130,803**	**2,381,378**	**12,029,160**	**33,988,079**	**11,375,615**	**45,363,694**
1. Residential Whole House	2,475,362	603,565	1,977,108	898,558	5,954,594	16,203,831	3,687,898	19,891,729
Residential New Construction & Major Renovation	87,390	24,672	80,819	44,819	237,701	858,820	214,365	1,073,184
Residential Multi-Family Retrofit	134,805	46,484	152,269	111,640	445,199	4,251,372	812,583	5,063,956
Residential Home Energy Services	2,244,956	528,247	1,730,385	742,099	5,245,686	11,005,340	2,642,171	13,647,511
Residential Behavior/Feedback Program	8,211	4,162	13,634	-	26,008	88,299	18,779	107,078
2. Residential Products	1,780,578	657,474	2,153,695	1,482,820	6,074,566	17,784,248	7,687,717	25,471,964
Residential Cooling & Heating Equipment	458,059	117,342	384,379	223,797	1,183,577	2,553,505	715,964	3,269,468
Residential Lighting	989,327	418,178	1,369,831	961,661	3,738,996	12,265,401	5,678,134	17,943,535
Residential Consumer Products	333,192	121,954	399,486	297,362	1,151,994	2,965,342	1,293,619	4,258,961
Low-Income	**707,949**	**188,116**	**616,213**	**348,246**	**1,860,524**	**2,879,901**	**945,484**	**3,825,385**
4. Low-Income Whole House	707,949	188,116	616,213	348,246	1,860,524	2,879,901	945,484	3,825,385
Low-Income New Construction	6,147	1,711	5,603	3,500	16,961	65,007	17,201	82,208
Low-Income Single Family Retrofit	655,067	168,518	552,015	304,325	1,679,924	2,294,032	738,025	3,032,057
Low-Income Multi-Family Retrofit	46,736	17,887	58,594	40,422	163,638	520,862	190,258	711,120
Commercial & Industrial	**11,841,264**	**3,539,326**	**11,593,820**	**8,718,728**	**35,693,138**	**53,136,168**	**20,136,056**	**73,272,223**
6. C&I New Construction	4,617,582	1,365,341	4,472,468	3,262,284	13,717,675	18,244,641	6,857,398	25,102,039
C&I New Construction	4,617,582	1,365,341	4,472,468	3,262,284	13,717,675	18,244,641	6,857,398	25,102,039
7. C&I Retrofit	7,223,682	2,173,985	7,121,353	5,456,444	21,975,463	34,891,526	13,278,657	48,170,184
C&I Retrofit	4,194,230	1,214,535	3,978,469	2,958,844	12,346,078	17,744,702	6,019,945	23,764,647
C&I Direct Install	3,029,452	959,450	3,142,884	2,497,600	9,629,385	17,146,825	7,258,712	24,405,537
Grand Total	**16,805,153**	**4,988,480**	**16,340,836**	**11,448,352**	**49,582,822**	**90,004,147**	**32,457,155**	**122,461,302**

Program Benefits (2013$)

2013-2015 Planned vs. Evaluated

Cape Light Compact

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Part One

H.O.s Leupold and Hale

Program	Planned Benefits										
	Non-Electric Resource Benefits							Total Resource Benefits (Electric + Non-Electric)	Non-Electric, Non-Resource Benefits	Total Benefits	Resource Benefits per Participant
	Natural Gas Benefits			Other Resource Benefits							
	Natural Gas	Natural Gas DRIPE	Total Gas Benefits	Oil	Propane	Water	Total Other Resource Benefits				
Residential	**7,616,668**	**1,271,758**	**8,888,426**	**51,996,000**	**9,237,637**	**382,481**	**61,616,118**	**127,897,397**	**82,279,630**	**210,177,028**	**540**
1. Residential Whole House	7,739,935	1,296,765	9,036,700	51,996,000	9,237,637	382,481	61,616,118	96,499,140	79,709,837	176,208,977	3,684
Residential New Construction & Major Renovation	223,626	34,779	258,405	-	493,518	45,891	539,410	2,108,700	816,950	2,925,649	6,295
Residential Multi-Family Retrofit	45,302	8,918	54,220	1,024,593	666,967	206,587	1,898,147	7,461,522	5,960,635	13,422,157	4,663
Residential Home Energy Services	7,471,007	1,253,068	8,724,075	50,971,407	8,077,152	130,002	59,178,561	86,795,833	72,932,253	159,728,085	4,754
Residential Behavior/Feedback Program	-	-	-	-	-	-	-	133,086	-	133,086	22
2. Residential Products	(123,267)	(25,007)	(148,274)	-	-	-	-	31,398,257	2,569,793	33,968,050	149
Residential Cooling & Heating Equipment	(123,267)	(25,007)	(148,274)	-	-	-	-	4,304,771	900,606	5,205,377	800
Residential Lighting	-	-	-	-	-	-	-	21,682,531	1,669,187	23,351,718	121
Residential Consumer Products	-	-	-	-	-	-	-	5,410,955	-	5,410,955	204
Low-Income	**224**	**132**	**356**	**16,102,729**	**2,848,549**	**280,659**	**19,231,936**	**24,918,201**	**9,586,517**	**34,504,719**	**10,068**
4. Low-Income Whole House	224	132	356	16,102,729	2,848,549	280,659	19,231,936	24,918,201	9,586,517	34,504,719	10,068
Low-Income New Construction	-	-	-	-	842,176	10,238	852,414	951,583	520,459	1,472,042	12,688
Low-Income Single Family Retrofit	224	132	356	14,837,569	2,006,372	39,203	16,883,144	21,595,482	6,777,936	28,373,418	17,996
Low-Income Multi-Family Retrofit	-	-	-	1,265,160	-	231,218	1,496,378	2,371,136	2,288,123	4,659,259	1,976
Commercial & Industrial	**(1,217,664)**	**(365,856)**	**(1,583,520)**	**1,190,243**	**247,175**	**-**	**1,437,418**	**108,819,260**	**13,452,650**	**122,271,910**	**24,676**
6. C&I New Construction	(193,687)	(74,879)	(268,567)	-	45,097	-	45,097	38,596,245	-	38,596,245	16,906
C&I New Construction	(193,687)	(74,879)	(268,567)	-	45,097	-	45,097	38,596,245	-	38,596,245	16,906
7. C&I Retrofit	(1,023,976)	(290,977)	(1,314,953)	1,190,243	202,078	-	1,392,321	70,223,015	13,452,650	83,675,665	33,015
C&I Retrofit	184,695	84,840	269,535	-	-	-	-	36,380,259	7,215,180	43,595,439	127,650
C&I Direct Install	(1,208,671)	(375,817)	(1,584,488)	1,190,243	202,078	-	1,392,321	33,842,756	6,237,470	40,080,225	18,373
Grand Total	**6,399,228**	**906,034**	**7,305,262**	**69,288,972**	**12,333,361**	**663,139**	**82,285,472**	**261,634,859**	**105,318,798**	**366,953,656**	**1,073**

Program Benefits (2013$)

2013-2015 Planned vs. Evaluated

Cape Light Compact

August 1, 2016

D.P.U. 16-127

Part One

H.O.s Leupold and Hale

Evaluated Benefits								
Program	Electric Benefits							
	Capacity					Energy		
	Summer Generation	Trans.	Distrib.	Electric Capacity DRIPE	Total Capacity Benefits	Electric	Electric Energy DRIPE	Total Energy Benefits
Residential	**5,233,159**	**1,518,178**	**4,973,117**	**3,084,543**	**14,808,997**	**44,007,119**	**14,475,450**	**58,482,569**
1. Residential Whole House	2,017,299	602,006	1,971,999	1,232,061	5,823,364	20,553,485	6,632,505	27,185,990
Residential New Construction & Major Renovation	548,831	128,089	419,582	187,339	1,283,839	1,990,277	402,547	2,392,824
Residential Multi-Family Retrofit	65,309	19,469	63,776	40,133	188,687	3,149,223	663,733	3,812,956
Residential Home Energy Services	1,403,027	454,383	1,488,427	1,004,589	4,350,427	15,412,785	5,566,012	20,978,797
Residential Behavior/Feedback Program	133	65	214	-	411	1,200	213	1,413
2. Residential Products	3,215,860	916,172	3,001,119	1,852,482	8,985,633	23,453,635	7,842,945	31,296,579
Residential Cooling & Heating Equipment	709,213	181,785	595,475	347,512	1,833,985	4,683,555	1,039,391	5,722,946
Residential Lighting	2,234,820	648,836	2,125,402	1,308,671	6,317,730	17,250,879	6,180,015	23,430,894
Residential Consumer Products	271,827	85,551	280,242	196,299	833,919	1,519,201	623,538	2,142,739
Low-Income	**853,280**	**243,816**	**798,673**	**489,846**	**2,385,616**	**4,668,599**	**1,652,453**	**6,321,052**
4. Low-Income Whole House	853,280	243,816	798,673	489,846	2,385,616	4,668,599	1,652,453	6,321,052
Low-Income New Construction	42,959	10,935	35,820	19,528	109,242	277,981	55,468	333,450
Low-Income Single Family Retrofit	726,941	206,394	676,088	410,965	2,020,389	3,551,182	1,336,051	4,887,233
Low-Income Multi-Family Retrofit	83,380	26,487	86,765	59,353	255,985	839,435	260,934	1,100,369
Commercial & Industrial	**10,510,868**	**3,050,998**	**9,994,199**	**6,961,034**	**30,517,099**	**58,165,067**	**21,541,161**	**79,706,228**
6. C&I New Construction	4,499,618	1,407,516	4,610,622	3,274,926	13,792,682	27,467,630	11,141,657	38,609,287
C&I New Construction	4,499,618	1,407,516	4,610,622	3,274,926	13,792,682	27,467,630	11,141,657	38,609,287
7. C&I Retrofit	6,011,249	1,643,482	5,383,577	3,686,108	16,724,417	30,697,436	10,399,505	41,096,941
C&I Retrofit	2,507,354	677,129	2,218,082	1,499,100	6,901,665	15,573,426	5,321,515	20,894,941
C&I Direct Install	3,503,895	966,353	3,165,495	2,187,009	9,822,752	15,124,010	5,077,990	20,202,000
Grand Total	**16,597,307**	**4,812,993**	**15,765,989**	**10,535,424**	**47,711,713**	**106,840,785**	**37,669,064**	**144,509,850**

Program Benefits (2013$)

2013-2015 Planned vs. Evaluated

Cape Light Compact

August 1, 2016

D.P.U. 16-127

Part One

H.O.s Leupold and Hale

Program	Evaluated Benefits											
	Non-Electric Resource Benefits							Total Resource Benefits (Electric + Non-Electric)	Non-Electric, Non-Resource Benefits	Total Benefits	Resource Benefits per Participant
	Natural Gas Benefits			Other Resource Benefits							
	Natural Gas	Natural Gas DRIPE	Total Gas Benefits	Oil	Propane	Water	Total Other Resource Benefits				
Residential	**16,455,016**	**2,916,338**	**19,371,354**	**59,512,462**	**8,410,695**	**733,177**	**68,656,333**	**161,319,255**	**80,176,608**	**241,495,863**	**449**
1. Residential Whole House	16,602,387	2,940,326	19,542,713	59,490,755	8,407,552	580,585	68,478,892	121,030,959	78,240,133	199,271,091	7,922
Residential New Construction & Major Renovation	4,632	1,169	5,802	40,948	2,013,531	-	2,054,479	5,736,944	719,892	6,456,837	11,853
Residential Multi-Family Retrofit	82,084	15,611	97,695	8,195	564,131	36,512	608,838	4,708,175	2,359,280	7,067,456	2,957
Residential Home Energy Services	16,515,671	2,923,546	19,439,216	59,441,612	5,829,890	544,073	65,815,575	110,584,014	75,160,960	185,744,974	8,483
Residential Behavior/Feedback Program	-	-	-	-	-	-	-	1,825	-	1,825	11
2. Residential Products	(147,370)	(23,988)	(171,358)	21,707	3,143	152,592	177,442	40,288,296	1,936,475	42,224,771	117
Residential Cooling & Heating Equipment	(159,420)	(31,098)	(190,519)	-	-	-	-	7,366,412	470,468	7,836,880	1,303
Residential Lighting	-	-	-	-	-	-	-	29,748,624	1,466,008	31,214,632	90
Residential Consumer Products	12,050	7,111	19,161	21,707	3,143	152,592	177,442	3,173,259	-	3,173,259	372
Low-Income	**350,735**	**15,168**	**365,903**	**9,823,130**	**1,408,116**	**49,622**	**11,280,868**	**20,353,439**	**9,152,104**	**29,505,543**	**4,974**
4. Low-Income Whole House	350,735	15,168	365,903	9,823,130	1,408,116	49,622	11,280,868	20,353,439	9,152,104	29,505,543	4,974
Low-Income New Construction	349,828	15,150	364,978	3,357	190,865	-	194,223	1,001,892	1,231,623	2,233,515	2,686
Low-Income Single Family Retrofit	907	18	925	9,773,984	990,566	48,987	10,813,537	17,722,084	7,155,571	24,877,655	7,254
Low-Income Multi-Family Retrofit	-	-	-	45,789	226,685	635	273,108	1,629,463	764,910	2,394,373	1,277
Commercial & Industrial	**(2,593,994)**	**(838,220)**	**(3,432,214)**	**(1,977,203)**	**1,432,123**	**25,221**	**(519,859)**	**106,271,255**	**21,068,995**	**127,340,250**	**17,022**
6. C&I New Construction	(2,113,435)	(609,734)	(2,723,169)	(2,914,139)	-	115	(2,914,024)	46,764,776	6,110,687	52,875,463	10,246
C&I New Construction	(2,113,435)	(609,734)	(2,723,169)	(2,914,139)	-	115	(2,914,024)	46,764,776	6,110,687	52,875,463	10,246
7. C&I Retrofit	(480,558)	(228,486)	(709,044)	936,936	1,432,123	25,106	2,394,165	59,506,479	14,958,308	74,464,787	35,442
C&I Retrofit	302,265	3,742	306,006	(358,219)	62,649	25,106	(270,464)	27,832,148	8,732,526	36,564,674	86,168
C&I Direct Install	(782,823)	(232,228)	(1,015,051)	1,295,155	1,369,474	-	2,664,630	31,674,331	6,225,782	37,900,113	23,359
Grand Total	**14,211,757**	**2,093,287**	**16,305,044**	**67,358,389**	**11,250,934**	**808,020**	**79,417,343**	**287,943,949**	**110,397,707**	**398,341,656**	**779**

Program Benefits (2013$)

2013-2015 Planned vs. Evaluated

Cape Light Compact

August 1, 2016

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Part One

H.O.s Leupold and Hale

Planned v. Evaluated Benefits (%)								
Program	Electric Benefits							
	Capacity					Energy		
	Summer Generation	Trans.	Distrib.	Electric Capacity DRIPE	Total Capacity Benefits	Electric	Electric Energy DRIPE	Total Energy Benefits
Residential	**23%**	**20%**	**20%**	**30%**	**23%**	**29%**	**27%**	**29%**
1. Residential Whole House	-19%	0%	0%	37%	-2%	27%	80%	37%
Residential New Construction & Major Renovation	528%	419%	419%	318%	440%	132%	88%	123%
Residential Multi-Family Retrofit	-52%	-58%	-58%	-64%	-58%	-26%	-18%	-25%
Residential Home Energy Services	-38%	-14%	-14%	35%	-17%	40%	111%	54%
Residential Behavior/Feedback Program	-98%	-98%	-98%		-98%	-99%	-99%	-99%
2. Residential Products	81%	39%	39%	25%	48%	32%	2%	23%
Residential Cooling & Heating Equipment	55%	55%	55%	55%	55%	83%	45%	75%
Residential Lighting	126%	55%	55%	36%	69%	41%	9%	31%
Residential Consumer Products	-18%	-30%	-30%	-34%	-28%	-49%	-52%	-50%
Low-Income	**21%**	**30%**	**30%**	**41%**	**28%**	**62%**	**75%**	**65%**
4. Low-Income Whole House	21%	30%	30%	41%	28%	62%	75%	65%
Low-Income New Construction	599%	539%	539%	458%	544%	328%	222%	306%
Low-Income Single Family Retrofit	11%	22%	22%	35%	20%	55%	81%	61%
Low-Income Multi-Family Retrofit	78%	48%	48%	47%	56%	61%	37%	55%
Commercial & Industrial	**-11%**	**-14%**	**-14%**	**-20%**	**-15%**	**9%**	**7%**	**9%**
6. C&I New Construction	-3%	3%	3%	0%	1%	51%	62%	54%
C&I New Construction	-3%	3%	3%	0%	1%	51%	62%	54%
7. C&I Retrofit	-17%	-24%	-24%	-32%	-24%	-12%	-22%	-15%
C&I Retrofit	-40%	-44%	-44%	-49%	-44%	-12%	-12%	-12%
C&I Direct Install	16%	1%	1%	-12%	2%	-12%	-30%	-17%
Grand Total	**-1%**	**-4%**	**-4%**	**-8%**	**-4%**	**19%**	**16%**	**18%**

Program Benefits (2013$)

2013-2015 Planned vs. Evaluated

Cape Light Compact

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Part One

H.O.s Leupold and Hale

Program	Planned v. Evaluated Benefits (%)										
	Non-Electric Resource Benefits							Total Resource Benefits (Electric + Non-Electric)	Non-Electric, Non-Resource Benefits	Total Benefits	Resource Benefits per Participant
	Natural Gas Benefits			Other Resource Benefits							
	Natural Gas	Natural Gas DRIPE	Total Gas Benefits	Oil	Propane	Water	Total Other Resource Benefits				
Residential	**116%**	**129%**	**118%**	**14%**	**-9%**	**92%**	**11%**	**26%**	**-3%**	**15%**	**-17%**
1. Residential Whole House	115%	127%	116%	14%	-9%	52%	11%	25%	-2%	13%	115%
Residential New Construction & Major Renovation	-98%	-97%	-98%		308%	-100%	281%	172%	-12%	121%	88%
Residential Multi-Family Retrofit	81%	75%	80%	-99%	-15%	-82%	-68%	-37%	-60%	-47%	-37%
Residential Home Energy Services	121%	133%	123%	17%	-28%	319%	11%	27%	3%	16%	78%
Residential Behavior/Feedback Program								-99%		-99%	-50%
2. Residential Products	20%	-4%	16%					28%	-25%	24%	-21%
Residential Cooling & Heating Equipment	29%	24%	28%					71%	-48%	51%	63%
Residential Lighting								37%	-12%	34%	-26%
Residential Consumer Products								-41%		-41%	82%
Low-Income	**156463%**	**11355%**	**102556%**	**-39%**	**-51%**	**-82%**	**-41%**	**-18%**	**-5%**	**-14%**	**-51%**
4. Low-Income Whole House	156463%	11355%	102556%	-39%	-51%	-82%	-41%	-18%	-5%	-14%	-51%
Low-Income New Construction					-77%	-100%	-77%	5%	137%	52%	-79%
Low-Income Single Family Retrofit	305%	-86%	160%	-34%	-51%	25%	-36%	-18%	6%	-12%	-60%
Low-Income Multi-Family Retrofit				-96%		-100%	-82%	-31%	-67%	-49%	-35%
Commercial & Industrial	**113%**	**129%**	**117%**	**-266%**	**479%**		**-136%**	**-2%**	**57%**	**4%**	**-31%**
6. C&I New Construction	991%	714%	914%		-100%		-6562%	21%		37%	-39%
C&I New Construction	991%	714%	914%		-100%		-6562%	21%		37%	-39%
7. C&I Retrofit	-53%	-21%	-46%	-21%	609%		72%	-15%	11%	-11%	7%
C&I Retrofit	64%	-96%	14%					-23%	21%	-16%	-32%
C&I Direct Install	-35%	-38%	-36%	9%	578%		91%	-6%	0%	-5%	27%
Grand Total	**122%**	**131%**	**123%**	**-3%**	**-9%**	**22%**	**-3%**	**10%**	**5%**	**9%**	**-27%**

Cost-Effectiveness

2013-2015 Planned vs. Evaluated

Cape Light Compact

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Part One

H.O.s Leupold and Hale

Planned Cost-Effectiveness						
Program	B/C Ratio	Net Benefits	Total TRC Test Benefits	Costs		
				PA Budget	Participant Costs	Total TRC Test Costs
Residential	**4.29**	**161,165,663**	**210,177,028**	**41,400,370**	**7,610,994**	**49,011,365**
1. Residential Whole House	4.99	140,894,915	176,208,977	30,862,566	4,451,496	35,314,062
Residential New Construction & Major Renovation	1.47	941,886	2,925,649	1,529,904	453,858	1,983,763
Residential Multi-Family Retrofit	8.39	11,822,242	13,422,157	1,599,915	-	1,599,915
Residential Home Energy Services	5.05	128,124,989	159,728,085	27,605,459	3,997,638	31,603,097
Residential Behavior/Feedback Program	1.05	5,798	133,086	127,288	-	127,288
2. Residential Products	3.00	22,642,378	33,968,050	8,166,174	3,159,498	11,325,672
Residential Cooling & Heating Equipment	1.36	1,387,006	5,205,377	2,259,388	1,558,983	3,818,371
Residential Lighting	4.24	17,844,517	23,351,718	4,456,133	1,051,068	5,507,202
Residential Consumer Products	2.71	3,410,856	5,410,955	1,450,652	549,447	2,000,099
3. Residential Hard-to-Measure	-	(2,371,630)	-	2,371,630	-	2,371,630
Low-Income	**3.46**	**24,524,872**	**34,504,719**	**9,978,254**	**1,593**	**9,979,846**
4. Low-Income Whole House	3.57	24,833,598	34,504,719	9,669,528	1,593	9,671,121
Low-Income New Construction	9.32	1,314,063	1,472,042	157,979	-	157,979
Low-Income Single Family Retrofit	3.54	20,350,891	28,373,418	8,022,527	-	8,022,527
Low-Income Multi-Family Retrofit	3.13	3,168,644	4,659,259	1,489,022	1,593	1,490,615
5. Low-Income Hard-to-Measure	-	(308,725)	-	308,725	-	308,725
Commercial & Industrial	**3.71**	**89,297,386**	**122,271,910**	**30,026,302**	**2,948,222**	**32,974,524**
6. C&I New Construction	6.02	32,181,230	38,596,245	5,991,492	423,524	6,415,016
C&I New Construction	6.02	32,181,230	38,596,245	5,991,492	423,524	6,415,016
7. C&I Retrofit	3.20	57,488,048	83,675,665	23,662,919	2,524,698	26,187,617
C&I Retrofit	3.34	30,559,998	43,595,439	11,914,585	1,120,856	13,035,441
C&I Direct Install	3.05	26,928,050	40,080,225	11,748,333	1,403,842	13,152,175
8. C&I Hard-to-Measure	-	(371,891)	-	371,891	-	371,891
Grand Total	**3.99**	**274,987,922**	**366,953,656**	**81,404,926**	**10,560,809**	**91,965,735**

Cost-Effectiveness

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H.O.s Leupold and Hale

Evaluated Cost-Effectiveness						
Program	B/C Ratio	Net Benefits	Total TRC Test Benefits	Costs		
				PA Budget	Participant Costs	Total TRC Test Costs
Residential	**3.18**	**165,438,359**	**241,495,863**	**56,161,347**	**19,896,157**	**76,057,503**
1. Residential Whole House	3.77	146,440,369	199,271,091	43,669,060	9,161,663	52,830,722
Residential New Construction & Major Renovation	4.63	5,062,487	6,456,837	1,064,083	330,267	1,394,350
Residential Multi-Family Retrofit	3.75	5,184,099	7,067,456	1,883,357	-	1,883,357
Residential Home Energy Services	3.78	136,550,120	185,744,974	40,363,458	8,831,396	49,194,854
Residential Behavior/Feedback Program	0.01	(356,337)	1,825	358,162	-	358,162
2. Residential Products	2.13	22,368,535	42,224,771	9,121,743	10,734,494	19,856,237
Residential Cooling & Heating Equipment	1.47	2,515,242	7,836,880	3,379,137	1,942,501	5,321,638
Residential Lighting	2.38	18,093,606	31,214,632	4,664,592	8,456,434	13,121,026
Residential Consumer Products	2.24	1,759,686	3,173,259	1,078,013	335,560	1,413,573
3. Residential Hard-to-Measure	-	(3,370,544)	-	3,370,544	-	3,370,544
Low-Income	**3.33**	**20,646,706**	**29,505,543**	**8,798,923**	**59,915**	**8,858,837**
4. Low-Income Whole House	3.40	20,837,825	29,505,543	8,607,803	59,915	8,667,718
Low-Income New Construction	9.14	1,989,206	2,233,515	184,394	59,915	244,309
Low-Income Single Family Retrofit	3.44	17,649,399	24,877,655	7,228,256	-	7,228,256
Low-Income Multi-Family Retrofit	2.00	1,199,220	2,394,373	1,195,153	-	1,195,153
5. Low-Income Hard-to-Measure	-	(191,119)	-	191,119	-	191,119
Commercial & Industrial	**3.30**	**88,779,967**	**127,340,250**	**32,741,737**	**5,818,546**	**38,560,283**
6. C&I New Construction	5.83	43,808,210	52,875,463	7,807,956	1,259,297	9,067,253
C&I New Construction	5.83	43,808,210	52,875,463	7,807,956	1,259,297	9,067,253
7. C&I Retrofit	2.57	45,446,684	74,464,787	24,458,854	4,559,249	29,018,103
C&I Retrofit	2.37	21,132,801	36,564,674	12,216,054	3,215,818	15,431,873
C&I Direct Install	2.79	24,313,882	37,900,113	12,242,800	1,343,430	13,586,231
8. C&I Hard-to-Measure	-	(474,927)	-	474,927	-	474,927
Grand Total	**3.23**	**274,865,032**	**398,341,656**	**97,702,007**	**25,774,617**	**123,476,624**

Cost-Effectiveness

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Part One

H.O.s Leupold and Hale

Planned v. Evaluated Cost-Effectiveness (%)						
Program	B/C Ratio	Net Benefits	Total TRC Test Benefits	Costs		
				PA Budget	Participant Costs	Total TRC Test Costs
Residential	**-26%**	**3%**	**15%**	**36%**	**161%**	**55%**
1. Residential Whole House	-24%	4%	13%	41%	106%	50%
Residential New Construction & Major Renovation	214%	437%	121%	-30%	-27%	-30%
Residential Multi-Family Retrofit	-55%	-56%	-47%	18%		18%
Residential Home Energy Services	-25%	7%	16%	46%	121%	56%
Residential Behavior/Feedback Program	-100%	-6245%	-99%	181%		181%
2. Residential Products	-29%	-1%	24%	12%	240%	75%
Residential Cooling & Heating Equipment	8%	81%	51%	50%	25%	39%
Residential Lighting	-44%	1%	34%	5%	705%	138%
Residential Consumer Products	-17%	-48%	-41%	-26%	-39%	-29%
3. Residential Hard-to-Measure		42%		42%		42%
Low-Income	**-4%**	**-16%**	**-14%**	**-12%**	**3662%**	**-11%**
4. Low-Income Whole House	-5%	-16%	-14%	-11%	3662%	-10%
Low-Income New Construction	-2%	51%	52%	17%		55%
Low-Income Single Family Retrofit	-3%	-13%	-12%	-10%		-10%
Low-Income Multi-Family Retrofit	-36%	-62%	-49%	-20%	-100%	-20%
5. Low-Income Hard-to-Measure		-38%		-38%		-38%
Commercial & Industrial	**-11%**	**-1%**	**4%**	**9%**	**97%**	**17%**
6. C&I New Construction	-3%	36%	37%	30%	197%	41%
C&I New Construction	-3%	36%	37%	30%	197%	41%
7. C&I Retrofit	-20%	-21%	-11%	3%	81%	11%
C&I Retrofit	-29%	-31%	-16%	3%	187%	18%
C&I Direct Install	-8%	-10%	-5%	4%	-4%	3%
8. C&I Hard-to-Measure		28%		28%		28%
Grand Total	**-19%**	**0%**	**9%**	**20%**	**144%**	**34%**

Notes:

• The Green Communities Act requires that energy efficiency programs be cost-effective. G.L. c. 25, §§ 21(a), 21(b)(3). If a core initiative is not cost-effective, the Program Administrator has provided an explanation in its report filing.

Significant Variances

2013-2015 Variances

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Significant Variances												
Program	Total PA Costs			Lifetime MWh			Total Resource Benefits			Total Benefits		
	Planned	Actual	Planned v. Actual (%)	Planned	Preliminary	Planned v. Preliminary (%)	Planned	Preliminary	Planned v. Preliminary (%)	Preliminary	Evaluated	Preliminary v. Evaluated (%)
Residential	**42,605,982**	**57,880,971**	**36%**	**442,480**	**607,667**	**37%**	**127,897,397**	**162,237,817**	**27%**	**244,474,703**	**241,495,863**	**-1%**
1. Residential Whole House	31,767,218	44,986,816	42%	195,269	278,073	42%	96,499,140	120,837,782	25%	200,801,929	199,271,091	-1%
Residential New Construction & Major Renovation	1,573,129	1,099,022	***-30%***	10,430	24,137	131%	2,108,700	5,756,367	173%	6,476,259	6,456,837	0%
Residential Multi-Family Retrofit	1,651,204	1,956,251	***18%***	49,369	39,938	***-19%***	7,461,522	4,928,062	***-34%***	7,287,737	7,067,456	-3%
Residential Home Energy Services	28,410,885	41,559,092	***46%***	134,144	213,980	60%	86,795,833	110,151,528	27%	187,036,108	185,744,974	-1%
Residential Behavior/Feedback Program	132,000	372,451	***182%***	1,325	18	***-99%***	133,086	1,825	***-99%***	1,825	1,825	0%
2. Residential Products	8,401,524	9,424,927	12%	247,211	329,594	33%	31,398,257	41,400,036	32%	43,672,774	42,224,771	-3%
Residential Cooling & Heating Equipment	2,329,323	3,482,795	***50%***	32,512	57,336	76%	4,304,771	7,225,038	68%	8,031,697	7,836,880	-2%
Residential Lighting	4,581,017	4,832,757	5%	173,390	251,339	45%	21,682,531	30,990,574	43%	32,456,654	31,214,632	-4%
Residential Consumer Products	1,491,183	1,109,375	***-26%***	41,309	20,919	***-49%***	5,410,955	3,184,423	***-41%***	3,184,423	3,173,259	0%
3. Residential Hard-to-Measure	2,437,240	3,469,228	42%	-	-		-	-		-	-	
Residential Statewide Marketing	366,556	315,826	-14%	-	-		-	-		-	-	
Residential DOER Assessment	301,570	297,444	-1%	-	-		-	-		-	-	
Residential EEAC Consultants	-	-		-	-		-	-		-	-	
Residential Sponsorship & Subscriptions	17,114	32,088	87%	-	-		-	-		-	-	
Residential HEAT Loan	900,000	2,482,478	176%	-	-		-	-		-	-	
Residential Workforce Development	267,000	19,156	-93%	-	-		-	-		-	-	
Residential R&D and Demonstration	210,000	6,219	-97%	-	-		-	-		-	-	
Residential Education	375,000	316,017	-16%	-	-		-	-		-	-	
Low-Income	**10,266,706**	**9,067,396**	**-12%**	**37,931**	**55,009**	**45%**	**24,918,201**	**19,055,807**	**-24%**	**28,145,938**	**29,505,543**	**5%**
4. Low-Income Whole House	9,949,225	8,870,802	-11%	37,931	55,009	45%	24,918,201	19,055,807	-24%	28,145,938	29,505,543	5%
Low-Income New Construction	162,490	191,508	***18%***	818	3,565	336%	951,583	1,027,849	8%	2,269,156	2,233,515	-2%
Low-Income Single Family Retrofit	8,256,477	7,449,650	-10%	30,076	41,418	38%	21,595,482	16,439,390	***-24%***	23,533,534	24,877,655	6%
Low-Income Multi-Family Retrofit	1,530,258	1,229,643	***-20%***	7,037	10,026	42%	2,371,136	1,588,567	***-33%***	2,343,248	2,394,373	2%
5. Low-Income Hard-to-Measure	317,482	196,594	-38%	-	-		-	-		-	-	
Low-Income Statewide Marketing	61,093	56,321	-8%	-	-		-	-		-	-	
Low-Income DOER Assessment	63,683	65,188	2%	-	-		-	-		-	-	
Low-Income Energy Affordability Network	192,706	75,084	-61%	-	-		-	-		-	-	
Commercial & Industrial	**30,713,963**	**33,794,191**	**10%**	**701,644**	**827,516**	**18%**	**108,819,260**	**113,379,654**	**4%**	**135,612,258**	**127,340,250**	**-6%**
6. C&I New Construction	6,147,902	8,054,743	31%	236,281	417,990	77%	38,596,245	54,157,419	40%	61,428,243	52,875,463	-14%
C&I New Construction	6,147,902	8,054,743	***31%***	236,281	417,990	77%	38,596,245	54,157,419	40%	61,428,243	52,875,463	***-14%***
7. C&I Retrofit	24,183,914	25,251,399	4%	465,363	409,526	-12%	70,223,015	59,222,235	-16%	74,184,015	74,464,787	0%
C&I Retrofit	12,112,050	12,634,243	4%	235,232	210,798	***-10%***	36,380,259	27,946,020	***-23%***	36,664,293	36,564,674	0%
C&I Direct Install	12,071,864	12,617,156	5%	230,131	198,728	***-14%***	33,842,756	31,276,214	-8%	37,519,722	37,900,113	1%
8. C&I Hard-to-Measure	382,147	488,050	28%	-	-		-	-		-	-	
C&I Statewide Marketing	187,351	199,268	6%	-	-		-	-		-	-	
C&I DOER Assessment	180,385	252,051	40%	-	-		-	-		-	-	
C&I EEAC Consultants	-	-		-	-		-	-		-	-	
C&I Sponsorships & Subscriptions	14,411	36,731	155%	-	-		-	-		-	-	
Grand Total	**83,586,651**	**100,742,558**	**21%**	**1,182,055**	**1,490,192**	**26%**	**261,634,859**	**294,673,278**	**13%**	**408,232,900**	**398,341,656**	**-2%**

Notes:

• Significant variances, for which explanation are provided, are defined as:

(1) variances between planned and actual core initiative budget of ten percent or greater;

(2) variances between planned and preliminary core initiative total lifetime savings showing a decrease of ten percent or greater;

(3) variances between planned and preliminary core initiative total resource benefits showing a decrease of ten percent or greater; and

(4) variances between preliminary and evaluated core initiative total benefits of ten percent or greater;

• Cells highlighted in the above table indicate that an explanation is provided.

Administrative Costs

2013-2015 Program Planning and Administration Costs

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Part One

H.O.s Leupold and Hale

Administrative Costs								
Program	Planned			Actual			Planned v. Actual (%)	
	Total PA Budget	Program Planning and Administration	PPA as % of Total PA Budget	Total PA Budget	Program Planning and Administration	PPA as % of Total PA Budget	Program Planning and Administration	PPA as % of Total PA Budget
Residential	**42,605,982**	**1,936,701**	**4.5%**	**57,880,971**	**2,400,181**	**4.1%**	**24%**	**-9%**
1. Residential Whole House	31,767,218	1,309,331	4.1%	44,986,816	1,627,579	3.6%	24%	-12%
Residential New Construction & Major Renovation	1,573,129	65,438	4.2%	1,099,022	60,762	5.5%	-7%	33%
Residential Multi-Family Retrofit	1,651,204	64,757	3.9%	1,956,251	67,942	3.5%	5%	-11%
Residential Home Energy Services	28,410,885	1,179,136	4.2%	41,559,092	1,498,875	3.6%	27%	-13%
Residential Behavior/Feedback Program	132,000	-	0.0%	372,451	-	0.0%		
2. Residential Products	8,401,524	342,854	4.1%	9,424,927	452,726	4.8%	32%	18%
Residential Cooling & Heating Equipment	2,329,323	95,655	4.1%	3,482,795	126,308	3.6%	32%	-12%
Residential Lighting	4,581,017	186,128	4.1%	4,832,757	245,775	5.1%	32%	25%
Residential Consumer Products	1,491,183	61,072	4.1%	1,109,375	80,643	7.3%	32%	77%
3. Residential Hard-to-Measure	2,437,240	284,516	11.7%	3,469,228	319,876	9.2%	12%	-21%
Residential Statewide Marketing	366,556	-	0.0%	315,826	-	0.0%		
Residential DOER Assessment	301,570	267,402	88.7%	297,444	287,788	96.8%	8%	9%
Residential EEAC Consultants	-	-		-	-			
Residential Sponsorship & Subscriptions	17,114	17,114	100.0%	32,088	32,088	100.0%	87%	0%
Residential HEAT Loan	900,000	-	0.0%	2,482,478	-	0.0%		
Residential Workforce Development	267,000	-	0.0%	19,156	-	0.0%		
Residential R&D and Demonstration	210,000	-	0.0%	6,219	-	0.0%		
Residential Education	375,000	-	0.0%	316,017	-	0.0%		
Low-Income	**10,266,706**	**597,696**	**5.8%**	**9,067,396**	**667,825**	**7.4%**	**12%**	**27%**
4. Low-Income Whole House	9,949,225	422,481	4.2%	8,870,802	557,870	6.3%	32%	48%
Low-Income New Construction	162,490	6,514	4.0%	191,508	8,602	4.5%	32%	12%
Low-Income Single Family Retrofit	8,256,477	350,283	4.2%	7,449,650	462,535	6.2%	32%	46%
Low-Income Multi-Family Retrofit	1,530,258	65,684	4.3%	1,229,643	86,733	7.1%	32%	64%
5. Low-Income Hard-to-Measure	317,482	175,215	55.2%	196,594	109,955	55.9%	-37%	1%
Low-Income Statewide Marketing	61,093	-	0.0%	56,321	-	0.0%		
Low-Income DOER Assessment	63,683	54,774	86.0%	65,188	63,027	96.7%	15%	12%
Low-Income Energy Affordability Network	192,706	120,441	62.5%	75,084	46,928	62.5%	-61%	0%
Commercial & Industrial	**30,713,963**	**1,530,409**	**5.0%**	**33,794,191**	**2,084,789**	**6.2%**	**36%**	**24%**
6. C&I New Construction	6,147,902	282,427	4.6%	8,054,743	372,934	4.6%	32%	1%
C&I New Construction	6,147,902	282,427	4.6%	8,054,743	372,934	4.6%	32%	1%
7. C&I Retrofit	24,183,914	1,081,958	4.5%	25,251,399	1,428,683	5.7%	32%	26%
C&I Retrofit	12,112,050	504,929	4.2%	12,634,243	666,738	5.3%	32%	27%
C&I Direct Install	12,071,864	577,030	4.8%	12,617,156	761,945	6.0%	32%	26%
8. C&I Hard-to-Measure	382,147	166,023	43.4%	488,050	283,171	58.0%	71%	34%
C&I Statewide Marketing	187,351	-	0.0%	199,268	-	0.0%		
C&I DOER Assessment	180,385	151,612	84.0%	252,051	246,440	97.8%	63%	16%
C&I EEAC Consultants	-	-		-	-			
C&I Sponsorships & Subscriptions	14,411	14,411	100.0%	36,731	36,731	100.0%	155%	0%
Grand Total	**83,586,651**	**4,064,806**	**4.9%**	**100,742,558**	**5,152,795**	**5.1%**	**27%**	**5%**

Notes:

• General Laws c. 25, § 19(b) requires the Department, when authorizing energy efficiency programs, to ensure that such programs minimize administrative costs to the fullest extent practicable. Administrative costs, also commonly referred to as PP&A costs, have traditionally been defined as all in-house and outsourced costs associated with planning activities and program administration. These include costs associated with developing program plans and day-to-day program administration, including labor, overhead costs, and any regulatory costs associated with energy efficiency activities.

• The Program Administrator has explained in its report filing the reasons for increases between planned and actual PP&A spending by sector.

Customer Sector Cost Allocation

2013-2015 Program Administrator Budget

Cape Light Compact

August 1, 2016

D.P.U. 16-127

Part One

H.O.s Leupold and Hale

Customer Sector Cost Allocation						
Customer Sector	**Planned**		**Actual**		**Planned v. Actual (%)**	
	Total PA Costs	**% of Total PA Costs**	**Total PA Costs**	**% of Total PA Costs**	**Total PA Costs**	**% of Total PA Costs**
Residential	42,605,982	51%	57,880,971	57%	36%	13%
Low-Income	10,266,706	12%	9,067,396	9%	-12%	-27%
Commercial & Industrial	30,713,963	37%	33,794,191	34%	10%	-9%
Grand Total	**83,586,651**	**100%**	**100,742,558**	**100%**	**21%**	**0%**

Notes:

• General Laws c. 25, § 19(c) requires that at least 10 percent of the amount expended for electric energy efficiency programs and at least 20 percent of the amount expended for gas energy efficiency programs be spent on low-income programs.

• If the low-income budget did not meet the statutory minimum of the amount expended for energy efficiency, the Program Administrator has explained in its report filing why not, and explained the steps the Program Administrator has taken to ensure compliance in the next term.

Competitive Procurement

2013-2015 Program Administrator Budget

Cape Light Compact

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Part One

H.O.s Leupold and Hale

Outsourced and Competitively Procured Services						
Sector & Cost Categories	Total Costs ($)		Percent of Total Sector Costs (%)		Planned v. Actual (%)	
	Planned	Actual	Planned	Actual	Costs	Percent of Total
Residential						
Total Cost of Services	10,619,908	10,796,067	100%	100%	2%	0%
In-House Activities	2,747,923	2,517,965	26%	23%	-8%	-10%
Outsourced Activities	7,871,985	8,278,102	74%	77%	5%	3%
Competitively Procured	7,006,988	7,356,640	66%	68%	5%	3%
Non-Competitively Procured	864,997	921,462	8%	9%	7%	5%
Low-Income						
Total Cost of Services	2,927,576	2,598,378	100%	100%	-11%	0%
In-House Activities	623,595	628,764	21%	24%	1%	14%
Outsourced Activities	2,303,980	1,969,614	79%	76%	-15%	-4%
Competitively Procured	1,987,969	1,741,594	68%	67%	-12%	-1%
Non-Competitively Procured	316,011	228,020	11%	9%	-28%	-19%
Commercial & Industrial						
Total Cost of Services	6,627,748	6,830,055	100%	100%	3%	0%
In-House Activities	1,972,056	2,073,463	30%	30%	5%	2%
Outsourced Activities	4,655,692	4,756,592	70%	70%	2%	-1%
Competitively Procured	4,243,072	4,225,962	64%	62%	0%	-3%
Non-Competitively Procured	412,620	530,630	6%	8%	29%	25%
Grand Total						
Total Cost of Services	20,175,232	20,224,499	100%	100%	0%	0%
In-House Activities	5,343,575	5,220,192	26%	26%	-2%	-3%
Outsourced Activities	14,831,657	15,004,308	74%	74%	1%	1%
Competitively Procured	13,238,029	13,324,195	66%	66%	1%	0%
Non-Competitively Procured	1,593,628	1,680,113	8%	8%	5%	5%

Notes:

• General Laws c. 25, § 19(b) requires that the Department ensure that energy efficiency programs use competitive procurement processes to the fullest extent practicable.

• Costs for the Competitively Procured Services analysis include Program Planning and Administration; Marketing and Advertising; Sales, Technical Assistance & Training; and Evaluation and Market Research.

• The Program Administrator has explained in its report filing the reasons for significant differences between planned and actual outsourced activities and competitively procured activities.

Greenhouse Gas Reductions

2013-2015 Planned vs. Evaluated

Cape Light Compact

August 1, 2016

D.P.U. 16-127

Part One

H.O.s Leupold and Hale

GHG reductions are provided for information purposes only. They are not included in the TRC test.

Planned Greenhouse Gas Reductions

Customer Sector	Savings			GHG Factors					Annual Emissions Reductions (Short Tons)		
	Energy	Natural Gas	Oil	NOX	SO2	CO2			NOX	SO2	CO2
	Annual MWh	Annual Therms	Annual MMBTU	Energy	Energy	Energy	Gas	Oil			
Residential	49,331	405,104	89,952	0.000194	0.000172	0.392473	0.005850	0.080693	9.6	8.5	28,989
Low-Income	4,448	48	30,874	0.000194	0.000172	0.392473	0.005850	0.080693	0.9	0.8	4,237
Commercial & Industrial	64,547	(147,834)	5,124	0.000194	0.000172	0.392473	0.005850	0.080693	12.5	11.1	24,881
Grand Total	**118,325**	**257,317**	**125,951**	**0.000194**	**0.000172**	**0.392473**	**0.005850**	**0.080693**	**23.0**	**20.4**	**58,108**

Evaluated Greenhouse Gas Reductions

Customer Sector	Savings			GHG Factors					Annual Emissions Reductions (Short Tons)		
	Energy	Natural Gas	Oil	NOX	SO2	CO2			NOX	SO2	CO2
	Annual MWh	Annual Therms	Annual MMBTU	Energy	Energy	Energy	Gas	Oil			
Residential	53,536	906,906	106,399	0.000194	0.000172	0.392473	0.005850	0.080693	10.4	9.2	34,902
Low-Income	6,364	16,990	18,269	0.000194	0.000172	0.392473	0.005850	0.080693	1.2	1.1	4,071
Commercial & Industrial	71,794	(210,414)	(15,347)	0.000194	0.000172	0.392473	0.005850	0.080693	13.9	12.3	25,708
Grand Total	**131,693**	**713,481**	**109,321**	**0.000194**	**0.000172**	**0.392473**	**0.005850**	**0.080693**	**25.5**	**22.7**	**64,681**

Planned v. Evaluated Greenhouse Gas Reductions (%)

Customer Sector	Savings			GHG Factors					Annual Emissions Reductions (Short Tons)		
	Energy	Natural Gas	Oil	NOX	SO2	CO2			NOX	SO2	CO2
	Annual MWh	Annual Therms	Annual MMBTU	Energy	Energy	Energy	Gas	Oil			
Residential	9%	124%	18%	0%	0%	0%	0%	0%	9%	9%	20%
Low-Income	43%	35295%	-41%	0%	0%	0%	0%	0%	43%	43%	-4%
Commercial & Industrial	11%	42%	-399%	0%	0%	0%	0%	0%	11%	11%	3%
Grand Total	**11%**	**177%**	**-13%**	**0%**	**0%**	**0%**	**0%**	**0%**	**11%**	**11%**	**11%**

Notes:

• The Department does not include greenhouse gas emissions and conversion factor information as part of the Three-Year Term Report template because such data are not required for the Department's investigation of the Three-Year Term Reports. See D.P.U. 11-120-A, Phase II at 6. The Department expects that the Program Administrators will continue to include the greenhouse gas emissions and conversion factor data in the Plan-Year and Three-Year Term Reports for informational purposes only.

• The PAs are working with DEP to try to determine the best method for properly and precisely capturing the full impact of energy efficiency measures on GHG emissions. As part of this process, the PAs have included this additional table on Emissions Reductions, based on continuing discussions with the DEP. These reductions are calculated using factors proposed by DEP, which are based on annual gas, oil, and electric savings. The PAs look forward to discussing these proposed factors with DEP and are committed to ensuring that the full impact of energy efficiency measures on GHG emissions are captured.

Program Planning and Administration Expenditures

2013-2015 Program Administrator Budget

Cape Light Compact

August 1, 2016

D.P.U. 16-127

Part One

H.O.s Leupold and Hale

Program Planning and Administration Expenditures							
Year	Internal Costs	External Costs					Total Program Planning and Administration
	Labor, benefits, employee expenses, materials, and overhead	Legal Services	Assessments	Other Vendor Services	Hard to Measure Sponsorships & Subscriptions	Total External Costs	
2013	$ 284,894.34	$ 350,495.10	$ 209,336.29	$ 289,995.24	$ 37,175.00	$ 887,001.63	$ 1,171,895.97
2014	$ 714,040.50	$ 353,658.77	$ 224,429.16	$ 286,575.33	$ 2,782.00	$ 867,445.26	$ 1,581,485.75
2015	$ 1,241,066.59	$ 470,518.68	$ 210,418.03	$ 448,548.08	$ 28,862.00	$ 1,158,346.79	$ 2,399,413.39
2013-2015	**$ 2,240,001.43**	**$ 1,174,672.55**	**$ 644,183.48**	**$ 1,025,118.65**	**$ 68,819.00**	**$ 2,912,793.68**	**$ 5,152,795.11**

Notes:

• Within Internal Costs, $812,889 is associated with the Compact's tracking system ($49,277 in 2013, $63,633 in 2014, and $699,979 in 2015).

• Assessments include costs associated with the Department of Energy Resource (DOER), Residential Conservation Services (RCS), Energy Efficiency Advisory Council (EEAC) Consultants, and the Low-Income Energy Affordability Network (LEAN). Note that the electric Program Administrators do not budget for the EEAC Consultant fees as these costs are paid by the DOER using RGGI proceeds.

• Other Vendor Services include costs associated with third-party consultants that assist with program planning and administration.

• The data included in the Hard to Measure Sponsorship and Subscriptions column is consistent with the hard-to-measure Sponsorships & Subscriptions lines in the Budget table; for additional information on sponsorships & subscriptions, please see Appendix G.

PART TWO – NARRATIVE

1. CORE INITIAITVE VARIANCES & COST-EFFECTIVENESS

As described below and as shown in the Significant Variances table in Part One, Data tables, a number of the Compact's core initiatives experienced significant variances between planned budgets and actual expenditures. In some cases, pursuant to § 3.8.1 and § 3.8.2 of the Revised Energy Efficiency Guidelines set forth in D.P.U. 11-120-A, Phase II (January 31, 2013) ("Guidelines"), the Compact sought review and support from the Energy Efficiency Advisory Council ("EEAC") and approval from the Department to make significant mid-term modifications ("modifications" or "MTMs") to its Energy Efficiency Plans.

On September 3, 2014, the Compact submitted three modifications for review and support by the EEAC. The modifications were for budget increases in its electric Residential Heat Loan Hard-to-Measure line ($1.4 million, a 154 percent increase), Residential Sponsorships Hard-to-Measure Line ($8,000, a 49 percent increase), and C&I Sponsorships Hard-to-Measure Line ($14,000, a 99 percent increase). This modification was submitted to the EEAC for support pursuant to § 3.8.1 (3) a change in the three-year term budget Energy Efficiency Program or Hard-to-Measure Energy Efficiency Program of greater than (1) 20 percent. The EEAC supported the request by adopting a resolution on October 15, 2014.

In March 2015, the Compact submitted four modifications for review and support by the EEAC. The modifications were for budget increases in its electric Residential Whole House program ($13.2 million, a 42 percent increase), Residential Hard-to-Measure Line ($1.2 million, a 51 percent increase), C&I New Construction program ($2.9 million, a 47 percent increase), and C&I Hard-to-Measure Line ($140,000, a 37 percent increase). This modification was submitted to the EEAC for support pursuant to § 3.8.1 (3) a change in the three-year term budget Energy Efficiency Program or Hard-to-Measure Energy Efficiency Program of greater than (1) 20 percent. The EEAC supported the request by adopting a resolution on March 31, 2015.

On April 2, 2015, the Compact filed an MTM request with the Department pursuant to § 3.8.2 (3) a change in the three-year term budget of a customer sector that would require a cents per kilowatt-hour (calculated using the method described in § 3.2.1.6) or cents per therm charge for the sector that, if it were to replace the Department-approved Energy Efficiency Surcharge for the applicable year, would result in a bill increase for an average customer in the sector exceeding two percent. This request was only for the residential budget increases supported by the EEAC resolution on March 31, 2015. The DPU approved this request on May 29, 2015. Please refer to D.P.U. 15-38 for more information on the Compact's 2015 MTM.

A. Residential Programs

(1) Residential Whole House

The Residential Whole House program was cost-effective for the term with a benefit-cost ratio of 3.77.

a. Residential New Construction & Major Renovation

Significant Variances

For this core initiative from 2013 to 2015, actual expenditures were significantly less than the planned budget. While the core initiative was underspent, the Compact exceeded the three-year goals for both savings and benefits.

Beginning in 2013 and continuing through 2014 and 2015, more electrically heated units participated in the core initiative, which led to more heating and hot water savings per unit than originally planned. As a result, the Compact exceeded the savings and benefits goals at lower-than-expected expenditures. The Compact has a history of significant variances between planned and actual costs, savings, and benefits for its Residential New Construction core initiative. This is due to the relatively small number of participants and the difficulty in predicting participant decisions in this core initiative. There is a wide variation in savings and benefits achieved by home, and the choices made by each participant impacts the core initiative's results greatly.

For the 2016–2018 Three-Year term, no changes are planned for this core initiative's design or implementation. The Compact continues to work with its vendor to better meet all of the planned goals.

Cost-Effectiveness

The Residential New Construction & Major Renovation core initiative was cost-effective for the term with a benefit-cost ratio of 4.63.

b. Residential Multi-Family Retrofit

Significant Variances

For this core initiative from 2013 to 2015, actual lifetime savings and resource benefits were less than the planned lifetime savings and resource benefits, while actual expenditures were greater than the planned budget. The primary reason for the variances is that there were fewer opportunities for weatherization-related measures than planned because fewer electrically heated facilities participated as compared to the plan, especially in 2013 and 2014. Relative to non-weatherization measures, weatherization measures typically provide greater savings and benefits. In addition, actual participation across 2013 and 2014 was below planned participation, which contributed to the decreases in savings and benefits. The core initiative exceeded 2015 goals for savings and participation, but cost more than prior years as a result of more weatherization jobs. Nonetheless, the three-year savings and benefits goal could not be met even with greater participation in 2015. The Compact planned to achieve savings and benefits from oil and propane

measures, but the Department of Energy Resources' ("DOER") Residential Conservation Services ("RCS") regulations were not approved in time for inclusion in 2015.[4]

For the 2016–2018 Three-Year term, the Compact anticipates greater participation with the addition of oil and propane weatherization measures. Other than that addition, no changes are planned for this core initiative' design or implementation. The Compact continues to work with its vendor to find more projects and to better meet all of the planned goals.

Cost-Effectiveness

The Residential Multi-Family core initiative was cost-effective for the term with a benefit-cost ratio of 3.75.

c. Residential Home Energy Services

Significant Variances

For this core initiative from 2013 to 2015, actual expenditures were significantly greater than the planned budget. The Compact spent more than planned on this core initiative due to the enhanced incentives for Efficient Neighborhoods +®.[5] In reviewing the methodology for available census block groups for this core initiative, it was determined that the Compact's census blocks did not enable the Compact to identify and target customers in the desired income categories of 61–100 percent of state median income. As a result, the Compact's Governing Board chose to allow all income eligible residents in the Compact's service territory to participate, but required income verification. The Compact experienced more participation than was originally expected as a result of allowing all towns to participate.

The Efficient Neighborhoods +® effort for the Compact spanned two years, and as such, this effort ended in August 2014. In the Compact's 2015 MTM, the three-year budget for this core initiative increased by approximately $14 million.

For the 2016–2018 Three-Year term, no changes are planned for this core initiative' design or implementation. The Compact continues to work with its vendor to better meet all of the planned goals.

[4] The Home Energy Services, Residential Multi-Family, and Low-Income Multi-Family core initiatives are regulated by 225 CMR 4.00. For more information on the DOER's RCS regulations and ongoing proceeding, visit www.mass.gov/eea/energy-utilities-clean-tech/energy-efficiency/policies-regs-for-ee/residential-conservation-services-rcs.html.

[5] More information on Efficient Neighborhoods +® is available in the Statewide Three-Year Electric and Gas Energy Efficiency Plan at 171 of 274.

Cost-Effectiveness

The Residential Home Energy Services core initiative was cost-effective for the term with a benefit-cost ratio of 3.78.

d. Residential Behavior/Feedback

Significant Variances

For this core initiative from 2013 through 2015, savings and resource benefits were significantly less than planned, while actual expenditures were significantly greater than the planned budget. In 2013, there were no expenditures, savings, or benefits because the Compact issued its request for proposals in 2013 with an official launch to customers toward the end of the third quarter in 2014. Given the timing of the core initiative launch, the Compact did not claim savings for 2013 or 2014. In 2015, a program evaluation was completed that shows far lower savings per participant than anticipated. That evaluation is being filed with this Term Report (see Appendix D, Study 15-10), and the 2015 savings included in this Term Report for the core initiative are based on this evaluation.

With regard to the budget variance, the Compact planned the 2013-2015 budget based on knowledge of other Residential Behavioral/Feedback core initiative efforts. The ultimate design of the Compact's Residential Behavioral/Feedback core initiative differed from the prior Residential Behavioral/Feedback core initiative on which the planned budget was based. Once the vendor was chosen and customers elected to join the core initiative, the Compact found that the costs were greater than expected.

As a result of the greater costs and lower savings, the Compact decided to terminate this core initiative in early 2016.

Cost-Effectiveness

The Residential Behavioral/Feedback core initiative was not cost-effective for the term with a benefit-cost ratio of 0.01. This is because costs were greater than planned and evaluated savings were less than anticipated. As a result of the greater costs and lower savings, the Compact decided to terminate this core initiative in early 2016.

(2) Residential Products

The Residential Products program was cost-effective for the term with a benefit-cost ratio of 2.13.

a. Residential Cooling & Heating Equipment

Significant Variances

For this core initiative from 2013 to 2015, actual expenditures were significantly greater than the planned budget. This core initiative was successful in all years, partially due to both the increased popularity of mini-split heat pumps and the incentives for early replacement central air

conditioning measures. These are some of the core initiative's more expensive measures in terms of cost to achieve savings. Additionally, the core initiative's participation increased due to trade ally partnerships, general marketing by those trade allies to attract more customers, and additional grants that were made available by the Massachusetts Clean Energy Center.

For the 2016–2018 Three-Year term, no changes are planned for this core initiative's design or implementation. The Compact continues to work with its vendor to better meet all of the planned goals.

Cost-Effectiveness

The Residential Cooling & Heating Equipment core initiative was cost-effective for the term with a benefit-cost ratio of 1.47.

b. Residential Lighting

Significant Variances

There are no significant variances in 2013–2015 for this core initiative.

For the 2016–2018 Three-Year term, no changes are planned for this core initiative' design or implementation. The Compact continues to work with its vendor to better meet all of the planned goals.

Cost-Effectiveness

The Residential Lighting core initiative was cost-effective for the term with a benefit-cost ratio of 2.38.

c. Residential Consumer Products

Significant Variances

For this core initiative from 2013 through 2015, savings, resource benefits, and expenditures were significantly less than planned. A number of aspects within this core initiative changed over the three-year term, all of which contributed toward the reduction in expenditures, savings, and benefits.

In 2014, ENERGY STAR changed some of its specifications for products and appliances. Specifically, many products previously on the ENERGY STAR list were delisted, and newly certified products were slow to be added to the list. As a result, there were fewer measures available to offer through the core initiative during the 2014 program year. This was especially true for refrigerators. This change to the specification resulted in diminished savings for refrigerators as a category.

For some appliance measures, availability of TopTen USA or ENERGY STAR® Most Efficient models was very limited in the market. This continued to be true in 2015.

The Compact saw less participation in the refrigerator/freezer recycling effort. Additionally, in 2015, the Program Administrators' recycling vendor unexpectedly went into receivership, and the Program Administrators had to terminate this offering. The PAs worked with a new vendor to offer recycling services in 2016 to address the issues that led to this portion of the variance.

Production for this core initiative had been tapering off in recent years, and overall three-year participation was 62 percent less than planned.

For the 2016–2018 Three-Year term, no changes are planned for this core initiative's design or implementation. The Compact continues to work with its vendor to find more projects and to better meet all of the planned goals.

Cost-Effectiveness

The Residential Consumer Products core initiative was cost-effective for the term with a benefit-cost ratio of 2.24.

B. Low-Income Programs

(1) Low-Income Whole House

The Low-Income Whole House program was cost-effective for the term with a benefit-cost ratio of 3.40.

a. Low-Income New Construction

Significant Variances

For this core initiative across both 2013 and 2014, expenditures were significantly less than the planned budget. Conversely, 2015 saw a significant increase in spending, for a net increase in costs over the three-year term. The core initiative exceeded its savings and resource benefits goals.

While the Compact had few low-income new construction projects that heated with electric, oil, or propane, it did provide incentives for lighting and gas heating measures in a large master-metered, natural gas heated project (consistent with the statewide agreement at the time). The majority of the Compact's achieved electric savings in this core initiative came from lighting measures. The increase in costs is due to the gas heating incentives (consistent with the statewide agreement at the time), because customer incentives are greater for heating measures than they are for lighting measures. Therefore, those heating incentives resulted in this core initiative exceeding its three-year budget, while the savings goals were mostly met through lighting measures.

With the combination of the Low-Income New Construction core initiative into the Residential New Construction core initiative beginning in 2016, the impact from one large project should not produce as significant a variance at the core initiative level in the future as experienced in 2015.

Cost-Effectiveness

The Low-Income New Construction core initiative was cost-effective for the term with a benefit-cost ratio of 9.14.

b. Low-Income Single Family Retrofit

Significant Variances

For this core initiative from 2013 through 2015, resource benefits were significantly less than planned benefits. Note that savings have been greater than planned across the three years. Efforts were made to address all eligible customers in this core initiative, which yielded a greater number of audits completed, as well as more lighting and refrigerator installations than originally planned. While more customers were served, fewer weatherization-related, domestic hot water, and heating system measures were installed than anticipated. Weatherization and heating systems typically provide greater benefits (especially non-electric impacts including oil benefits) but at a greater cost than non-weatherization measures. Therefore, the decrease in weatherization work and heating

systems more than offsets the increase in audits, lighting, and refrigerator measures, which led to fewer benefits than planned.

For the 2016–2018 Three-Year term, no changes are planned for this core initiative's design or implementation. The Compact continues to work with its vendor and LEAN to find more projects and to better meet all of the planned goals.

Cost-Effectiveness

The Low-Income Single Family Retrofit core initiative was cost-effective for the term with a benefit-cost ratio of 3.44.

c. Low-Income Multi-Family Retrofit

Significant Variances

For this core initiative from 2013 through 2015, actual expenditures and resource benefits were significantly less than the planned budget and resource benefits. Note, however, that savings increased in all years relative to plan. Fewer weatherization-related and HVAC measures were installed than planned, and these measures typically provide greater benefits.

When the Compact planned its 2013-2015 Low-Income Multi-Family core initiative, it anticipated expansion of the core initiative for units heated by deliverable fuels. However, the RCS regulations were not approved as anticipated,[6] and the Compact was unable to serve as many oil and propane customers as planned. As a result, the Compact did not achieve the targeted benefits.

For the 2016–2018 Three-Year term, no changes are planned for this core initiative's design or implementation.

Cost-Effectiveness

The Low-Income Multi-Family Retrofit core initiative was cost-effective for the term with a benefit-cost ratio of 2.00.

[6] The Home Energy Services, Residential Multi-Family, and Low-Income Multi-Family core initiatives are regulated by 225 CMR 4.00. For more information on the DOER's RCS regulations and ongoing proceeding, visit www.mass.gov/eea/energy-utilities-clean-tech/energy-efficiency/policies-regs-for-ee/residential-conservation-services-rcs.html.

C. Commercial and Industrial Programs

(1) C&I New Construction

Significant Variances

Actual three-year spending for this core initiative was significantly greater than planned. This is primarily due to the success of the upstream lighting sub-initiative in 2014 and 2015. This sub-initiative proved very popular with businesses all over Massachusetts, including the Cape and the Vineyard, where strong participation came from industries like hospitality and retail. Within the sub-initiative, the Compact experienced high customer demand for LED A-line, PAR lamps, decorative LEDs, and MR-16s, among others.

Other elements of the core initiative that contributed to greater than anticipated costs include a CHP project in 2015, more prescriptive chillers installed than planned in 2013 and 2014, a custom process project in 2013, and a large custom comprehensive design project in 2015. All of these projects contributed to greater than expected program expenditures, as well as to even greater increases in savings than expected for the core initiative.

As part of the 2016–2018 Three-Year Plan, the Program Administrators reorganized the C&I programs and core initiatives. The upstream lighting sub-initiative was moved from the C&I New Construction core initiative to the C&I Retrofit program as its own core initiative.

Additionally, evaluated total benefits were significantly less than preliminary total benefits for this core initiative, despite the evaluated total benefits being greater than originally planned. In 2014 and 2015, the Massachusetts Program Administrators completed evaluation studies for the upstream lighting component of the C&I New Construction program.[7] The results of these evaluations decreased the measure life for certain upstream lighting measures based on a change to the average annual operating hours, increased realization rates for all lighting measures in the program, and increased the heating penalties for gas and oil. In particular, the Compact provided a large number of LED A-line measures, for which the measure lives decreased from 10 years to six years. Both the decrease in measure life and the increase in gas and oil heating penalties resulted in a significant decrease to resource benefits.

Cost-Effectiveness

The C&I New Construction program was cost-effective for the term with a benefit-cost ratio of 5.83.

(2) C&I Retrofit Program

[7] The 2014 study was filed in the 2013 Plan-Year Report, Appendix 4D, Study 13-6. The 2015 study was filed with the 2014 Plan-Year Report, Appendix 4D, Study 14-26.

The C&I Retrofit program was cost-effective for the term with a benefit-cost ratio of 2.57.

a. C&I Retrofit Core Initiative

Significant Variances

For this core initiative from 2013 to 2015, actual lifetime savings and resource benefits were significantly less than the planned lifetime savings and resource benefits.

Similar to both 2013 and 2014, non-streetlight lighting measures had less activity in the C&I Retrofit core initiative in 2015 than expected. This is the primary driver of the variance in savings and benefits for the C&I Retrofit core initiative over the three-year term as compared to the plan. Because this trend has continued since 2013, the decrease in lighting opportunities for this core initiative is believed to be directly linked to the simultaneous increase in volume for the upstream lighting component of the C&I New Construction program in the same timeframe.[8]

Refrigeration measures also had lower-than-anticipated activity and delivered fewer lifetime savings and benefits. This was also a trend from 2013 through 2015, and could be due in part to increased refrigeration measures being installed through the C&I Direct Install core initiative. Some of the reduction in refrigeration and lighting activity in this core initiative was offset by an increase in activity for HVAC measures over the three-year period from what was expected.

As part of the 2016–2018 Three-Year Plan, the Program Administrators reorganized the C&I programs and core initiatives. In addition, the Compact in particular reassessed its C&I program delivery approach for the 2016–2018 term, and allocated a dedicated resource to more proactively manage the needs of its largest C&I customers.

Cost-Effectiveness

The C&I Retrofit core initiative was cost-effective for the term with a benefit-cost ratio of 2.37.

b. C&I Direct Install

Significant Variances

The actual three-year lifetime electric savings for this core initiative were less than planned savings.

[8] The upstream lighting component of the C&I New Construction program exceeded its savings and benefits goals at lower cost than expected. Any link between this success and a decrease in downstream lighting implementation is difficult to prove. However, after more LED lamp models had been added to upstream lighting, upstream distributors undertook major sales campaigns for LEDs across the Cape and Vineyard territory, yielding an increase in lifetime savings and benefits for the upstream lighting sub-initiative. This kind of activity could have increased the applicability of the upstream buying option for those participants who might have otherwise gone through traditional downstream channels to improve their lighting by participating in the C&I Retrofit core initiative.

Like its other C&I core initiatives, the Compact's Direct Install core initiative volume can fluctuate substantially from year to year. In 2013, actual expenditures, lifetime savings, and total benefits were significantly less than planned, primarily due to lower than anticipated participation in the first year of the three-year plan. However, in 2014, this trend was reversed because the Compact worked with its vendors to increase participation, and because a substantial volume of projects proposed in late 2013 came to fruition in 2014. Overall, the core initiative achieved greater than expected lifetime savings for the 2014 year. In the final year of the three-year plan, the Compact experienced less overall participation than expected due in part to transitioning to a new vendor contract. However, some of this lower participation was offset by increased installations of certain measures. More specifically, savings from non-LED lighting measures were less than planned, but were mitigated by increases in LED installations. The Compact also experienced fewer than expected savings from HVAC and hot water measures, but greater than expected savings from refrigeration measures.

As part of the 2016–2018 Three-Year Plan, the Program Administrators worked collaboratively to clarify criteria for the C&I Small Business core initiative to be based on kWh usage, rather than on kW demand. The Compact continues to work with its vendor to find more projects and to better meet all of the planned goals.

Cost-Effectiveness

The C&I Direct Install core initiative was cost-effective for the term with a benefit-cost ratio of 2.79.

2. LOW-INCOME COST ALLOCATION

The Green Communities Act requires that at least 10 percent of electric efficiency funding be spent on low-income programs. G.L. c. 25 § 19(c). The table below summarizes and compares the Compact's planned and actual program budget allocation by customer sector by year and in total for the three-year term.

2013-2015 Customer Sector Cost Allocation						
Customer Sector	Planned		Actual		Planned v. Actual	
	Total PA Costs	% of Total PA Costs	Total PA Costs	% of Total PA Costs	Total PA Costs	% of Total PA Costs
2013 Allocation						
Residential	12,990,648	43.5%	16,216,641	63.3%	24.8%	45.5%
Low-Income	3,306,419	11.1%	2,713,226	10.6%	-17.9%	-4.3%
Commercial & Industrial	13,591,802	45.5%	6,709,066	26.2%	-50.6%	-42.5%
Grand Total	**29,888,870**	**100%**	**25,638,933**	**100%**	**-14.2%**	**0%**
2014 Allocation						
Residential	14,241,901	54.8%	19,142,877	52.1%	34.4%	-5.0%
Low-Income	3,153,143	12.1%	2,683,268	7.3%	-14.9%	-39.8%
Commercial & Industrial	8,589,870	33.1%	14,930,992	40.6%	73.8%	22.9%
Grand Total	**25,984,914**	**100%**	**36,757,137**	**100%**	**41.5%**	**0%**
2015 Allocation						
Residential	15,373,432	55.5%	22,521,454	58.7%	46.5%	5.9%
Low-Income	3,807,144	13.7%	3,670,901	9.6%	-3.6%	-30.3%
Commercial & Industrial	8,532,290	30.8%	12,154,133	31.7%	42.4%	2.9%
Grand Total	**27,712,867**	**100%**	**38,346,488**	**100%**	**38.4%**	**0%**
2013-2015 Allocation						
Residential	42,605,982	51.0%	57,880,971	57.5%	35.9%	12.7%
Low-Income	10,266,706	12.3%	9,067,396	9.0%	-11.7%	-26.7%
Commercial & Industrial	30,713,963	36.7%	33,794,191	33.5%	10.0%	-8.7%
Grand Total	**83,586,651**	**100%**	**100,742,558**	**100%**	**20.5%**	**0%**

The Compact's three-year low-income budget did not meet the statutory minimum of the amount expended for energy efficiency. However, it is important to note that the original budget filed in December 20, 2012, for the whole portfolio for 2013–2015 was $83.6 million, and the Compact did spend more than 10 percent of that total original budget in the low-income sector (i.e., the Compact's actual low-income spending was 10.85 percent of the planned total budget). The mid-term modifications added significant enough increases in the overall budget such that the low--income program vendor was not able to add sufficient resources in time to meet the revised 10 percent threshold.

The Compact's spending in the low-income sector was less than expected for all years of the Three-Year Plan, though the Compact did spend 10 percent of the overall budget in 2013. The Compact did not meet the statutory minimum of the amount expended on low-income energy efficiency services because of the rapid increase in budgets due to demand for services in the residential sector.

The Compact has historically spent a significant amount on low-income customers. As summarized in the table below, the Compact has steadily increased its spending in the low-income sector from $1.8 million in 2010, to over $3.7 million in 2015. From 2010 through 2015, the Compact spent a total of almost $16.5 million on low-income customers, which is 10.5 percent of total spending in that timeframe. Further, the Compact is expected to spend an additional $13.4 million by the end of 2018, which is 10.6 percent of total spending for that timeframe.

Year	Low-Income Spending ($)	Annual Increase in Low-Income Spending (%)	Total Portfolio Spending ($)	Low-Income Spending as Percent of Total Spending (%)
2010	1,826,691		13,531,218	13.5%
2011	2,489,571	36%	16,908,160	14.7%
2012	3,079,664	24%	25,857,219	11.9%
2013	2,713,226	-12%	25,638,933	10.6%
2014	2,683,268	-1%	36,757,137	7.3%
2015	3,670,901	37%	38,346,488	9.6%
2016 (planned)	4,040,498	10%	38,845,613	10.4%
2017 (planned)	4,460,916	10%	42,236,204	10.6%
2018 (planned)	4,965,362	11%	46,239,256	10.7%

The steps that the Compact has taken to ensure compliance in the next three-year term include additional focus on longer term multi-family projects and better forecasting for the single family efforts. All efforts are being done in close collaboration with the vendor and LEAN.

3. MINIMIZATION OF ADMINISTRATIVE COSTS

The Green Communities Act requires that energy efficiency programs minimize administrative costs to the fullest extent practicable. G.L. c. 25 § 19(b). In accordance with the GCA, the Compact has sought to minimize administrative costs to the fullest extent practicable.

Please refer to the Administrative Costs table in the Compact's Data Tables for a summary and comparison by core initiative of (i) planned and actual Program Planning and Administration ("PP&A") costs, and (ii) planned and actual PP&A costs as a percent of total program costs. Compared to the three-year planned budget, three-year actual PP&A costs were 24 percent greater for the residential sector, 12 percent greater for the low-income sector, 36 percent greater for the C&I sector, and 27 percent greater for the Compact in total.

The increase in PP&A costs is due to both new costs that were not included in the original three-year plan, and costs that were planned but turned out to be greater than expected. Most of these costs are not program- or sector-specific; they are overhead or general administration costs that are allocated to each program. New costs include the Compact's new internal energy efficiency tracking system, additional overhead costs, and new resources to develop the 2016–2018 Three-Year Plan. Costs that were greater than expected include legal fees, internal resources, DOER assessments, and overhead.

4. COMPETITIVE PROCUREMENT

The Green Communities Act requires that energy efficiency programs utilize competitive procurement processes to the fullest extent practicable. G.L. c. 25 § 19(b). In accordance with the GCA, the Compact has utilized competitive procurement processes to the fullest extent practicable. Please refer to the Competitive Procurement table in the Compact's Data Tables for a summary and comparison of planned and actual outsourced program activities by sector.

The Compact has no significant differences in the percent of total costs between planned and actual Outsourced Activities or Competitively Procured activities for any sector or in total.

5. BENEFIT-COST RATIO SCREENING TOOL

Please see Appendix A, the CD-ROM accompanying this report, for the Benefit-Cost Ratio Screening Tool in Microsoft Excel format.

6. STATEWIDE TECHNICAL REFERENCE MANUAL/LIBRARY

The Technical Reference Manual ("TRM") documents how the energy efficiency Program Administrators consistently, reliably, and transparently calculate savings resulting from the installation of prescriptive energy efficiency measures. The TRM provides methods, formulas, and default assumptions for estimating energy, peak demand, and other resource impacts from energy efficiency measures. The 2015 report-version TRM is available in Appendix B. Please see Appendix 3 to the Compact's 2013 Plan-Year Report in D.P.U. 14-87 for the 2013 report-version TRM and Appendix 3 to the Compact's 2014 Plan-Year Report in D.P.U. 15-49 for the 2014 report-version TRM.

The PAs have been developing an electronic version of the TRM, known as the Technical Reference Library ("TRL"), which will allow the public to access information from a central website. The development of this product is a collaborative effort of the PAs and reflects the efforts of the PAs to align common measure naming across all PAs, where appropriate. The PAs have been working diligently on developing the TRL, but development has been more complex than anticipated; the PAs expect that the TRL will be complete by the end of 2016.

7. STATEWIDE EVALUATION STUDIES SUMMARY

A. Previously Submitted Evaluation Studies Incorporated by Reference

Under the guidance and direction of the Evaluation Management Committee, 87 evaluation studies were completed during the 2013–2015 term. The majority of these studies were previously submitted to the Department in D.P.U. 14-87 (2013 Energy Efficiency Plan-Year Report), D.P.U. 15-49 (2014 Energy Efficiency Plan-Year Report), and D.P.U. 15-160 through D.P.U. 15-169 (2016–2018 Electric & Gas Three-Year Energy Efficiency Plan). Previously submitted studies are incorporated in the instant docket by reference. Please refer to the table below for a complete list of these studies. The table provides the name of each study, the applicable fuel, the location of the study in each report/plan, and the primary EM&V contractor conducting the study. All completed studies are also available on the Massachusetts Energy Efficiency Advisory Council's website at: http://ma-eeac.org/studies/.

Evaluation Studies Completed During the 2013-2015 Term Previously Submitted in Other Dockets			
Study Name	**Study Location and Number**	**Fuel**	**EM&V Contractor**
Residential			
Northeast Residential Lighting Hours-of-Use Study	2013 Plan-Year Report D.P.U. 14-87 App. 4D, Study 13-1	Gas/ Electric	NMR Group, Inc.
Massachusetts Residential New Construction Net Impacts Report	2013 Plan-Year Report D.P.U. 14-87 App. 4D, Study 13-2	Gas/ Electric	NMR Group, Inc.
Massachusetts Spring 2014 Survey Results: FINAL Report	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-1	Electric	The Cadmus Group, Inc.
Residential Lighting Shelf Survey and Pricing Analysis	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-2	Electric	The Cadmus Group, Inc.
Baseline Sensitivity Analysis Spreadsheet, 2014	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-3	Electric/ Gas	NMR Group, Inc.
Market Lift Assessment FINAL Report	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-4	Electric	The Cadmus Group, Inc.
Results of the Massachusetts On-site Lighting Inventory 2014	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-5	Electric	The Cadmus Group, Inc.

Evaluation Studies Completed During the 2013-2015 Term Previously Submitted in Other Dockets			
Study Name	**Study Location and Number**	**Fuel**	**EM&V Contractor**
Supplier and Retailer Perspectives on the Massachusetts Residential Lighting Market Final Report	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-6	Electric	The Cadmus Group, Inc.
Saturation Comparison of Massachusetts, California, and New York: Final Report	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-7	Electric	The Cadmus Group, Inc.
Ductless Mini-Split Heat Pump Customer Survey Results	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-8	Electric	The Cadmus Group, Inc.
Mass Save Multifamily Program Process Evaluation Report	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-9	Electric/ Gas	The Cadmus Group, Inc.
High Efficiency Heating Equipment Impact Evaluation	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-10	Gas	The Cadmus Group, Inc.
Furnace Baseline	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-11	Gas	The Cadmus Group, Inc.
Massachusetts Residential Lighting Cross-Sector Sales Research	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 1	Electric	The Cadmus Group, Inc.
Multistage Lighting Net-to-Gross Assessment: Overall Report	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 2	Electric	The Cadmus Group, Inc.
Lighting Market Assessment and Saturation Stagnation Overall Report	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 3	Electric	The Cadmus Group, Inc.
Baseline Sensitivity Analysis 2016 - 2018	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 4	Electric/ Gas	NMR Group, Inc.
Lighting Interactive Effects Study Preliminary Results	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 5	Electric/ Gas	The Cadmus Group, Inc.
Program Assessment Tube TV Recycling	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 6	Electric	The Cadmus Group, Inc.
Cool Smart Incremental Cost Study	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 7	Electric	The Cadmus Group, Inc.

Evaluation Studies Completed During the 2013-2015 Term Previously Submitted in Other Dockets			
Study Name	**Study Location and Number**	**Fuel**	**EM&V Contractor**
Home Energy Services Initiative and HEAT Loan Delivery Assessment	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 8	Electric/ Gas	The Cadmus Group, Inc.
Residential Customer Profile Study	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 9	Electric/ Gas	The Cadmus Group, Inc.
Multifamily Impact Findings Memo	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 10	Electric/ Gas	DNV-GL
Ductless Mini-Split Heat Pump (DMSHP) Final Heating Season Results	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 11	Electric	The Cadmus Group, Inc.
Ductless Mini-Split Heat Pump (DMSHP) Baseline Determination	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 12	Electric	The Cadmus Group, Inc.
Low-Income			
Massachusetts Low Income Metering Study	2013 Plan-Year Report D.P.U. 14-87 App. 4D, Study 13-3	Gas/ Electric	The Cadmus Group, Inc.
Massachusetts Low-Income Multifamily Initiative Impact Evaluation	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 13	Electric/ Gas	The Cadmus Group, Inc.
Commercial & Industrial			
Massachusetts Combined Heat and Power Program Impact Evaluation 2011-2012	2013 Plan-Year Report D.P.U. 14-87 App. 4D, Study 13-4	Gas/ Electric	DNV-GL
Mid-Size Customer Needs Assessment	2013 Plan-Year Report D.P.U. 14-87 App. 4D, Study 13-5	Gas/ Electric	DNV-GL
Impact Evaluation of the Massachusetts Upstream Lighting Program	2013 Plan-Year Report D.P.U. 14-87 App. 4D, Study 13-6	Electric	DNV-GL
Variable Speed Drive Loadshape Project	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-12	Electric	Northeast Energy Efficiency Partnership
Massachusetts Existing Buildings Market Characterization: Commercial and Industrial Customer Telephone Survey Final Report	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-13	Electric/ Gas	DNV-GL

Evaluation Studies Completed During the 2013-2015 Term Previously Submitted in Other Dockets			
Study Name	**Study Location and Number**	**Fuel**	**EM&V Contractor**
Retrofit Lighting Controls Measures Summary of Findings FINAL REPORT	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-14	Electric	KEMA, Inc.
Whole Systems Energy Efficiency Programs – Literature Review	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-15	Electric/ Gas	DNV KEMA, Inc.
Final Report of Massachusetts LED Market Effects: Baseline Characterization	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-16	Electric	DNV-GL
2012 C&I Customer Profile Final Report	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-17	Electric/ Gas	DNV-GL
Learning from Successful Projects Final Report	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-18	Electric/ Gas	DNV-GL
How PA Differences Affect Outcomes Phase 2 Final Report	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-19	Electric/ Gas	DNV-GL
Massachusetts Commercial Real Estate Survey Analysis - Final Report	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-20	Electric/ Gas	DNV-GL
Small Business Program Process Evaluation Final Report	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-21	Electric/ Gas	DNV-GL
Massachusetts Boiler Market Characterization Study	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-22	Gas	DNV-GL
Impact Evaluation of Massachusetts Prescriptive Gas Pre-Rinse Spray Valve Measure	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-23	Gas	DNV-GL
T12 Phaseout Market Research	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-24	Electric	DNV-GL
2013 Commercial & Industrial Customer Profile Report	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-25	Electric/ Gas	DNV-GL
Massachusetts Commercial and Industrial Upstream Lighting Program: “In Storage” Lamps Follow-Up Study	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-26	Electric	DNV-GL

Evaluation Studies Completed During the 2013-2015 Term Previously Submitted in Other Dockets			
Study Name	**Study Location and Number**	**Fuel**	**EM&V Contractor**
Prescriptive Gas Impact Evaluation – Steam Trap Evaluation Phase 1	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 19	Gas	DNV-GL
Prescriptive Programmable Thermostats	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 20	Gas	DNV-GL
Impact Evaluation of PY2013 Custom Gas Installations	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 21	Gas	DNV-GL
Massachusetts Commercial New Construction Energy Code Compliance Follow-Up Study	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 22	Electric/ Gas	DNV-GL
Massachusetts LED Spillover Analysis	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 23	Electric	DNV-GL
Impact Evaluation of Prescriptive Chiller and Compressed Air Installations	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 24	Electric	DNV-GL
Impact Evaluation of 2012 Custom HVAC Installations	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 25	Electric	DNV-GL
Special & Cross Cutting			
Evaluation of the Northampton Leading the Way and Powering Pittsfield Initiatives	2013 Plan-Year Report D.P.U. 14-87 App. 4D, Study 13-7	Gas/ Electric	Opinion Dynamics Corporation
2013 Massachusetts Statewide Marketing Campaign Evaluation Report	2013 Plan-Year Report D.P.U. 14-87 App. 4D, Study 13-8	Gas/ Electric	Opinion Dynamics Corporation
Abbreviated Review of Methods for the Draft Top- Down Modeling Methods Study	2013 Plan-Year Report D.P.U. 14-87 App. 4D, Study 13-9	Gas/ Electric	DNV-GL
Efficient Neighborhoods+SM Summary of Evaluation Results	2013 Plan-Year Report D.P.U. 14-87 App. 4D, Study 13-10	Gas/ Electric	Opinion Dynamics Corporation
2013 Massachusetts Statewide COOL SMART/GasNetworks Brand Assessment	2013 Plan-Year Report D.P.U. 14-87 App. 4D, Study 13-11	Gas/ Electric	Opinion Dynamics Corporation
2013 Commercial and Industrial Electric Programs Free-Ridership and Spillover Study	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-27	Electric	Tetra Tech, Inc.

Evaluation Studies Completed During the 2013-2015 Term Previously Submitted in Other Dockets			
Study Name	**Study Location and Number**	**Fuel**	**EM&V Contractor**
Stage 1 Results and Stage 2 Detailed Research Plan - Commercial and Industrial New Construction Non-Energy Impacts Study	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-28	Electric/ Gas	Tetra Tech, Inc.
Top-Down Modeling Methods Study - Final Report	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-29	Electric/ Gas	Tetra Tech, Inc.
Code Compliance Results for Single-Family Non-Program Homes in Massachusetts	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-30	Electric/ Gas	Tetra Tech, Inc.
Massachusetts Cross Cutting Evaluation Home Energy Report Decay Analysis	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-31	Electric/ Gas	Opinion Dynamics, Inc.
Efficient Neighborhoods + Initiative Evaluation Report	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-32	Electric/ Gas	Opinion Dynamics, Inc.
Massachusetts Cross-Cutting Behavioral Program Evaluation Opower Results	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-33	Electric/ Gas	Navigant Consulting, Inc.
Methods for Measuring Market Effects of Massachusetts Energy Efficiency Programs	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-34	Electric/ Gas	Tetra Tech, Inc.
Recommended Methods for Assessing Market Effects of HVAC Programs	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-35	Electric/ Gas	Tetra Tech, Inc.
Recommended Methods for Assessing Market Effects of C&I Lighting and Controls Programs	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-36	Electric	Tetra Tech, Inc.
Recommended Methods for Assessing Market Effects of Non-Residential New Construction Programs	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-37	Electric/ Gas	Tetra Tech, Inc.
Cross-Cutting Code Compliance Support Initiative Evaluation Reports	2014 Plan-Year Report D.P.U. 15-49 App. 4D, Study 14-38	Electric/ Gas	Tetra Tech, Inc.
Comprehensive Review of Non-Residential Training and Education Programs, with a Focus on Building Operator Certification	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 14	Electric/ Gas	Navigant Consulting, Inc. /Research Into Action, Inc.

Evaluation Studies Completed During the 2013-2015 Term Previously Submitted in Other Dockets			
Study Name	**Study Location and Number**	**Fuel**	**EM&V Contractor**
Comprehensive Review of Behavior and Education Programs	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 15	Electric/ Gas	Navigant Consulting, Inc.
Massachusetts Behavioral Programs Process Evaluation	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 16	Electric/ Gas	Navigant Consulting, Inc.
2014-2015 Commercial and Industrial Natural Gas Programs Free-Ridership and Spillover Study	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 17	Gas	Tetra Tech, Inc.
Efficient Neighborhoods +® Incremental Cost Assessment	2016-2018 Three-Year Plan D.P.U. 15-160 – 15-169 App. U, Study 18	Electric/ Gas	Opinion Dynamics, Inc.

B. Annual Summary for Year Three (2015)

The following evaluation studies, completed after the Program Administrators filed their 2016–2018 Three-Year Plan, are included in this Term Report. Summaries of these evaluations are included in Appendix C and full copies are available in Appendix D. Additionally, all currently completed studies are available on the Council's website at: http://ma-eeac.org/studies/.

Evaluation Studies Completed in Advance of the 2013–2015 Term Report Not Previously Submitted			
Study Name	**Study Location and Number**	**Fuel**	**EM&V Contractor**
Residential Program Studies			
LED Incremental Cost Study – Overall FINAL Report	App. D, Study 15-1	Electric	The Cadmus Group, Inc.
Baseline Sensitivity Analysis – 2015	App. D, Study 15-2	Electric/ Gas	NMR Group, Inc.
Ductless Mini-Split Heat Pump (DMSHP) Cooling Season Results	App. D, Study 15-3	Electric	The Cadmus Group, Inc.
Commercial & Industrial Studies			
2014 Commercial & Industrial Customer Profile Report	App. D, Study 15-4	Electric/ Gas	DNV-GL
Special & Cross Sector Studies			
Cross Cutting Code Compliance Support Initiative Evaluation of Classroom Trainings	App. D, Study 15-5	Electric/ Gas	Tetra Tech, Inc.

Evaluation Studies Completed in Advance of the 2013–2015 Term Report Not Previously Submitted			
Study Name	**Study Location and Number**	**Fuel**	**EM&V Contractor**
Cross Cutting Code Compliance Support Initiative Evaluation of Circuit Rider Support	App. D, Study 15-6	Electric/ Gas	Tetra Tech, Inc.
Cross Cutting Code Compliance Support Initiative Residential Single Family Building Department Document Review	App. D, Study 15-7	Electric/ Gas	Tetra Tech, Inc.
Cross Cutting Code Compliance Support Initiative Commercial Building Department Document Review	App. D, Study 15-8	Electric/ Gas	Tetra Tech, Inc.
Stage 2 Results – Commercial and Industrial New Construction Non-Energy Impacts Study – Final Report	App. D, Study 15-9	Electric/ Gas	Tetra Tech, Inc.
Evaluation of Cape Light Compact's Creating Awareness for Power Efficiency Initiative	App. D, Study 15-10	Electric	Navigant Consulting, Inc.
Reducing the Size of the Control Group in the Home Energy Report Program	App. D, Study 15-11	Electric/ Gas	Navigant Consulting, Inc.
Summary of the Massachusetts Behavioral Program Impact Evaluations	App. D, Study 15-12	Electric/ Gas	Navigant Consulting, Inc.
Berkshire Gas Home Energy Report Program Evaluation	App. D, Study 15-13	Gas	Navigant Consulting, Inc.

C. Summary of the Studies with the Most Significant Effects

The PAs are filing 13 new evaluation studies with the 2013-2015 Energy Efficiency Term Report. In addition, the PAs filed 25 evaluation studies in the 2016-2018 Three-Year Energy Efficiency Plan, D.P.U. 15-160 through D.P.U. 15-169 (October 30, 2015), that also had significant impacts in 2015. The studies that produced the most significant results in 2015 are:

- Impact Evaluation of 2012 Custom HVAC Installations
- 2014 Commercial & Industrial Customer Profile Report
- Ductless Mini Split Heat Pump Study
- Baseline Sensitivity Analysis - 2015

Impact Evaluation of 2012 Custom HVAC Installations

In 2015, the electric PAs conducted an impact evaluation to quantify the actual energy and demand savings realized from 69 custom heating, ventilation and air-conditioning ("HVAC") measures installed through the C&I New Construction and Major Renovation and C&I Large Retrofit programs during the 2012 program year. The scope of work of this impact evaluation covered the 2012 custom HVAC end-use, which includes high efficiency HVAC equipment, HVAC controls as part of Energy Management Systems ("EMS"), operations and maintenance ("O&M"), retro-commissioning of HVAC measures, building shell improvements that impact HVAC loads, and other measures. Quantification of savings was produced in the form of realization rates by PA and statewide at the end use level. The selected verification approach was on-site measurement and verification, which was conducted on the statistically selected sample of 69 participant sites from the 2012-year participant population.

The results of the evaluation vary among statewide and PA specific rates, depending on relevant sample size and ultimate precision. Depending on the PA, this study had upward or downward impacts on the evaluated savings of the electric C&I New Construction and Major Renovation and C&I Large Retrofit programs. This study was filed with the 2016-2018 Plan and is discussed in more detail in D.P.U. 15-160 through D.P.U. 15-169, Exhibit 1, Appendix T, and is available at D.P.U. 15-160 through D.P.U. 15-169, Exhibit 1, Appendix U, Study 25.

2014 Commercial & Industrial Customer Profile Report

The C&I Customer Profile is an annual publication that analyzes the PAs' billing and tracking data in order to identify notable trends and research questions that will help inform and improve the Massachusetts C&I energy efficiency programs. This study seeks to identify where C&I energy efficiency savings and participation are occurring, and what segments remain to be served. The study builds on the analyses of prior Customer Profile studies in order to identify new trends in the data and to verify patterns over time.

Results of the 2014 study suggest that there are several key drivers of PA savings, including the following:

1) There are indications that larger customers, many of whom have been served in recent years, may potentially be experiencing some degree of fatigue even if additional opportunity for savings remains.
2) Custom projects continue to be a key source of gas and electric savings, showing that these accounts are being effectively managed, and that meeting the individual needs of these accounts is an essential tool to drive savings.
3) Large outlier and strategic accounts can have a substantial single year contribution to meeting goals. Because of the changing participation of these outlier accounts, PAs may have a large year-over-year variability in savings ratios.
4) Multi-year participants are a small population, but a key driver of savings, indicating that there may be opportunity for additional savings by focusing on developing more multi-year relationships with customers.

Another notable finding is that gas participation is stronger in towns served by a single PA compared to towns served by different gas and electric PAs, indicating an opportunity for more gas and electric coordination; however, there are sizable variations within the different electric and gas PA combinations. These findings give PAs insight into evolving C&I trends in the energy efficiency landscape in order to continue to achieve challenging savings targets and to better serve C&I customers within Massachusetts. There was no impact to savings from this study. This study is available at Appendix D, Study 15-4.

Ductless Mini Split Heat Pump Study

The objective of this study was to determine the gross impacts from ductless mini-split heat pumps ("DMSHPs") installed through the Residential Cooling & Heating Equipment (Massachusetts) and High Efficiency Heating and Cooling (RI) programs, including electricity savings, fossil fuel savings, and electric peak demand reductions. To support this goal, the evaluation team deployed a suite of temporary metering equipment in 152 homes across Massachusetts and Rhode Island for 12 to 18 months. These data were used to calculate actual operating efficiencies of DMSHPs installed through the programs to analyze efficiency and performance as a consequence of customer operational behavior, and to understand key research questions about cold-climate performance and coincident heating and cooling scenarios. The evaluation team submitted early deliverables at the conclusion of each season to provide preliminary findings and updates to DMSHP savings estimates.

The PAs planned with a value of 1200 hours per year for the equivalent full load heating hours (EFLH_h), while the evaluation team determined a value of 447 for the same parameter. This change from previous accepted values of EFLH_h arises primarily from observed and metered usage patterns and will reduce projected heating savings for DMSHPs. The previous estimate of full load heating hours was based on an assumption, and this new data indicates that infrequent use and part-load heating operation of real-world units contribute to a much lower value of EFLH_h for DMSHPs.

The PAs planned with a value of 360 hours per year for the equivalent full load cooling hours (EFLH_c). The evaluation results show a value of 259 for the same parameter. This change of EFLH arises primarily from observed and metered usage patterns and will reduce projected cooling savings for DMSHPs. The previous estimate of full load cooling hours was based on a 2009 study of central air-conditioners, and this new data indicates that infrequent use and part-load cooling operation contribute to a lower value of EFLH_c for DMSHPs. The evaluation team also recommended a baseline update from SEER 14 to SEER 14.5 for DMSHPs. This update is due to a literature review of currently available DMSHP models and reflects the minimum efficiency currently available in the market. This change in baseline efficiency also reduces projected cooling savings for DMSHPs. This study had a significant downward impact on the evaluated savings of the electric Residential Heating & Cooling program. The evaluation team is planning to update its findings in an upcoming evaluation study upon inclusion of data from an additional heating

season for approximately 80 sites (the first winter studied experienced an abnormally large amount of snowfall). This study is available at Appendix D, Study 15-3.

Baseline Sensitivity Analysis – 2015

The objective of this study was to develop a Market Adoption Model ("MAM") that described likely lighting market-level sales by lighting technology with and without future program activity. The model outputs yielded revised delta watts for residential lighting measures impacted by the Energy Independence and Security Act ("EISA"), which are used to calculate gross savings. To develop the MAM, the evaluation team relied on inputs from existing market assessment activities, changes to federal lighting standards, and records of program activity. Specifically, the study updated 2015 values based on the following lighting standards and studies:

- The Energy Independence and Security Act of 2007
- 2015 program sales data from Energy Federation, Inc. (EFI)
- Lighting Market Assessment On-site Visit and Consumer Survey Results (2015)
- Supplier Interviews and point-of-sale modeling, as reported in the Multistage Net-to Gross Study (2015)

The period of time covered by the 2015 MAM was 2015 through 2023. Based on the inputs described above, the evaluation team developed a spreadsheet-based simulation model that predicted likely market-level adoption of lighting technologies in the absence of further program intervention. Ultimately, the MAM showed that inefficient incandescent and halogen bulbs will remain the baseline well after EISA has restricted sales of these bulbs (long sell-through period), compact florescent light bulb ("CFL") sales will increase at a steady rate, and Light-Emitting Diode ("LED") sales will increase fairly rapidly. The results represent a material increase in savings for CFLs from planning values due to an increased amount of inefficient lighting in the baseline as well as improved sales weights developed from program sales data. Although savings increased for CFLs, results represent a decrease in savings for LEDs, which is due to the presence of CFLs in the LED baseline. This study is available at Appendix D, Study 15-2.

D. Evaluation Studies Recommendations Table

Appendix E provides a table summarizing all evaluation study recommendations and, if applicable, whether the Program Administrators (or the Compact for Compact-specific recommendations) have implemented the recommendation to date.

8. THREE-YEAR COSTS

A. Allocation and Assignment of C&I Direct Install Costs for 2013-2015 Term Report

The Program Administrators worked together to resolve inconsistencies in the allocation of C&I Direct Install (now called the Small Business core initiative) costs. In this effort, the PAs defined cost categories and discussed the most appropriate categories to assign costs. The PAs finalized the common allocation methodology in early 2016. Please see the table below for the agreed-upon assignment of costs by cost category.

Cost Category	Assignment of Cost
Audit costs (where applicable and separately invoiced)	STAT
Any installations (fixtures, showerheads, etc.)	Incentive
Lamp Recycling	Incentive
External QA/QC – administration and visits (if applicable)	STAT
Marketing (if there is a special push)	Marketing
Fees associated with installation (lift, contractor fees (permits and electrician/labor charges, etc.)	Incentive
Contractor Fees (management fee–non direct labor and fees for lead vendor costs) – (if applicable)	STAT

B. Invoice Summary Table

Please refer to Appendix F for invoice summary tables for each core initiative, sorted by budget category. The Compact will continue to maintain all invoices associated with the implementation of its energy efficiency programs.

The invoice summary tables are a summary of how invoices were paid by the Compact. While the invoices are organized by core initiative, not all costs in the invoices are specific to each core initiative. Such costs include IT support, legal services, general marketing for the efficiency programs, and other efficiency-related overhead costs provided by third-party vendors. These costs are allocated to each core initiative based on the core initiative's planned percentage of total costs. Additionally, the tables represent vendor invoices only. They do not include costs that are not paid via an invoice to a vendor, such as internal labor costs, internal expenses, direct incentive payments to participants, or loans repaid by participants as part of multi-year financing opportunities in certain core initiatives. Therefore, the totals in the tables will not match the totals in the Term Report Data tables.

Note that a Motion for Protective Treatment of Confidential Information is being submitted as part of this filing for information included in this appendix. As discussed in that motion, the Compact requests that the Department protect from public disclosure non-public vendor pricing information.

Public disclosure of this information would reveal the Compact's proprietary, confidential pricing information, disclosure of which could harm the competitive business position of the Compact and its vendors.

C. Sponsorships and Subscriptions

Introduction

In the process of preparing this Term Report, the PAs performed a detailed review of the energy efficiency expenses incurred during the period 2013 through 2015 that were categorized as Sponsorships & Subscriptions in the hard-to-measure line items, as well as similar costs that were included as program expenses. PAs acknowledge that there were some inconsistencies across PAs in the categorization of costs related to sponsorships and subscriptions in the past and have worked together to create a consistent, statewide policy for the review of sponsorship costs and budget categorization in accordance with the Order and Department precedent.

As a result of this detailed review, the PAs determined that the methodology for including costs in the Sponsorships & Subscriptions hard-to-measure line items should be clarified for 2016–2018. For 2013–2015, PAs are reporting costs in the manner in which they were categorized during that term. Going forward, the PAs will categorize costs in the manner described in the Policy on Sponsorships & Subscriptions provided in Appendix G.

In the past, costs were allocated to the Sponsorships & Subscriptions hard-to-measure line items based on the name of the cost (i.e., any sponsorships and any subscriptions that were made for any purpose). Going forward, the PAs will categorize costs based on the purpose for which those costs were incurred. While reviewing sponsorship information, PAs determined that the majority of these costs were incurred to promote or affect an in-the-field energy efficiency program directly, including marketing specific programs or sectors, or acquiring data for planning or evaluation. In fact, reaching customers, contractors, and other program influencers through sponsorships and participation in conferences and events is a key element of the PAs' go-to-market strategy. These sponsorships were intended for the purpose of promoting energy efficiency and Mass Save through banners, brochures, presentations, tables, submission of papers, and other marketing strategies. PAs consider this approach to be a fundamental element of their marketing strategy because they are often able to reach a substantial number of participants for a very low cost of acquisition. Starting in 2016, all costs that are incurred for the direct purpose of supporting in-the-field programs will be included as program costs in the appropriate program lines. Conversely, sponsorships and subscriptions that do not directly impact a program, but do provide a benefit to customers, will be included in the Sponsorships & Subscriptions hard-to-measure line item in the appropriate sectors.

2013–2015 Sponsorships & Subscriptions

Please refer to Appendix G for a list of all organizations or items the Compact sponsored or subscribed to during the term. The list includes the following: (a) name of the sponsored organization or item, (b) description of organization or item, (c) cost category, (d) annual funding,

(e) purpose of the item, (f) whether the organization is a lobbyist, and (g) an analysis describing why the expense was reasonable, prudently incurred, and how it provided a direct benefit to Massachusetts' ratepayers. Appendix G also provides, where applicable, supporting documentation to justify the purpose and benefit. For any sponsored organization that is a registered lobbyist, Appendix G also provides details of the structure and function of the organization; percent of resources devoted to lobbying and legislative activities; and the method used to derive the percentage.

Sponsorships and Subscriptions Policy

Starting in 2016-2018, all PAs will be following a statewide policy for Sponsorships & Subscriptions, which is provided in Appendix G. The attached policy includes the process a Program Administrator will use to determine whether it will enter into a specific sponsorship, including (with all appropriate documentation): (1) a detailed description of the direct energy efficiency-related benefit that the expenditures will provide to Massachusetts ratepayers; (2) an identification of the cost category where the expense will be classified; (3) how the expenditure will be allocated between a Program Administrator's gas and electric operations, when applicable; (4) how the Program Administrator will determine if any marketing or advertising sponsorship costs are recoverable from ratepayers in a manner that is consistent with Department precedent; (5) how the Program Administrator will determine if the sponsorship expenses for an organization that is a registered lobbyist are recoverable from ratepayers in a manner that is consistent with Department precedent; and (6) a description of an annual review process that each Program Administrator will undertake to determine whether the events or organizations sponsored the prior year realized the expected benefits.

Cost Categories

Consistent with the Department's Order in the 2016-2018 Three-Year Plan and the Consistent Cost Categories Report, the PAs have extensively reviewed the Sponsorships & Subscriptions from past and current years and have assigned cost categories for each sponsorship and subscription (including costs that are appropriately categorized as program costs) for use starting in 2016. The PAs will continue to review new costs going forward and assign a consistent category. Please see Appendix G for examples of statewide potential sponsorships and subscriptions cost categories.

9. PERFORMANCE INCENTIVE MODELS

The purpose of this section is to provide detailed supporting documentation on performance incentives that each Program Administrator proposes to collect. This section is not applicable to the Compact; as a municipal aggregator and public entity, the Compact does not collect any performance incentives.

APPENDIX A
BENEFIT-COST RATIO SCREENING TOOL

Please refer to the CD-ROM accompanying this report for the Benefit-Cost Ratio Screening Tool in Microsoft Excel format.

APPENDIX B
TECHNICAL REFERENCE MANUAL – 2015 REPORT VERSION

Please see Statewide Appendix B filed under separate cover.

APPENDIX C
SUMMARIES OF EVALUATION STUDIES

Study 15-1: LED Incremental Cost Study – Overall FINAL Report

Type of Study: Market Assessment
Evaluation Conducted by: NMR Group
Date Evaluation Conducted: 2/1/2016

Study Objective and Summary of Results:

The purpose of this study was to forecast the prices of residential lighting technologies through the year 2018 with the goal of understanding the incremental cost of light-emitting diodes (LEDs) relative to compact fluorescent lamps (CFLs) and halogen bulbs. The three techniques used to extrapolate prices through 2018 included:

1. In-depth interviews with suppliers and high-level retail buyers;
2. Regression model using historical point-of-sale (POS) pricing data; and
3. Exponential regression analysis based on web-scraping data

All three methods predict that LED prices will continue to decline; however, the magnitude of decline varies by method; interviews and POS suggest a 30% decline in estimated prices between 2015 and 2018, and web-scraping estimates a 50% decline in price relative to 2015 by 2018. There was also a large spread in the estimate of starting LED prices ranging from $11.29 to $7.25 (in 2015). The variance in price decline might be attributed to the different distribution channels and associated data that are available within each incremental cost method.

Core Initiatives to which the Results of the Study Apply:

- Residential Lighting (electric) (Electric Only)
- Residential New Construction (Electric Only)
- Residential Multi-Family Retrofit (Electric Only)
- Residential Home Energy Services (Electric Only)
- Low-Income Single Family (Electric Only)
- Low-Income Multi-Family (Electric Only)

Evaluation Recommendations:

The following recommendations were made by the evaluators conducting this study.

Because of the various strengths and weaknesses of each approach, the evaluation team recommended using these ranges to inform 2016 to 2018 planning (see table below). They also suggested that the Massachusetts Program Administrators (PAs) and Energy Efficiency Advisory Council (EEAC) consultants consider the average prices in each year and by bulb type and feature to serve as the best point-estimate if a single estimate was needed. Finally, the evaluators noted that if quarterly POS data become available, the

PAs and EEAC consultants should consider having more frequent quarterly updates in the POS and web-scraping outlooks to match the rapidly evolving nature of the lighting marketplace.

Predicted incremental cost of LED bulb compared to selected bulb technologies, 2016 to 2018

Method	Product	2016	2017	2018
Interviews	CFL A-Type	$3.07	-	$2.19
	CFL Reflector	$4.43	-	$1.78
	Halogen A-Type	$4.49	-	$3.26
	Halogen Reflector	$4.87	-	$2.69
Point of Sale	CFL, generic	$8.23	$7.09	$6.09
	Halogen, generic	$8.90	$7.90	$7.02
Web-Scraping	CFL A-Type	$4.52	$3.01	$1.82
	CFL Reflector	$6.86	$4.23	$2.16
	Halogen A-Type	$5.87	$4.34	$3.14
	Halogen Reflector	$7.53	$4.89	$2.81
Average of Predicted	CFL A-Type	$5.27	-	$3.37
	Halogen A-Type*	$6.42	-	$4.47

Explain Whether or Not the PAs Decided to Adopt the Recommendations from the Study:

The PAs plan to adopt the recommendations.

How the Study Affected Program Results and Its Significance:

The results of this study are used to inform the incremental costs for LEDs for 2016 through 2018, which as discussed previously, are expected to continue to decline, on average, by about 30 to 40 percent. As a result, the PAs will likely revisit the merits of the program incentives being offered for LEDs, and whether adjustments to the affected programs and initiatives involving LEDs should be made.

Overview of Study Method:

The study relied on three approaches, all of which yielded extrapolations of bulb prices and incremental costs that factored into the recommended values for 2016 to 2018.

Supplier Interviews: The Residential Evaluation Team (the team) conducted interviews with 20 manufacturers (including product developers) and six retail buyers to gain insights into bulb pricing trends and forecasts and predictions of market share.

Point-of-Sale Modeling: The team used the 2009 to 2014 LightTracker data set to model pricing trends for LEDs, CFLs, and halogens bulbs.

Web-based Price Modeling: The team used the data obtained through a web-scraping effort to model pricing trends for LEDs, CFLs, and halogens bulbs.

Application of Results: Prospectively

A copy of the complete study can be found in Appendix D, Study 15-1.

Study 15-2: Baseline Sensitivity Analysis – 2015

Type of Study: Impact Evaluation
Evaluation Conducted by: NMR Group
Date Evaluation Conducted: 3/3/2016

Study Objective and Summary of Results:

The purpose of this study was to develop a market adoption model to simulate the changing baseline for the lighting program based on recent market assessment work conducted by the evaluation team.

The study updates the 2015 values based on the following lighting standards and studies:

- Energy Independence and Security Act (EISA)
- Program Sales data from Energy Federation, Inc. (EFI) (2015)
- Lighting Market Assessment On-site Saturation (2015)
- Lighting Market Assessment Consumer Survey Findings Memo (2015)
- Supplier Interviews, as reported in the Multistage Net-To-Gross (NTG) study (2015)
- Point-of-sale Modeling, as reported in the Multistage NTG study (2015)

Core Initiatives to which the Results of the Study Apply:

- Residential Lighting (electric) (Electric Only)
- Residential Multi-Family Retrofit (Electric Only)
- Residential Home Energy Services (Electric Only)
- Residential New Construction (Electric & Gas)
- Low-Income Single Family (Electric & Gas)
- Low-Income Multi-Family (Electric & Gas)

Evaluation Recommendations:

No formal recommendations were made in this evaluation.

Explain Whether or Not the PAs Decided to Adopt the Recommendations from the Study:

N/A (no formal recommendations were made in this evaluation)

Although no formal recommendations were made in this evaluation, it provided an updated characterization of the baseline for the lighting program, which the PAs will use to revise their gross savings estimates for residential lighting, namely CFLs and LEDs.

How the Study Affected Program Results and Its Significance:

The evaluation yielded updated delta watts for residential lighting impacted by EISA, which are used to calculate gross savings. The results represent a material increase in savings for CFLs from planning values due to an increased amount of inefficient lighting in the baseline as well as improved sales weights developed from EFI program sales data. Although savings increased for CFLs, results represent a decrease in savings for LEDs, which is due to the presence of CFLs in the LED baseline.

Overview of Study Method:

The evaluation team constructed a predication of what the lighting market would look like in the absence of any further program intervention based on evaluation market assessment. It was hypothesized that inefficient incandescents and halogens will remain the baseline well after EISA has outlawed them (long sell through period) and that CFL sales will increase at a steady rate and LED sales will increase fairly rapidly. The last assumptions about CFL and LED sales reflect updates from prior Market Adoption Models given what appears to be a shift from CFLs to LEDs by consumers, retailers, and manufacturers.

Application of Results: Retroactively and Prospectively

A copy of the complete study can be found in Appendix D, Study 15-2.

Study 15-3: Ductless Mini-Split Heat Pump (DMSHP) Cooling Season Results

Type of Study: Impact Evaluation
Evaluation Conducted by: The Cadmus Group
Date Evaluation Conducted: 5/2/2016

Study Objective and Summary of Results:

The purpose of this study was to evaluate and estimate the savings of high-efficiency ductless mini-split heat pumps (DMSHPs) in Massachusetts and Rhode Island during the cooling season. The study also provided key systemic characteristics of utilizing DMSHPs within the regional context. Performance correlations between the DMSHP rated cooling capacity, rated efficiencies, and ambient conditions were also evaluated.

For single and multi-head systems with an average nameplate SEER of 22.1, the evaluation team calculated a field-measured SEER of about 19, based on BTU measurements at the indoor head on 88 systems for the sample of homes included in the study. The DMSHPs metered in this study averaged 1.3 tons of nameplate cooling capacity and provided an energy savings for a normal cooling season of 98.6 kWh. This value is based on an average unit in the study. A larger unit, or one that is more highly used would generate larger cooling savings.

The average Equivalent Full Load Hours (EFLH) for cooling was 259 hours. This finding is not surprising because many users were observed to turn the units on and off for 'on-demand' cooling, rather than operating them continuously to maintain a consistent, cooler space temperature. Based on the study results, the only methodological adjustment that needed to be made to the current savings algorithm in the PAs' Technical Reference Manual (TRM) is to update the EFLHs from 360 to 259 hours. The table below compares the 2015 statewide program participation to the DMSHPs metered.

2015 Statewide DMSHP Participation and Savings Comparison

Measure Level (Tier)	Total DMSHP Count in (2015) Program year	Average Nameplate Cooling Capacity (Tons)	Average Nameplate SEER	Average Cooling Energy Savings per DMSHP [kWh]
DMSHP Tier 1 (18 SEER and 9.0 HSPF)	1,298	1.8	19.7	101.8
DMSHP Tier 2 (20 SEER and 11.0 HSPF)	1,718	1.0	25.3	91.5
Combined (2015 Year)	**3,016**	**1.3**	**22.9**	**95.9**
Combined (Metering Study)	**129**	**1.3**	**22.1**	**98.6**

Core Initiatives to which the Results of the Study Apply:

- Residential Heating and Cooling (Electric Only)

Evaluation Recommendations:

No formal recommendations were made in this evaluation.

Explain Whether or Not the PAs Decided to Adopt the Recommendations from the Study:

N/A (no formal recommendations were made in this evaluation)

Although no formal recommendations were made in this evaluation, the evaluation provided an updated estimate of the cooling hours and savings, which the PAs will use to revise their gross savings estimates for DMSHPs during the cooling season.

How the Study Affected Program Results and Its Significance:

The evaluation yielded revised gross savings estimates for DMSHPs during the cooling season. The results represent a material decrease in savings from 2013-2015 planning values from roughly 150 kWh across the various DMSHP unit tiers to 98.6 kWh due primarily to the fewer full load cooling hours calculated in the field. This study also informs future implementation efforts by providing in situ performance characteristics of MA & RI clients using DMSHPs.

Overview of Study Method:

Across 152 homes, the Evaluation Team logged energy consumption, outdoor air characteristics, indoor air characteristics, and indoor unit fan current as a proxy for airflow. The team collected actual airflow measurements with a calibrated flow hood and generated fan curves for different models of indoor units, which were then used to develop estimates of energy delivered or removed by the indoor unit.

Energy savings were computed using the Standard Energy Savings Algorithm found in the MA Technical Reference Manual for program years 2016-2018, dated October 2015. Cooling energy provided and outdoor weather conditions were computed using standard engineering calculations and normalized against Typical Meteorological Year data.

Application of Results: Retroactively and Prospectively

A copy of the complete study can be found in Appendix D, Study 15-3.

Study 15-4: 2014 Commercial & Industrial Customer Profile Report

Type of Study: Market Characterization
Evaluation Conducted by: DNV GL
Date Evaluation Conducted: 4/8/2016

Study Objective and Summary of Results:

The annual C&I Customer Profile project integrates the Massachusetts PAs' billing and tracking data into a single C&I Evaluation Database, reports on evolving trends in the C&I energy efficiency landscape, and informs the development of hypotheses for further investigation. The primary objective of this project is to generate cross-PA views of the data at as granular a level as feasible without compromising customer or project data confidentiality.

Additional objectives include:

- Ensure customer level data confidentiality is maintained
- Provide a standardized, time-series, state-wide view of the PA's tracking and billing data in a format that is compatible with existing PA IT systems
- Support a diverse and robust array of drill downs and roll-ups of PA data on different attributes to provide unique insight into PA C&I efficiency accomplishments
- Minimize data requests on the PA teams
- Integrate additional data collected by third parties, surveys, site visits, and other methods to provide a more comprehensive understanding of PA customers and maximize the return on PA investments in data collection

The 2014 C&I Customer Profile study provides the following key findings:

- The availability of project level upstream lighting data had a significant impact on the participation ratio, particularly for smaller customers.
- Mid-size electric customers have contributed a greater share of the savings relative to their share of consumption each year since 2011.
- Town level consumption weighted participation over the last four years indicates that PAs have engaged many of the larger customers recently.
- Electric PA savings increasingly come from a larger population of smaller saving projects.
- Pre-rinse spray valves are a key, but declining, driver of gas participation.
- Approximately half of all accounts from 2011 - 2014 are new accounts to the C&I dataset.

- Gas PAs engaged 25% of their collective consumption-weighted population in 2014 (up from 20% in 2013).
- The annual consumption for gas accounts is more deterministic of the total savings that can be achieved for the account than it is for electric accounts.
- Since 2011, towns served by a single PA experience higher gas participation than towns served by two PAs.
- Large outlier and strategic accounts can have very substantial single year contributions to meeting goals.
- PAs all have instances where 2014 savings exceeded the corresponding account's projected savings based on a full extrapolation of 2013 consumption.
- Custom projects continue to be a key source of gas and electric PA savings.
- Multi-year participants represent a small population, but are a key driver of savings.

Core Initiatives to which the Results of the Study Apply:

- C&I New Construction: New Buildings & Major Renovations (Electric & Gas)
- C&I Retrofit: Small Business (Electric & Gas)

Evaluation Recommendations:

The following recommendations were made by the evaluators conducting this study.

> **Recommendation 1:** Where possible, capture the account number as a data field in the upstream lighting and HVAC data.

Explain Whether or Not the PAs Decided to Adopt the Recommendations from the Study:

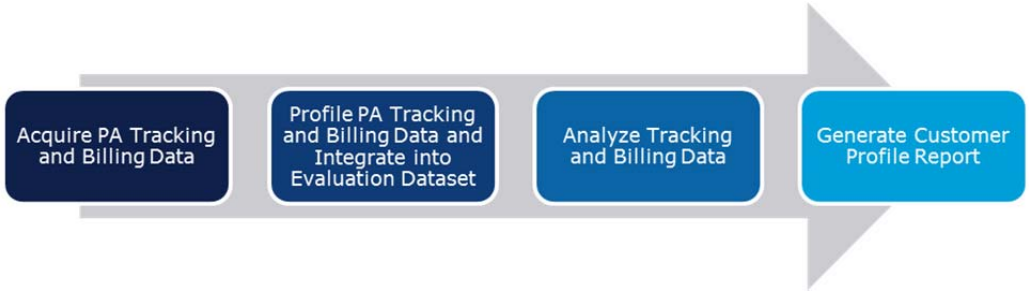
The PAs are considering all recommendations for adoption at this time. The PAs have not formally adopted or rejected any recommendations that require changes to program design and operations.

How the Study Affected Program Results and Its Significance:

This study was not applied to 2015 results. However, it informs future program planning by providing a characterization of C&I customers by their end uses, business types and sizes, and project types. It also provides recommendations for conducting more detailed, robust analyses to more precisely identify potential target areas and examining how best to engage particular sectors.

Overview of Study Method:

The following flow chart presents the four primary steps of the C&I Customer Profile:



The C&I Customer Profile report leverages a review and feedback process from the PAs and EEAC throughout the four primary steps presented above. In the acquisition step the process focuses on:

1. Documenting for PAs what data they have provided per the data request memo and timeline
2. Confirming that the profile project has accurately collected the PAs billing and tracking data for the most recent year

In the integration step the review and feedback process focuses on:

1. Profiling the PA supplied billing and tracking data using the Summary of Data Completeness reporting memo to document the fields provided and the percentage of useable data in these fields
2. Communicating which fields for the current year the PAs have provided that will be integrated into the C&I Evaluation Database (which includes historical data back to 2011)
3. Documenting and communicating any dataset updates that the PAs supply in response to the Summary of Data Completeness.

In the analysis step the review and feedback process focuses on:

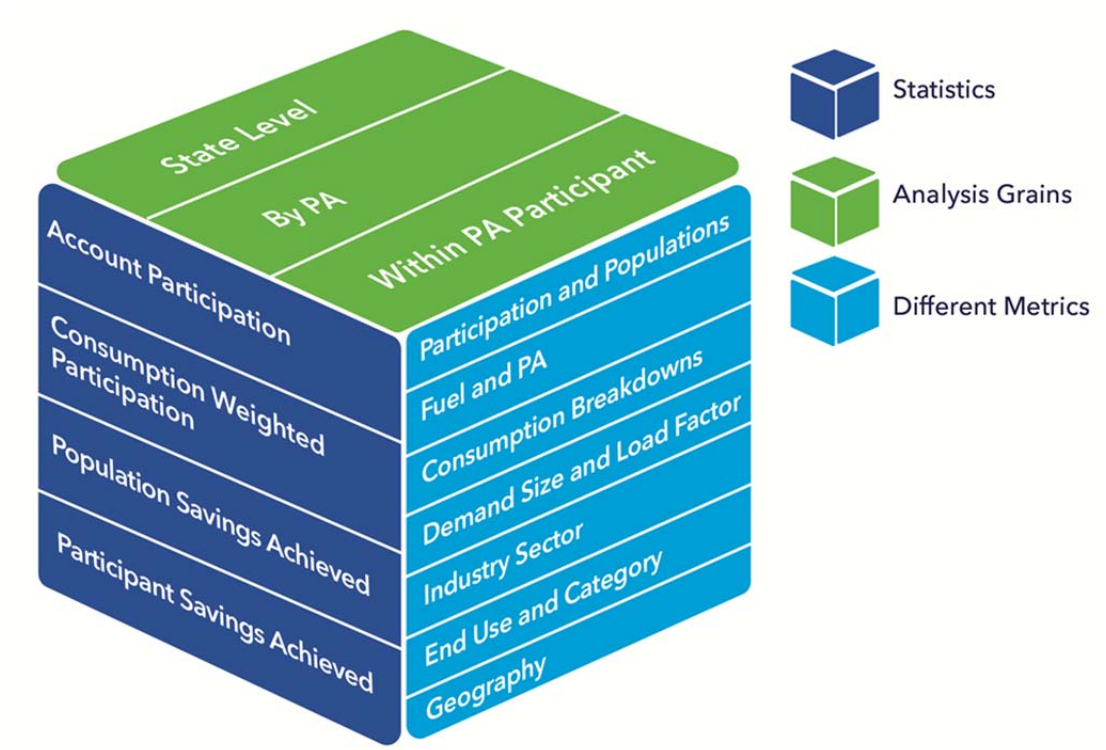
1. Presenting the early drafts of the analysis through the bi-weekly non-impact call and working group venues for review and to inform discussion on where the report should look deeper into the data (August to October)
2. Presenting the drafts of the graphs, tables, and maps to identify notable trends in savings and participation, and inform other research projects as appropriate
3. Conduct calls with individual PAs to look deeper into outliers in their data to ensure they are supported in the report by the proper non-data context

Finally, in the reporting step the review and feedback process focuses on:

1. Reviewing the full draft of the base analysis (October)
2. Identifying additional areas for analysis in the advanced analysis window (November and December)

3. Updating the base analysis and integrating the advanced analysis per reviewer feedback into the full C&I Customer Profile (January)
4. Presenting the report results to the Energy Management Committee and incorporating their feedback
5. Finalizing the report for the PAs in advance of the annual reporting window (February and March)

The report includes a large number of different reporting statistics allowing stakeholders to view the data though many different lenses. These statistics include account participation, consumption-weighted participation, and contribution ratios and are reported at multiple different levels of analysis granularity. The following figure provides a visual representation of the statistics, metrics, and analysis grains used in the C&I Customer Profile report.



While the analysis occurred at the individual-record level, the report results use three "analysis grain" levels in order to preserve individual account confidentiality and to provide useful context for readers. Results associated with each level of detail are presented in separate chapters within this report.

1. State level analyses present aggregate results without distinguishing between PAs. These analyses focus on insights relevant to the population as a whole.

2. By PA analyses provide a more detailed view of how individual PAs fit into the statewide picture. These analyses compare differences in PA performance using the lens of single or multiple metrics, and examine how those differences may be driven by differences in the underlying PA populations.
3. Within PA analyses represent the highest level of granularity. These analyses examine in detail how populations and participants vary across and within the PAs, and provide valuable insight for specific sub-population trends.

Application of Results: Prospectively

A copy of the complete study can be found in Appendix D, Study 15-4.

Study 15-5: Cross Cutting Code Compliance Support Initiative Evaluation of Classroom Trainings

Type of Study: Process Evaluation
Evaluation Conducted by: NMR Group
Evaluation Conducted by: The Cadmus Group
Date Evaluation Conducted: 3/16/2016

Study Objective and Summary of Results:

The purpose of these studies was to assess how well the classroom trainings sponsored by the Code Compliance Support Initiative (CCSI) are meeting the needs of code officials, builders, and other market actors to enable enhanced compliance with the current energy codes. Evaluation activities covering the CCSI trainings include analyses of surveys completed immediately after the trainings, in-depth interviews with trainees approximately six months after attendance, and process assessments of the quality of the trainings.

NMR and Cadmus provided memos presenting their analyses of the data collected from classroom training registration, responses to questions posed during the trainings through an Audience Response System (ARS), and immediate paper surveys completed by training attendees at the conclusion of each classroom training. Memos for residential trainings were provided on July 10 and December 23, 2015. Memos for commercial trainings were provided on April 30, July 31 and December 30, 2015.

NMR and Cadmus conducted in-depth interviews with training attendees approximately six months after the trainings examining how much the training information they were using in their everyday work. The reports from these interviews were provided on January 12, 2016, covering 60 residential trainees, and on January 29, 2016, covering 21 commercial trainees.

NMR and Cadmus attended three residential and three commercial classroom trainings. Process assessments of these trainings were provided on November 18, 2015 for the residential trainings and February 19, 2016 for the commercial trainings.

The immediate survey response memos provide the following key findings:

- Training attendees continued to provide fairly positive feedback on the residential trainings in 2015. The most recent group of immediate survey respondents (fall of 2015) rated individual components of the residential trainings slightly higher in terms of usefulness than past respondents.
- Most training attendees also indicated that they would likely use the information provided within the next six months.

The follow-up interview reports provide the following key findings:

- Nearly two out of three residential training attendees and over one-half of commercial training attendees said they had made some changes in their work as

a result of the training(s) they attended. Municipal building code employees were more likely to say they had made changes due to the trainings than builders and others, for both residential and commercial training attendees.

- Most training attendees (72 percent of residential and 81 percent of commercial) had shared some of the information from the trainings with other parties.

The classroom training process assessments provide the following key findings:

- The residential classroom training quality is very good overall with the presenters effectively conveying the information to the attendees. The trainings should be very useful for people in the field who need to be brought up to speed on how to meet the new 2012 International Energy Conservation Code (IECC) requirements.
- The commercial classroom trainings were also good; however, there was more inconsistency in the skills and knowledge of the presenters. One training faced challenges due to insufficient time for the session and the instructor's need for more fluency with the subject.

Core Initiatives to which the Results of the Study Apply:

- Residential New Construction (Electric & Gas)
- C&I New Construction: New Buildings & Major Renovations (Electric & Gas)
- Other (specify below) (Electric & Gas)
- Code Compliance Support Initiative

Evaluation Recommendations:

The following recommendations were made by the evaluators conducting this study.

Based on the immediate training survey response memos,

Recommendation 1: Provide handouts of the slides used in the trainings to the attendees. (The CCSI began providing handouts of the slides on November 9, 2015.)

Recommendation 2: Provide more details on code requirements and case studies and provide more trainings targeted toward contractors.

Based on the follow-up interview reports,

Recommendation 1: Encourage more people to attend the trainings, especially builders and contractors, possibly through offering different trainings for attendees with different levels of knowledge and experience, and partnering with suppliers to make trainings more convenient.

Recommendation 2: Add more information about specific code sections such as ventilation, air sealing, and window requirements as well as more case studies and real life examples to help participants understand practical applications of the code provisions to the trainings.

Based on the classroom training process assessment reports,

Recommendation 1: Ensure that all trainers are proficient in the subject matter and have excellent communication and training skills.

Recommendation 2: Incorporate real-world examples and class interactive exercises in classes to maintain trainee engagement and enhance their learning experience.

Recommendation 3: Continue to offer the trainings; a sizable number of attendees go into them with limited knowledge of the code requirements. The trainings also provide a venue for code officials, builders, Home Energy Rating System (HERS) raters, and other market actors to discuss conditions in the field affecting code compliance.

Explain Whether or Not the PAs Decided to Adopt the Recommendations from the Study:

The PAs plan to adopt some of the recommendations.

Immediate Training Survey Response Memos:

Recommendation 1 was adopted – The CCSI is now providing handouts of the slides used in the trainings to the attendees.

Recommendation 2 was adopted – The PAs' program vendor has engaged in partnerships with several contractor groups to offer trainings: Northeast Builders and Remodelers Assoc. (NEBA), National Assoc. of Remodelers (NARI), IDI Insulation Distributors (IDI), etc.

Follow-Up Interview Reports:

Recommendation 1 was adopted – The PAs' program vendor has engaged in partnerships with several contractor groups to offer trainings: Northeast Builders and Remodelers Assoc. (NEBA), National Assoc. of Remodelers (NARI), IDI Insulation Distributors (IDI), etc.

Classroom Training Process Assessment Reports:

Recommendation 1 was adopted – All trainers have scored satisfactorily as measured by surveys administered at the end of each class.

Recommendation 2 was adopted – Real-world examples are incorporated into the training when appropriate. In addition, use of the Audience Response System (ARS) during trainings has improved trainee engagement.

Recommendation 3 was adopted – Trainings continue to be offered throughout the year across all geographic areas of the state.

The PAs are considering Recommendation 2 from the Follow-Up Interview Reports for adoption at this time. The PAs have not formally adopted or rejected any recommendations that require changes to program design and operations.

How the Study Affected Program Results and Its Significance:

This study was not applied to program results. However, it informs future program planning by providing a set of recommendations to enhance the classroom trainings sponsored by the CCSI in order to enable enhanced compliance with the energy code.

Overview of Study Method:

The immediate training survey response memos analyzed responses to paper surveys completed by training attendees at the end of each session, feedback provided during the training through an Audience Response System (ARS), and information gathered during the registration process.

The follow-up interview reports analyzed in-depth interviews conducted by telephone with individuals who had attended classroom trainings approximately six months earlier.

The process assessments are based on the researcher's observations while attending CCSI classroom trainings.

Application of Results: Prospectively

A copy of the complete study can be found in Appendix D, Study 15-5.

Study 15-6: Cross Cutting Code Compliance Support Initiative Evaluation of Circuit Rider Support

Type of Study: Process Evaluation
Evaluation Conducted by: NMR Group
Date Evaluation Conducted: 3/16/2016

Study Objective and Summary of Results:

The purpose of these studies was to assess how well the Circuit Rider services sponsored by CCSI are meeting the needs of code officials, builders, and other market actors to enable enhanced compliance with the current energy codes. Evaluation activities covering the CCSI Circuit Rider services consisted of analyses of data collected from short telephone surveys conducted with individuals as soon as possible after they had contacted the services and their issues were resolved.

NMR provided memos presenting its analysis of the data collected from every ten or eleven interviews on April 7 and July 25, 2015 and February 8, 2016.

The immediate telephone survey memos provide the following key findings:

- The respondents have generally appreciated the service and give it high ratings for usefulness, total time it took to resolve the question(s) asked, how the call was initially handled (for questions not answered during the initial call), knowledge of the person who resolved the issue, professionalism, and overall responsiveness.
- Respondents in the most recent set of surveys were much more satisfied with the total amount of time it took to resolve their questions and how their calls were initially handled than in the surveys done earlier in 2015.
- Respondents in the most recent set of surveys were more likely to pose questions related to current projects rather than hypothetical situations; the latter were more frequent in surveys done earlier in 2015.

Core Initiatives to which the Results of the Study Apply:

- Residential New Construction (Electric & Gas)
- C&I New Construction: New Buildings & Major Renovations (Electric & Gas)
- Other (specify below) (Electric & Gas)
- Code Compliance Support Initiative

Evaluation Recommendations:

The following recommendations were made by the evaluators conducting this study.

Recommendation 1: Monitor response times and work to improve them; response times continue to become more important as more questions come in concerning

current projects and almost all respondents expect to use the information they receive immediately.

Recommendation 2: As the number of days needed to resolve questions decreased for contacts received in the second half of 2015 and the beginning of 2016 from those received in early 2015, consider recording phone calls, emails, and other attempts to reach those who contact the service for support to more accurately gauge response times.

Explain Whether or Not the PAs Decided to Adopt the Recommendations from the Study:

The PAs plan to adopt some of the recommendations.

Recommendation 1 was adopted – The PAs' program vendor is aware of response times and maintains a log. Depending on the nature of the inquiry, the research that needs to be conducted, and the availability of the inquirer for a call-back, all these factors play into response time from when the Circuit Rider inquiry is opened to when it can be considered closed.

The PAs are considering Recommendation 2 for adoption at this time. The PAs have not formally adopted or rejected any recommendations that require changes to program design and operations.

How the Study Affected Program Results and Its Significance:

This study was not applied to program results. However, it informs future program planning by providing a set of recommendations to enhance the Circuit Rider services sponsored by the CCSI in order to enable enhanced compliance with the energy code.

Overview of Study Method:

The Circuit Rider immediate telephone survey response memos analyzed responses to short telephone surveys conducted with individuals as soon as possible after they had contacted the services and their issues were resolved.

Application of Results: Prospectively

A copy of the complete study can be found in Appendix D, Study 15-6.

Study 15-7: Cross Cutting Code Compliance Support Initiative Residential Single Family Building Department Document Review

Type of Study: Process Evaluation
Evaluation Conducted by: NMR Group
Date Evaluation Conducted: 12/1/2015

Study Objective and Summary of Results:

The purpose of this study was to assess what type of documentation is being filed with local building departments to show compliance with the energy code for single-family homes and how that documentation varies across the different municipalities which may have the 2012 IECC or the stretch code in effect. In conjunction with the ongoing single-family compliance/baseline study, NMR visited 52 building departments throughout Massachusetts and took photos of all energy-related documentation available for each of the 389 homes considered for the baseline study.

NMR provided a final report with findings from documentation review on December 1, 2015.

The documentation review found that very few homes had the required documentation filed for all applicable requirements of the applicable energy or stretch code. More specifically,

- Duct leakage testing, required under both the 2009 and 2012 IECC, was documented for only 20% of 2009 IECC homes and 27% of 2012 IECC homes. Similarly, air leakage testing, required under the 2012 IECC, was documented for only 32% of 2012 IECC homes.
- REScheck checklists, intended to be populated by code officials, were found to be blank for all but one out of the 237 homes where the checklist was present in the filed documentation.
- Only 10% of homes built under the 2012 IECC, 12% of homes built under the 2009 IECC, and 12% of homes built under the stretch code had documentation showing that manual J calculations were used to calculate heating and cooling design loads.
- Only 20% of stretch code homes had documentation showing that the ENERGY STAR thermal enclosure checklist was completed during construction.

Core Initiatives to which the Results of the Study Apply:

- Residential New Construction (Electric & Gas)
- N/A (Electric & Gas)
- Other (specify below) (Electric & Gas)

- Code Compliance Support Initiative

Evaluation Recommendations:

The following recommendations were made by the evaluators conducting this study.

> **Recommendation 1:** The results of this study could be used in conjunction with the results of the ongoing baseline study to inform future CCSI trainings. Areas with poor documentation may also show lower compliance rates and, if so, should be emphasized in future trainings. These areas may include duct leakage, air leakage, and lack of Manual J calculations resulting in oversizing.

Explain Whether or Not the PAs Decided to Adopt the Recommendations from the Study:

The PAs are considering all recommendations for adoption at this time. The PAs have not formally adopted or rejected any recommendations that require changes to program design and operations.

How the Study Affected Program Results and Its Significance:

This study was not applied to program results. However, it informs future program planning by providing a recommendation to integrate into future CCSI trainings the importance of filing complete energy code documentation with the local building departments in order to improve and better document compliance.

Overview of Study Method:

The Residential Building Department Documentation Review analyzed data filed in 52 building departments throughout Massachusetts through photos of all energy-related documentation available for 389 homes considered for the ongoing single-family compliance/baseline study.

Application of Results: Prospectively

A copy of the complete study can be found in Appendix D, Study 15-7.

Study 15-8: Cross Cutting Code Compliance Support Initiative Commercial Building Department Document Review

Type of Study: Process Evaluation
Evaluation Conducted by: The Cadmus Group
Date Evaluation Conducted: 4/27/2016

Study Objective and Summary of Results:

The purpose of this study was to assess what type of documentation is being filed with local building departments to show compliance with the energy code for commercial buildings. The Cadmus Group visited 6 building departments throughout Massachusetts and examined 29 projects in all.

The Cadmus Group provided a final report with findings from the commercial documentation review on April 27, 2016.

The commercial documentation review found that none of the municipalities or the projects examined had all the required documentation filed for envelope measures, lighting, and HVAC. More specifically,

- Of the 29 projects examined, 62 percent had at least some envelope documentation, 34 percent had at least some lighting documentation, 52 percent had at least some HVAC documentation, and 14 percent were LEED certified.
- There were no major differences in documentation between stretch code and non-stretch code communities.

Core Initiatives to which the Results of the Study Apply:

- C&I New Construction: New Buildings & Major Renovations (Electric & Gas)
- Other (specify below) (Electric & Gas)
- Code Compliance Support Initiative

Evaluation Recommendations:

The following recommendations were made by the evaluators conducting this study.

Recommendation 1: The PAs should explore ways to work with municipalities to increase the submittals of COMcheck outputs to verify code compliance as a way to increase consistency and reduce the burden on code officials. One option would be to emphasize the usefulness of COMcheck in CCSI code official training and how it can make it easier to enforce the code.

Recommendation 2: The PAs also should consider ways to work with municipalities to help them institute requirements for a prescriptive compliance checklist if

COMcheck output is not provided. This also could be included in CCSI code official training.

Recommendation 3: The future CCSI trainings should focus on best practices in terms of providing adequate and transparent documentation of energy code compliance for commercial buildings.

Recommendation 4: The CCSI should consider working with the Massachusetts Department of Public Safety (DPS)/Board of Building Regulations and Standards (BBRS) to find methods that may enable increased energy code enforcement during code officials' compliance review and inspection. Examples of these methods might include encouraging attendance at energy code technical support events (both CCSI as well as other regional and national events), a greater emphasis on providing handout materials to attendees at training events and at building departments, and alerting CCSI training attendees as to where compliance documentation failures are occurring. Increased emphasis on communicating the importance of compliance in training opportunities should help raise awareness of the importance of energy code enforcement and increase the priority placed on enforcing the energy code.

Explain Whether or Not the PAs Decided to Adopt the Recommendations from the Study:

The PAs plan to adopt some of the recommendations.

Recommendation 4 was adopted – The PAs are engaging with the DPS and meet with them at least on a quarterly basis to find ways to increase energy code enforcement.

The PAs are considering the other recommendations for adoption at this time. The PAs have not formally adopted or rejected any recommendations that require changes to program design and operations.

How the Study Affected Program Results and Its Significance:
This study was not applied to program results. However, it informs future program planning by providing a set of recommendations to improve the level and review of documentation filed with the local building departments in order to ensure compliance with the energy code.

Overview of Study Method:

The Commercial Building Department Documentation Review analyzed data for 29 projects filed in six building departments throughout Massachusetts.

Application of Results: Prospectively

A copy of the complete study can be found in Appendix D, Study 15-8.

Study 15-9: Stage 2 Results - Commercial and Industrial New Construction Non-Energy Impacts Study - Final Report

Type of Study: Impact Evaluation
Evaluation Conducted by: DNV GL
Date Evaluation Conducted: 3/24/2016

Study Objective and Summary of Results:

The purpose of this study was to quantify the dollar value of participant NEIs for Commercial and Industrial (C&I) New Construction (NC) projects completed in 2013, and to estimate gross NEIs per unit of energy savings resulting from NC electric and gas measures separately.

The study was completed in two stages. Stage 1 determined the best approach for estimating NEIs from NC measures. Based on the results of the Stage 1 research, the Stage 2 analysis focused on the NEIs associated with "true" new construction measures only. True new construction measures are defined as:

- New buildings/facilities
- Major renovations.

True new construction does not include early retirement, upstream, or replace on failure (ROF)/natural replacement.

The study provides the following key findings:

- The total annual value of NEIs for 2013 NC program participants that conducted true NC projects was roughly $488,000 per year, across 957 measures installed in 2013. These results include the Custom – Comprehensive Design Analysis (CDA) performance path-based measure. Table 1 provides a breakdown of savings by project track.

Table 1. Estimated Annual NEIs

Project Track	Annual NEI
Custom Electric	$ 89,261
Prescriptive Electric	$ 372,353
Custom Gas	$ (3,643)
Prescriptive Gas	$ 30,151
Total	**$ 488,122**

-
-

- Table **2** and Table 3 show the electric and gas NEI estimates for each of the measure categories used in the PAs' benefit-cost (BC) analysis. For each of the BC measure categories, the tables present NEIs in dollars per kWh or per therm and their statistical significance. The NEI estimates are derived using the engineering-based analysis conducted on a sample of 255 measures of the population of 957 NC measures installed in 2013.

Table 2. Electric NEI Estimates by PA Benefit-Cost Measure Category

	Benefit- Cost Category	Sample Category	Overall NEI/kWh	Statistically Significant?	Source of Recommended NEI
Custom					
	CHP	N/A	**N/A**	Not Studied	Not Sampled
	Comprehensive Design	Comprehensive Design	**$ 0.001**	Not Recommended	Custom Electric Comprehensive Design
	Compressed Air	Compressed Air	**$ 0.026**	b	Custom Compressed Air
	Food Services	Commercial Kitchen	**$ 0**	0	Prescriptive Electric Commercial Kitchen
	HVAC	HVAC	**$ 0.001**	a	Custom Electric HVAC/Heat Recovery
	Lighting	Lighting	**$ 0.003**	a	Custom Electric Lighting
	Motors & VFD	Motors	**$ 0**	0	Custom Electric Motors
	Other	Other	**$ 0**	0	Custom Electric Other
	Process	Industrial Process	**$ 0.013**	b	Custom Electric Industrial Process
	Refrigeration	Refrigeration	**$ 0.012**	b	Custom Electric Refrigeration
	Overall	**Overall**	**$ 0.006**	**c**	**Custom Electric Overall**
Prescriptive					
	Compressed Air	Compressed Air	**$ 0.038**	c	Prescriptive Compressed Air
	Food Services	Commercial Kitchen	**$ 0**	0	Prescriptive Electric Commercial Kitchen
	HVAC	HVAC	**$ 0**	0	Prescriptive Electric HVAC
	Lighting	Lighting	**$ 0.020**	c	Prescriptive Electric Lighting
	Motors & VFD	Motors	**$ 0**	0	Prescriptive Electric Motors
	Overall	**Overall**	**$ 0.016**	**c**	**Prescriptive Electric Overall**

a: Recommended, but not well determined ($.10 < p \leq .50$)

b: Recommended, statistically significant at 90% confidence ($p \leq .10$)

c: Recommended, statistically significant at 99% confidence ($p \leq .01$)

0: NEIs are determined to be negligible

Not Recommended: $p > .5$

Not Studied: No measures of this type in our sample

Table 3. Gas NEI Estimates by PA Benefit-Cost Measure Category

	Benefit- Cost Category	Sample Category	Overall NEI/Therm	Statistically Significant?	Source of Recommended NEI
Custom					
	Building Shell	Building Shell	$ 0	0	Custom Gas Building Shell
	Comprehensive Design	Comprehensive Design	$ (0.004)	a	Custom Gas Comprehensive Design
	Condensing Boiler	Boilers	$ (0.006)	a	Custom Gas Boilers
	Combination Boiler/Hot Water Heater	Boilers	$ (0.006)	a	Custom Gas Boilers
	Condensing Unit Heater	Other Gas Heating	$ 0	0	Custom Gas Other Gas Heating
	Food Services	Commercial Kitchen	$ 3.399	b	Prescriptive Gas Commercial Kitchen
	Furnace	Other Gas Heating	$ 0	0	Custom Gas Other Gas Heating
	Heat Recovery	HVAC/ Heat Recovery	$ 0.000	a	Custom HVAC/ Heat Recovery
	Heating	Other Gas Heating	$ 0	0	Custom Gas Other Gas Heating
	Hot Water	HVAC/ Heat Recovery	$ 0.000	a	Custom HVAC/ Heat Recovery
	HVAC/ Heat Recovery	HVAC/ Heat Recovery	$ 0.000	a	Custom HVAC/ Heat Recovery
	Infrared Heaters	Other Gas Heating	$ 0	0	Custom Gas Other Gas Heating
	Other	Other	$ (0.032)	a	Custom Gas Other
	Process	Industrial Process	$ 0.007	Not Recommended	Custom Gas Industrial Process
	Overall	**Overall**	$ (0.005)	**b**	**Custom Gas Overall**
Prescriptive					
	Combination Oven	Commercial Kitchen	$ 3.399	b	Prescriptive Gas Commercial Kitchen
	Condensing Boiler	Boilers	$ (0.084)	c	Prescriptive Gas Boilers
	Combination Boiler/Hot Water Heater	Boilers	$ (0.084)	c	Prescriptive Gas Boilers
	Condensing Unit Heater	Other Gas Heating	$ 0.053	c	Prescriptive Gas Other Gas Heating
	Convection Oven	Commercial Kitchen	$ 3.399	b	Prescriptive Gas Commercial Kitchen
	Conveyer Oven	Commercial Kitchen	$ 3.399	b	Prescriptive Gas Commercial Kitchen
	Food Services	Commercial Kitchen	$ 3.399	b	Prescriptive Gas Commercial Kitchen
	Fryer	Commercial Kitchen	$ 3.399	b	Prescriptive Gas Commercial Kitchen
	Furnace	Other Gas Heating	$ 0.053	c	Prescriptive Gas Other Gas Heating
	Griddle	Commercial Kitchen	$ 3.399	b	Prescriptive Gas Commercial Kitchen
	Heating	Other Gas Heating	$ 0.053	c	Prescriptive Gas Other Gas Heating
	Hot Water	HVAC/ Heat Recovery	$ 0.242	a	Prescriptive Gas HVAC/ Heat Recovery
	HVAC/ Heat Recovery	HVAC/ Heat Recovery	$ 0.242	a	Prescriptive Gas HVAC/ Heat Recovery
	Infrared Heaters	Other Gas Heating	$ 0.053	c	Prescriptive Gas Other Gas Heating
	Rack Oven	Commercial Kitchen	$ 3.399	b	Prescriptive Gas Commercial Kitchen
	Steamer	Commercial Kitchen	$ 3.399	b	Prescriptive Gas Commercial Kitchen
	Overall	**Overall**	$ 0.235	**a**	**Prescriptive Gas Overall**

a: Recommended, but not well determined ($.10 < p \leq .50$)

b: Recommended, statistically significant at 90% confidence ($p \leq .10$)

c: Recommended, statistically significant at 99% confidence ($p \leq .01$)

0: NEIs are determined to be negligible

Not Recommended: $p > .5$

Core Initiatives to which the Results of the Study Apply:

- C&I New Construction: New Buildings & Major Renovations (Electric & Gas)

Evaluation Recommendations:

The following recommendations were made by the evaluators conducting this study.

Recommendation 1: The PAs should apply the recommended electric and gas NEIs presented in

Table 2 and Table 3, respectively. These NEIs should be applied to the annual energy savings (kWh or therm) for each of the respective BC categories. Except for performance based measures, NEIs reported here do not reflect interactive savings across measure groups.

Recommendation 2: Conduct further research to explore whether the NEIs estimated in this study can be applied to upstream program measures. The approach used in this analysis may be transferable to estimating NEIs for upstream programs, although additional research would be required to distinguish which measures sold through the upstream program are replace on failure/natural replacement or true new construction.

Recommendation 3: Review the 2012 C&I Retrofit NEI results to assess whether the NEIs estimated in this study can be applied to replace on failure/natural replacement measures. While this study did not explicitly estimate NEIs associated with measures installed in replace on failure /natural replacement of existing equipment, many of the NEIs estimated in this study may also be applicable to such measures, especially since the PAs are taking steps to distinguish ROF measures in their tracking systems.

Explain Whether or Not the PAs Decided to Adopt the Recommendations from the Study:

The PAs plan to adopt the recommendations.

The recommended NEI values will be applied to C&I NC projects beginning in program year 2016. In addition, the PAs are currently undertaking a comprehensive NEI framework study to identify and prioritize future NEI research needs across all program areas, including Recommendations 2 and 3.

How the Study Affected Program Results:

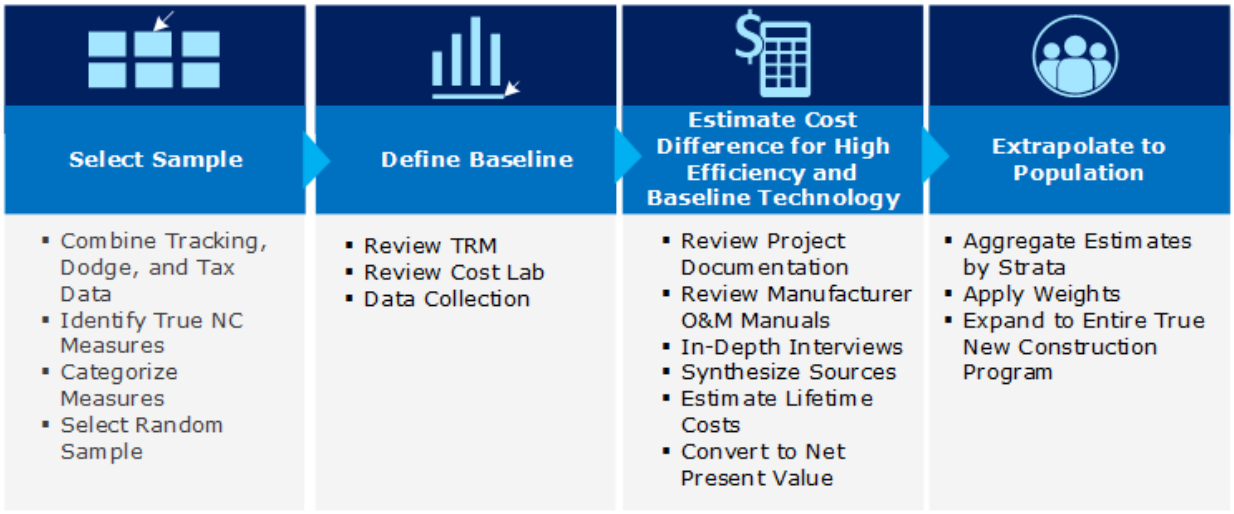
The application of the NEIs developed in this study increases the benefits of the C&I NC program by approximately $500,000 (based on 2013 projects).

Overview of Study Method:

This evaluation used an engineering cost-estimating approach to determine NEIs for true NC projects because it would have been difficult for C&I customers to conceptualize

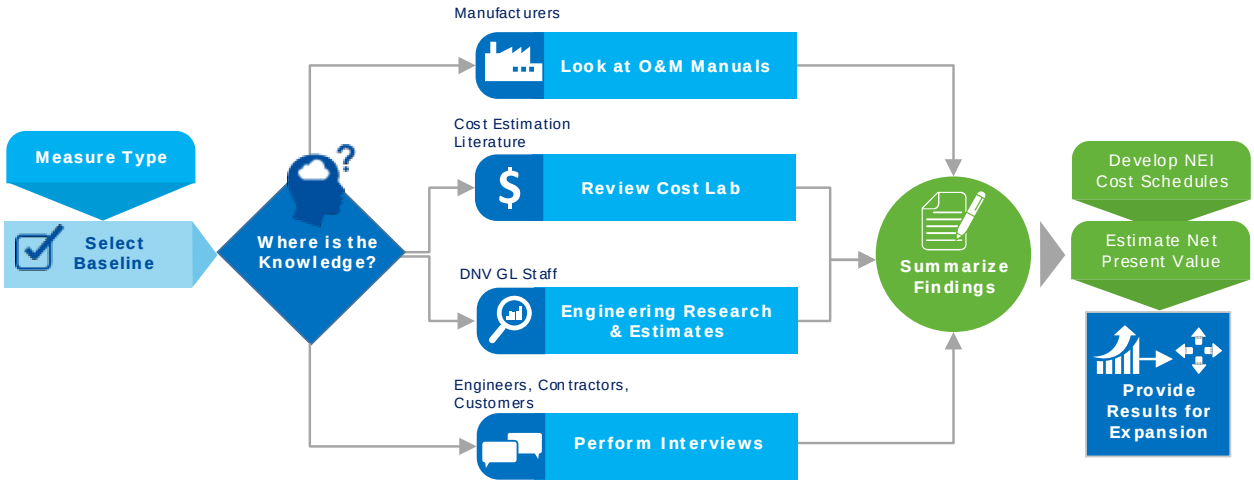
what the baseline would have been (new but less energy efficient measure), and compare that hypothetical baseline with its more efficient counterpart. The analysis is limited to impacts on operations and maintenance costs. Previous research shows that other sources of NEIs, such as changes in productivity, revenue, and comfort, may also result from energy efficiency measures; however, this study was limited to NEIs resulting from life-cycle cost differences due to the use of an engineering based approach. Figure 1 provides a high-level overview of the approach, which consisted of four general steps.

Figure 1. Overview of NEI Estimation Process



As shown in Figure 2, the engineering analysis required data from a variety of sources to develop and corroborate the assumptions used to construct NEI estimates. Figure 2 also depicts the flow of information used in the analysis.

Figure 2. Sources of Information used in the Engineering Analysis



Manufacturers' operations and maintenance manuals. Manufacturer-produced operations and maintenance (O&M) manuals were used to provide manufacturer-recommended maintenance and repair schedules, a valuable input to life-cycle cost estimation.

CostLab software. CostLab is cost-estimation software produced by CBRE Whitestone that provides estimates for building O&M costs that many institutions and large businesses use to set their O&M budgets. These estimates were used in many cases to establish the baseline costs of ownership to compare to efficient equipment estimates. CostLab provides costs in terms of annual maintenance, periodic repair, and replacement costs.

DNV GL staff. DNV GL's expertise in life-cycle costing provided a valuable resource for developing life-cycle cost estimates, as they were able to leverage engineers experienced in high-performance building design support. These engineers have significant hands-on experience with Massachusetts-based facilities.

In-depth interviews. Thirty in-depth interviews were conducted with building owners, engineering firms, and public officials to gain the following general insights:

- What benefits or costs do respondents see from energy-efficient equipment on new construction projects?
- How do these differ depending upon whether the project is a new building or a major renovation?
- What are the important technical, structural, and other parameters for determining whether these benefits are present?
- What sources of information can be used to provide estimates for these parameters?

- What are the values for specific technical parameters identified by the engineering staff through our initial review of the sampled measures and life-cycle cost computations?

Application of Results: Prospectively

A copy of the complete study can be found in Appendix D, Study 15-9.

Study 15-10: Evaluation of Cape Light Compact's Creating Awareness for Power Efficiency Initiative

Type of Study: Impact Evaluation and Process Evaluation
Evaluation Conducted by: Navigant Consulting and Illume Advising
Date Evaluation Conducted: 3/24/2016

Study Objective and Summary of Results:

The purpose of this study was to evaluate the effectiveness of the process and impact portions of the Creating Awareness for Power Efficiency (CAPE) initiative. On the process side, the purpose was to assess customer experience with CAPE, identify motivations and barriers to participation, and to determine how customers responded to near real-time feedback data. On the impact side, the purpose was to estimate the energy impacts of CAPE, including whether the initiative generated savings through other Cape Light Compact (CLC) programs.

The study provides the following key findings:

- Installation of the equipment to monitor energy usage was the primary barrier to participation in the CAPE initiative.[1] Thirty-one percent of customers were unable to install their equipment. Another 17 percent installed the equipment either by themselves or with assistance, but the equipment is no longer online. Professional installation was more successful than customer installation – among a subset of customers that completed in-depth interviews, 5 of 9 professionally installed systems remained online compared to 3 of eleven customer-installed systems. Key barriers to installation included the time required to install the equipment, difficulty of the instructions, and scheduling constraints when working with People Power for professional installation.
- Customers who participated in the CAPE initiative expressed high levels of interest in monitoring energy use and motivation to save energy. Nineteen of 27 customers interviewed identified tracking their energy use as their key motivator for enrolling in the program and more than half of the respondents expressed an interest in participating in a similar program in the future. However, among customers with access to their energy data, monitoring decreased over time with more than half of participants monitoring their energy use once per week or less.
- Few CAPE participants committed to energy saving actions as a result of their energy use monitoring. Many of the interviewees had already participated in a

[1] Notably, CLC's original program design did not require equipment installation and instead relied on Green Button. When it was recognized that Green Button would not provide the granularity of data required, the CAPE initiative was re-designed to rely on equipment installation to provide near real-time feedback.

home audit program and may have needed additional suggestions of actions to take to save energy.

- Estimated savings were not statistically significant at the 10% precision level and ranged from 0.85% to 2.89%. The results suggest there *may* be savings but the current sample size (n=154) is too small to identify savings with adequate precision. The channeling analysis findings found no uplift in energy efficiency program participation among CAPE participants compared to the unconstrained matches and a small uplift among CAPE participants compared to the constrained matches.
- CLC has implemented two behavioral feedback initiatives prior to the CAPE initiative: the SHEMP Legacy and Energize programs. The SHEMP Legacy program achieved the highest savings ranging from 7.8% to 8.8%. Although the savings estimates for the CAPE initiative were not statistically significant, it is clear from the confidence bounds that the savings are not as high as the savings from the SHEMP Legacy program but they may be similar to the SHEMP Energize program.

Core Initiatives to which the Results of the Study Apply:

- Residential Behavior/Feedback (Electric Only)

  Cape Light Compact only

Evaluation Recommendations:

No formal recommendations were made in this evaluation.

Explain Whether or Not the PAs Decided to Adopt the Recommendations from the Study:

N/A (no formal recommendations were made in this evaluation)

Although no formal recommendations were made in this evaluation, the evaluation provided an updated estimate of the energy savings, as well as information useful for the planning and design of CLC's expanded CAPE initiative and other behavior feedback initiatives.

How the Study Affected Program Results and Its Significance:

The evaluation yielded energy savings estimates for CLC's CAPE initiative, which are slightly less than the planning estimates. The study also informs future program

planning as CLC expands the CAPE initiative and explores other behavior feedback initiatives.

CLC is now enrolling customers in the expanded CAPE initiative. In particular, the program now allows customers with solar panels and residential wind generation and all new customers who enroll in the program (with and without renewables) to receive The Energy Detective (TED) device installed by a Massachusetts licensed electrician. Professional installation should help ameliorate many of the challenges faced by participants in the original CAPE initiative.

The table below presents considerations for CLC's future behavior feedback initiatives.

Considerations for Future Initiatives

Category	Consideration
Equipment Installation	Assess the cost-effectiveness of directly installing equipment
	Continue to monitor Eversource Energy's Green Button agreement.
Participant Engagement	Ongoing engagement is important to keep customers involved in monitoring their data.
Participant Action Steps	Energy use feedback programs need to provide clear energy-saving action steps for customers to take based on their energy use data.
Ramp-up Time	Behavior programs often need ramp up time to show results.
	Programs requiring equipment installation often take longer than expected to reach participation goals.
Cross-Program Marketing	Cross-program marketing that effectively channels participants across programs may result in lower savings of downstream programs due to lower remaining savings potential.

It is clear from the survey that CLC customers have a high interest in energy efficiency and are seeking opportunities to do more. This means that although the CAPE initiative did not drive statistically significant savings, CLC customers may be receptive to new, more advanced programs. In addition to the expanded CAPE initiative described above, CLC is investigating demand response and load reduction programs, which have been shown to be effective in driving demand savings in Eversource's and National Grid's territories in Massachusetts. These programs may be more effective at achieving savings than the more traditional behavioral programs CLC has piloted in the past.

Overview of Study Method:

For the process evaluation, a total of 27 interviews were conducted with program participants. To ensure that the sample would represent the breadth of experiences among program participants, we divided customers into three groups of participants:[2]

- Group 1: Customers who never successfully installed the equipment (n=7, N=106)
- Group 2: Customers who connected the equipment, but are no longer connected (n=11, N=59)
- Group 3: Customers who connected and remained connected (n=9, N=171)

The goal of these interviews was to assess the participants' journey engaging with the program, identifying common customer pathways through the program and common benefits and barriers. As a result, the in-depth interview guide was designed to be semi-structured, with most of the questions left open-ended so the interviewers could engage in a more extended conversation with interviewees on their experiences at each point in the process.

The impact evaluation was conducted through billing analysis. The CAPE initiative was not implemented as an experimental design and as a result did not have a randomized control group to use as the basis for estimating savings. Instead, the evaluation team relied upon a regression model utilizing the regression with pre-program matching (RPPM) method as described in Ho, Imai, King, and Stuart (2007).[3] As a robustness check, the evaluation team also implemented a variation-in-adoption (VIA) approach as described in Harding and Hsiaw (2011).[4] Matching methods rely on a set of matched non-participant households to estimate program savings, while the VIA model utilizes the rolling enrollment of the program to estimate savings using only participant data, essentially using late enrollees as controls for early enrollees. The evaluation team also considered channeling of CAPE participants into CLC's other energy efficiency programs using a difference-in-difference statistic. Savings caused by channeling were removed from the savings estimate to avoid double counting.

Application of Results: Retroactively and Prospectively

A copy of the complete study can be found in Appendix D, Study 15-10.

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2 "n" represents the number of participants interviewed, "N" represents the population of participants.

3 Ho, Daniel E., Kosuke Imai, Gary King, and Elizabeth Stuart. 2007. Matching as nonparametric preprocessing for reducing model dependence in parametric causal inference. *Political Analysis* 15(3): 199-236.

4 Harding, M. and A. Hsiaw. Goal Setting and Energy Conservation. July 2013. Available at: http://www.stanford.edu/~mch/resources/Harding_Goals.pdf.

Study 15-11: Reducing the Size of the Control Group in the Home Energy Report Program

Type of Study: Process Evaluation
Evaluation Conducted by: Navigant Consulting and Illume Advising
Date Evaluation Conducted: 3/31/2016

Study Objective and Summary of Results:

The purpose of this study was to evaluate opportunities to reduce the size of the control groups in the Home Energy Report (HER) program. The results of the study's power analysis provide the PAs and EEAC with optimal numbers of control group customers which can be removed from each HER cohort control group and assigned to a new cohort treatment group, while taking into consideration the statistical confidence of resulting savings estimation, sensitivity analysis around potential deviations from expected savings values, and other key considerations.

The study provides the following key findings:

- National Grid has the ability to reduce the control group size in six of the eleven HER program cohorts analyzed, resulting in over 100,000 new treatment customers.
- All four of the Eversource Energy (formerly NSTAR) HER program cohorts analyzed were found to be reducible, allowing nearly 50,000 new customers to be transitioned into a new treatment group.

Core Initiatives to which the Results of the Study Apply:

- Residential Behavior/Feedback (Electric & Gas)

Evaluation Recommendations:

No formal recommendations were made in this evaluation.

Explain Whether or Not the PAs Decided to Adopt the Recommendations from the Study:

N/A (no formal recommendations were made in this evaluation)

Although no formal recommendations were made in this evaluation, the evaluation provides and supports appropriate and desirable reductions in the size of the HER control groups in the event the program is expanded to new customers.

How the Study Affected Program Results and Its Significance:

This study informed the PAs that the size of the HER control groups can be reduced if, in the future, they decide to expand the HER program to new customers. As there are currently no plans to expand the HER program, the results do not have a direct, material effect on the program design or results.

Overview of Study Method:

This study used power analysis to determine the number of customers in each HER cohort control group that could be moved into a new treatment group while maintaining statistically significant results for the original and new treatment groups. Power analysis is a regression-based simulation exercise that utilizes assumptions on statistical significance, effect size and other considerations to identify the minimum sample size needed to achieve desired results. In the context of reducing the size of HER control groups, power analysis consists of running a series of simulated regressions to evaluate expected savings and confidence intervals for increasingly larger control group reductions (i.e. half, three-quarters, four-fifths).

Application of Results: Prospectively

A copy of the complete study can be found in Appendix D, Study 15-11.

Study 15-12: Summary of the Massachusetts Behavioral Program Impact Evaluations

Type of Study: Impact Evaluation
Evaluation Conducted by: Navigant Consulting and Illume Advising
Date Evaluation Conducted: 4/11/2016

Study Objective and Summary of Results:

The evaluation team conducted three distinct impact analyses related to the National Grid and Eversource Home Energy Report (HER) programs:

1. The **Cohort-Specific Impact Analysis** estimated 2014 savings for each of the National Grid and Eversource Energy cohorts and proposed savings estimate ratios for use by the PAs in future years when a third-party impact evaluation is not conducted.
2. The **Mapping Analysis** identified the overlap between different program cohorts, addressing potential implications for the experimental design and evaluability. This research found overlap of approximately 3% of customers (treatment and control). The overlap was generally small and not expected to impact the cohort-specific savings analysis using standard evaluation methods.
3. The **Dual Treatment Analysis** estimated whether there were statistically significant differences in savings for customers receiving a single dual-fuel report as compared to those receiving two single-fuel reports.

The study provides the following key findings:

Cohort Specific Impact Analysis

- Total net electric savings from the Massachusetts HER programs in 2014 were 127,854,643 kWh. Total net gas savings were 643,157 MMBtu.

Mapping Analysis

- The evaluation team identified 69,697 instances of overlapping programs, which is approximately 3% of all customers (treatment and control) in the National Grid and Eversource Energy HER cohorts.

Dual Treatment Analysis

- Table 4 summarizes the per customer savings by report regime and fuel type. On the electric side, dual-fuel customers (those receiving a single dual-fuel report) save 1.10% and dual-treatment customers (those receiving two single-fuel reports) save 1.41%; this difference is statistically significant at the 90% confidence level (p-value = 0.042). On the gas side, dual-fuel customers save 1.44% and dual-treatment customers save 1.24%; this difference is not statistically significant at the 90% confidence level (p-value = 0.882).

Table 4. Summary of Per Customer Savings

Report Regime	Fuel Type	Percentage Savings	Per Customer Annual Savings (kWh/therms)	Per Customer Annual Baseline Usage (kWh/therms)*	Per Customer Annual Savings (MMBTU)
Dual-Fuel	Electric	1.10%	75.11	6,838	0.256
Dual-Treatment	Electric	1.41%	124.68	8,823	0.425
Dual-Fuel	Gas	1.44%	14.41	997	1.441
Dual-Treatment	Gas	1.24%	14.81	1,195	1.481

Source: Evaluation team analysis
*Differences in baseline usage for the two report groups cause the discrepancies in the magnitudes of the absolute and percentage savings.

- Table 5 summarizes total annual savings under the current report configuration (61,518 dual-fuel customers and 20,909 dual-treatment customers) and annual savings if program implementation was modified such that all customers were either dual-fuel or dual-treatment. Coordination across PAs such that all customers received dual-fuel reports would result in a net gain of approximately 3,000 MMBTU or a 2% increase in savings for this group of customers. In total, the HER program saved just over one million MMBTU in 2014, thus this coordination would only increase total program savings by approximately 0.3%.[5]

Table 5. Summary of Total Savings

Report Regime	Total Savings (MMBTU)	90% Confidence Bounds	Difference from Current Configuration (MMBTU)	Percent Difference from Current Configuration
Current Configuration	144,241	[116,838 – 171,644]	-	-
All Dual-Fuel	147,393	[123,742 – 171,044]	+3,152	+2%
All Dual-Treatment	136,151	[99,635 – 172,667]	-11,242	-8%

Source: Evaluation team analysis

- The evaluation team's process evaluation analyzed whether there were differences in satisfaction between dual-fuel and dual-treatment customers.[6] Cross-PA customers (a subset of dual-treatment customers who receive electric reports from one PA and gas reports from another[7]) are satisfied with the frequency at which

[5] Total savings for the HER program were presented to the PAs in a memo titled "Massachusetts Cross-Cutting Behavioral Program Evaluation Opower Results" on June 25, 2015.

[6] Navigant Consulting, Inc. and Illume Advising, LLC. 2015. "Massachusetts Behavioral Programs Process Evaluation: Report in the Cross-Cutting Research Areas of Behavior and Education."

[7] The remaining dual treatment customers receive a gas report and an electric report from the same PA. Of all the dual-treatment customers, 97.6% are cross-PA customers and only 2.4% receive two reports from the same utility.

they currently receive reports and they find the reports just as useful as dual-fuel customers.

Core Initiatives to which the Results of the Study Apply:

- Residential Behavior/Feedback (Electric & Gas)

Evaluation Recommendations:

The following recommendations were made by the evaluators conducting this study.

Cohort-Specific Impact Analysis

- The evaluation team recommended that the PAs adopt the following savings estimate ratios in future years when third-party impact evaluations are not completed.
    - National Grid Electric: 95%
    - National Grid Gas: 98%
    - NSTAR Electric: 104%
    - NSTAR Gas: 98%
    - WMECo Electric: 104%

Mapping Analysis

- No formal recommendations were made for this portion of the study

Dual Treatment Analysis

- Given that the total increase in annual MMBTU savings from switching all customers to dual-fuel reports was small and not statistically significant at the 90% confidence level and the process evaluation showed that receiving multiple single-fuel reports was not an issue for cross-PA customers (the vast majority of dual-treatment customers), the evaluation team does not believe that coordination across the PAs is warranted and recommends that the PAs continue implementing the HER program in its current form.

Explain Whether or Not the PAs Decided to Adopt the Recommendations from the Study:

The PAs plan to adopt the recommendations.

How the Study Affected Program Results and Its Significance:

The cohort specific treatment analysis recommended savings estimate ratios for National Grid and Eversource to use in future years when 3rd party evaluations are not conducted. As shown above, application of these ratios will decrease the deemed energy savings by

2% or 5% for National Grid Electric, National Grid Gas, and NSTAR Gas; but increase by 4% for NSTAR Electric and WMECo Electric. The mapping analysis and dual treatment study found that there is no need to adjust the program design for customers who are in multiple program cohorts and may receive multiple reports from different PAs.

Overview of Study Method:

The cohort specific impact analysis used billing analysis to estimate savings for each program cohort and adjusted those savings values for channeling. For the mapping analysis, the evaluation team identified the PA and program cohort to which each household was assigned, including identifying the target fuel of the program and assignment to the treatment or control group. The evaluation team then used this database to identify overlap in assignment to treatment and control groups across PA and fuel-types. The dual treatment analysis used billing analysis with a matched control group to identify the difference in savings for customers who received a single dual-fuel home energy report and those who received two single fuel home energy reports.

Application of Results: Prospectively

A copy of the complete study can be found in Appendix D, Study 15-12.

Study 15-13: Berkshire Gas Home Energy Report Program Evaluation

Type of Study: Process Evaluation and Impact Evaluation
Evaluation Conducted by: Navigant Consulting and Illume Advising
Date Evaluation Conducted: 1/25/2016

Study Objective and Summary of Results:

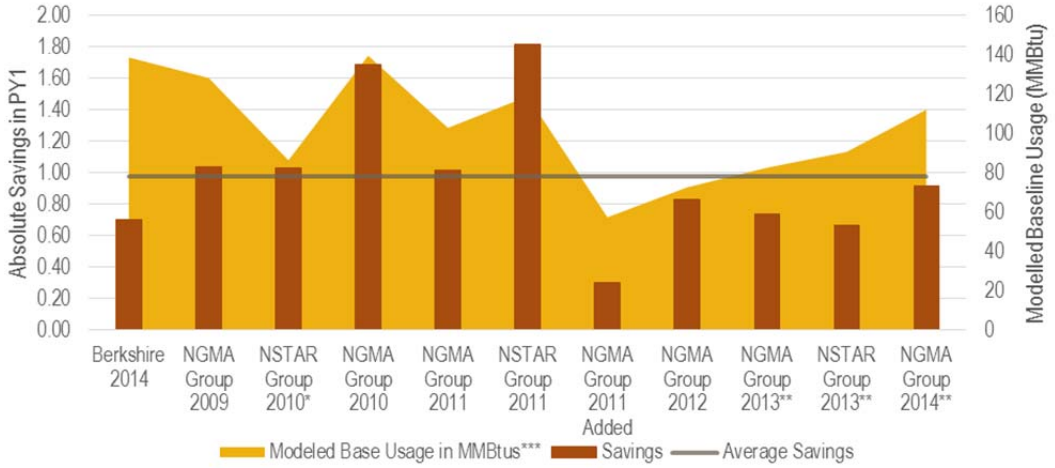
The purpose of the process evaluation was to examine customers' use and satisfaction with Berkshire Gas' Home Energy Report (HER) program as well as how the reports have affected participant energy-saving actions and behaviors. The purpose of the impact evaluation was to evaluate and estimate the program's first-year total and per-customer savings in 2014, the channeled savings, and the savings estimate ratio that should be used by Berkshire in future years when third-party impact evaluations are not completed.

The study provides the following key findings:

- Overall, participants are satisfied with the HER reports. Over half of participants (59%) classify the reports as useful, similar to surveys of other Massachusetts gas HER programs.[8] Participants are most satisfied with the personal usage comparison.
- Total program savings (after the channeling savings adjustment) were 7,603 million British thermal units (MMBtu), which is 0.7 MMBtu annually per person or 0.49% of baseline usage. This absolute savings value is relatively low given the high baseline usage compared to the first-year evaluated savings of other gas cohorts in Massachusetts (Figure). In percentage terms, savings are the lowest among the MA cohorts. The lower than expected evaluated savings are supported by Opower's reported savings and the customer surveys conducted through this evaluation, which revealed that fewer Berkshire participants said that the reports led to energy-saving behaviors (Figure).

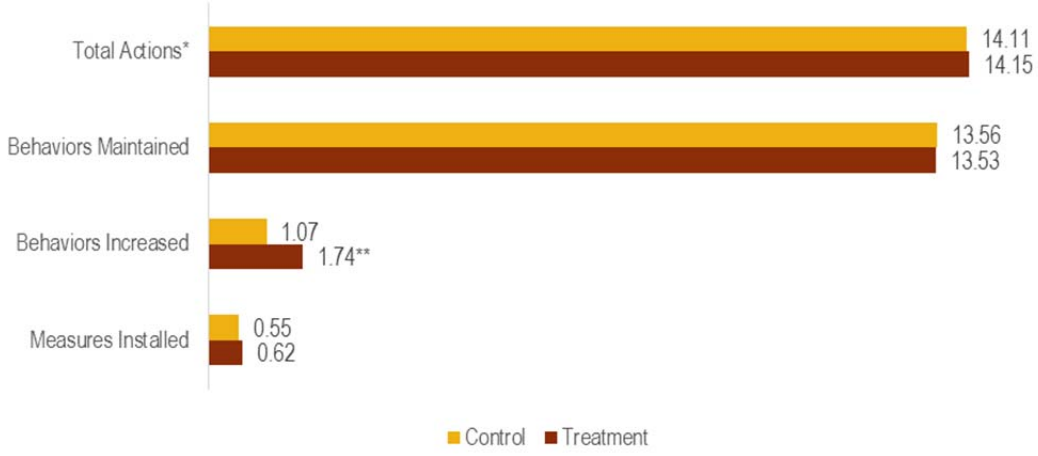
[8] See Figure 5 in "Massachusetts Behavioral Process Evaluation," July 2015, Navigant Consulting, Inc.

Figure 1. First-Year Savings Comparison, Gas-Only Cohorts



*NSTAR Group 2010 is a weighted average of two analyses covering August 2010–April 2011 and May 2011–December 2011.
**These cohorts were examined for the first time in 2014 in lieu of a true first-year evaluation.
***Modeled baseline usage is not weather normalized.
Source: Evaluation team analysis, the 2013 Evaluation Report[9]*, and the 2014 HER analysis*[10]

Figure 2. Energy-Saving Actions and Behaviors Taken by Treatment and Control Customers



*Includes all actions—measures installed/purchased, behaviors changed, and behaviors maintained.
**Significantly higher than control group at $p<0.05$.
Source: Evaluation team analysis

- Several factors may have contributed to lower than expected absolute and percentage savings during the first program year:

[9] Opinion Dynamics, Navigant Consulting, Inc., and Evergreen Economics. 2013. *Massachusetts Cross-Cutting Behavioral Program Evaluation Integrated Report.*
[10] The results of the 2014 HER analysis were presented to the PAs in a memo titled "Massachusetts Cross-Cutting Behavioral Program Evaluation Opower Results" on June 25, 2015.

  - Data issues led to half of the customers receiving fewer reports than originally planned.
  - Relatively low email coverage prevented the implementer from reaching customers through a second channel that promotes savings.
  - Berkshire has a higher population of seasonal homes than the other PAs, which may cause participants to be less able to save because they are not occupying the home during the winter.
  - It is possible that households in urban areas with more exposure to the statewide Mass Save campaigns are primed and, thus are more responsive to HERs relative to rural areas.
  - The 2014/15 winter was colder than previous years which may have made participants less apt to save compared to other PA cohorts in previous years.
- The Berkshire HER program has resulted in an uplift in participation in the Home Energy Services program even though program-specific modules were not included in the home energy reports.

Core Initiatives to which the Results of the Study Apply:

- Residential Behavior/Feedback (Gas Only)

  Berkshire Gas only

Evaluation Recommendations:

The following recommendations were made by the evaluators conducting this study.

- ***Recommendation 1:*** Continue efforts to ensure that the program implementer receives complete billing data going forward. Berkshire has made changes to operations to ensure that the program vendor receives complete data moving forward. Berkshire should monitor these efforts to ensure they are successfully transmitting complete data.
- ***Recommendation 2:*** When possible, collect email addresses from customers. Customers with email addresses on file can receive electronic reports, which may help the program reach customers who prefer electronic communication and can reinforce messaging for customers who will read both paper and electronic reports.
- ***Recommendation 3:*** Continue to monitor participant feedback and savings. Since the program had a delayed start and difficulties with data, the evaluation team

recommends monitoring the program for another year before considering additional program process changes.

- ***Recommendation 4:*** Berkshire should adopt a savings estimate ratio[11] of 100% in future years when third-party impact evaluations are not completed. This conservative estimate takes into account the fact that the savings estimate ratio typically falls after the first year of the program.

Explain Whether or Not the PAs Decided to Adopt the Recommendations from the Study:

The PAs are considering all recommendations for adoption at this time. The PAs have not formally adopted or rejected any recommendations that require changes to program design and operations.

How the Study Affected Program Results and Its Significance:

The savings estimated for the Berkshire program in 2015 were higher than the savings estimated by the program implementer. The savings estimate ratio recommended for future years when a 3rd party evaluation is not completed is 100%, which if adopted, would not materially change the deemed energy savings.

Overview of Study Method:

For the process evaluation, telephone surveys were conducted for a random sample of the treatment and control groups. The evaluation team completed surveys with 150 treatment group customers and 150 control group customers. The team applied sampling weights to account for differences in respondents' ages between the treatment and control groups. For age post-stratification weights, the team used the control group as a benchmark and weighted the treatment group to match the control to adjust for any response bias.

The impact evaluation was conducted through billing analysis. The HER program was implemented as a randomized controlled trial and as such the random control group was used as the baseline for the participant group. The evaluation team used a post program regression model to estimate savings for the treatment group which included parameters for treatment, the year and month, and usage from the pre-program period.

Application of Results: Prospectively

A copy of the complete study can be found in Appendix D, Study 15-13.

[11] The saving estimate ratio is calculated by dividing the modeled savings estimated by the evaluation team by the savings estimated by Opower.

APPENDIX D
EVALUATION STUDIES

Please see Statewide Appendix D filed under separate cover.

APPENDIX E
TABLE OF EVALUATION STUDY RECOMMENDATIONS

Rec #	Study Name	Sector	Filing/Docket	Study Location and Number	Fuel	Recommendation ID (Year - Study # - Rec #)	Recommendation	PA Specific / Statewide	Did the Program Administrator implement the recommendation (Yes, No & Explain Why not, Currently Under Consideration, Will Consider for Future Studies, N/A))	National Grid	Eversource	CMA	Liberty	Berkshire	CLC	Unitil
1	LED Incremental Cost Study Overall FINAL Report	Residential	2013-2015 Term Report	App. D, Study 15-1	Electric	2016-1-1	The evaluation team recommended using the ranges of predicted incremental cost of LED bulbs included in the report to inform 2016 to 2018 planning. They also suggested that the Massachusetts Program Administrators (PAs) and Energy Efficiency Advisory Council (EEAC) consultants consider the average prices in each year and by bulb type and feature to serve as the best point-estimate if a single estimate was needed. Finally, the evaluators noted that if quarterly POS data become available, the PAs and EEAC consultants should consider having more frequent quarterly updates in the POS and web-scraping outlooks to match the rapidly evolving nature of the lighting marketplace.	Statewide	The PAs plan to adopt the recommendations.							
2	Baseline Sensitivity Analysis – 2015	Residential	2013-2015 Term Report	App. D, Study 15-2	Electric	2016-2-1	The study did not offer any recommendations.	N/A	N/A							
3	Ductless Mini-Split Heat Pump (DMSHP) Cooling Season Results Memo	Residential	2013-2015 Term Report	App. D, Study 15-3	Electric/Gas	2016-3-1	The study did not offer any recommendations.	N/A	N/A							
4	2014 Commercial & Industrial Customer Profile Report	Commercial & Industrial	2013-2015 Term Report	App. D, Study 15-4	Electric/Gas	2016-4-1	Where possible, capture the account number as a data field in the upstream lighting and HVAC data.	Statewide	Currently Under Consideration							
5	Cross Cutting Code Compliance Support Initiative Evaluation of Classroom Trainings	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-5	Electric/Gas	2016-5-1	Provide handouts of the slides used in the trainings to the attendees.	Statewide	Yes, the CCSI began providing handouts of the slides on November 9, 2015.							
6	Cross Cutting Code Compliance Support Initiative Evaluation of Classroom Trainings	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-5	Electric/Gas	2016-5-2	Provide more details on code requirements and case studies and provide more trainings targeted toward contractors.	Statewide	Yes							
7	Cross Cutting Code Compliance Support Initiative Evaluation of Classroom Trainings	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-5	Electric/Gas	2016-5-3	Encourage more people to attend the trainings, especially builders and contractors, possibly through offering different trainings for attendees with different levels of knowledge and experience, and partnering with suppliers to make trainings more convenient.	Statewide	Yes							
8	Cross Cutting Code Compliance Support Initiative Evaluation of Classroom Trainings	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-5	Electric/Gas	2016-5-4	Add more information about specific code sections such as ventilation, air sealing, and window requirements as well as more case studies and real life examples to help participants understand practical applications of the code provisions to the trainings.	Statewide	Currently Under Consideration							
9	Cross Cutting Code Compliance Support Initiative Evaluation of Classroom Trainings	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-5	Electric/Gas	2016-5-5	Ensure that all trainers are proficient in the subject matter and have excellent communication and training skills.	Statewide	Yes							
10	Cross Cutting Code Compliance Support Initiative Evaluation of Classroom Trainings	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-5	Electric/Gas	2016-5-6	Incorporate real-world examples and class interactive exercises in classes to maintain trainee engagement and enhance their learning experience.	Statewide	Yes							
11	Cross Cutting Code Compliance Support Initiative Evaluation of Classroom Trainings	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-5	Electric/Gas	2016-5-7	Continue to offer the trainings; a sizable number of attendees go into them with limited knowledge of the code requirements. The trainings also provide a venue for code officials, builders, Home Energy Rating System (HERS) raters, and other market actors to discuss conditions in the field affecting code compliance.	Statewide	Yes							
12	Cross Cutting Code Compliance Support Initiative Evaluation of Circuit Rider Support	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-6	Electric/Gas	2016-6-1	Monitor response times and work to improve them; response times continue to become more important as more questions come in concerning current projects and almost all respondents expect to use the information they receive immediately.	Statewide	Yes							
13	Cross Cutting Code Compliance Support Initiative Evaluation of Circuit Rider Support	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-6	Electric/Gas	2016-6-2	As the number of days needed to resolve questions decreased for contacts received in the second half of 2015 and the beginning of 2016 from those received in early 2015, consider recording phone calls, emails, and other attempts to reach those who contact the service for support to more accurately gauge response times.	Statewide	Currently Under Consideration							
14	Cross Cutting Code Compliance Support Initiative Residential Single Family Building Department Document Review	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-7	Electric/Gas	2016-7-1	The results of this study could be used in conjunction with the results of the ongoing baseline study to inform future CCSI trainings. Areas with poor documentation may also show lower compliance rates and, if so, should be emphasized in future trainings. These areas may include duct leakage, air leakage, and lack of Manual J calculations resulting in oversizing.	Statewide	Currently Under Consideration							
15	Cross Cutting Code Compliance Support Initiative Commercial Building Department Document Review	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-8	Electric/Gas	2016-8-1	The Massachusetts program administrators should explore ways to work with municipalities to increase the submittals of COMcheck outputs to verify code compliance as a way to increase consistency and reduce the burden on code officials. One option would be to emphasize the usefulness of COMcheck in CCSI code official training and how it can make it easier to enforce the code.	Statewide	Currently Under Consideration							

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16	Cross Cutting Code Compliance Support Initiative Commercial Building Department Document Review	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-8	Electric/Gas	2016-8-2	The Massachusetts program administrators also should consider ways to work with municipalities to help them institute requirements for a prescriptive compliance checklist if COMcheck output is not provided. This also could be included in CCSI code official training.	Statewide	Currently Under Consideration							
17	Cross Cutting Code Compliance Support Initiative Commercial Building Department Document Review	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-8	Electric/Gas	2016-8-3	The future CCSI trainings should focus on best practices in terms of providing adequate and transparent documentation of energy code compliance for commercial buildings.	Statewide	Currently Under Consideration							
18	Cross Cutting Code Compliance Support Initiative Commercial Building Department Document Review	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-8	Electric/Gas	2016-8-4	The CCSI should consider working with the Massachusetts Department of Public Safety (DPS)/Board of Building Regulations and Standards (BBRS) DPS/BBRS to find methods that may enable increased energy code enforcement during code officials' compliance review and inspection	Statewide	Yes							
19	Stage 2 Results -- Commercial and Industrial New Construction Non-Energy Impacts Study	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-9	Electric/Gas	2016-9-1	The PAs should apply the recommended electric and gas NEIs presented in the report (see Table 2 and Table 3, respectively). These NEIs should be applied to the annual energy savings (kWh or therm) for each of the respective BC categories.	Statewide	The report was not finished at the time of the Plan and the decision was made not to include the NEIs in the Plan. They have not yet been incorporated into the model.							
20	Stage 2 Results -- Commercial and Industrial New Construction Non-Energy Impacts Study	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-9	Electric/Gas	2016-9-2	Conduct further research to explore whether the NEIs estimated in this study can be applied to upstream program measures.	Statewide	Yes. The PAs are currently undertaking a comprehensive NEI framework study to identify and prioritize future NEI research needs across all program areas, including this recommendation.							
21	Stage 2 Results -- Commercial and Industrial New Construction Non-Energy Impacts Study	Special & Cross Sector	2013-2015 Term Report	App. D, Study 15-9	Electric/Gas	2016-9-3	Review the 2012 C&I Retrofit NEI results to assess whether the NEIs estimated in this study can be applied to replace on failure/natural replacement measures.	statewide	Yes. The PAs are currently undertaking a comprehensive NEI framework study to identify and prioritize future NEI research needs across all program areas, including this recommendation.							
22	Evaluation of Cape Light Compact's Creating Awareness for Power Efficiency Initiative	Residential	2013-2015 Term Report	App. D, Study 15-10	Electric	2016-10-1	The study did not offer any recommendations.	PA Specific	N/A							
23	Reducing the Size of the Control Group in the Home Energy Report Program	Residential	2013-2015 Term Report	App. D, Study 15-11	Electric/Gas	2016-11-1	The study did not offer any recommendations.	Statewide	N/A							
24	Summary of the Massachusetts Behavioral Program Impact Evaluations	Residential	2013-2015 Term Report	App. D, Study 15-12	Electric/Gas	2016-12-1	The evaluation team recommended that the PAs adopt the savings estimate ratios described in the report in future years when third-party impact evaluations are not completed.	Statewide	Currently Under Consideration							
25	Summary of the Massachusetts Behavioral Program Impact Evaluations	Residential	2013-2015 Term Report	App. D, Study 15-12	Electric/Gas	2016-12-1	Given that the total increase in annual MMBTU savings from switching all customers to dual-fuel reports was small and not statistically significant at the 90% confidence level and the process evaluation showed that receiving multiple single-fuel reports was not an issue for cross-PA customers (the vast majority of dual-treatment customers), the evaluation team does not believe that coordination across the PAs is warranted and recommends that the PAs continue implementing the HER program in its current form.	Statewide	Currently Under Consideration							
26	Berkshire Gas Home Energy Report Program Evaluation	Residential	2013-2015 Term Report	App. D, Study 15-13	Gas	2016-13-1	Continue efforts to ensure that the program implementer receives complete billing data going forward. Berkshire has made changes to operations to ensure that the program vendor receives complete data moving forward. Berkshire should monitor these efforts to ensure they are successfully transmitting complete data.	Statewide	Currently Under Consideration							
27	Berkshire Gas Home Energy Report Program Evaluation	Residential	2013-2015 Term Report	App. D, Study 15-13	Gas	2016-13-2	When possible, collect email addresses from customers. Customers with email addresses on file can receive electronic reports, which may help the program reach customers who prefer electronic communication and can reinforce messaging for customers who will read both paper and electronic reports.	Statewide	Currently Under Consideration							
28	Berkshire Gas Home Energy Report Program Evaluation	Residential	2013-2015 Term Report	App. D, Study 15-13	Gas	2016-13-3	Continue to monitor participant feedback and savings. Since the program had a delayed start and difficulties with data, the evaluation team recommends monitoring the program for another year before considering additional program process changes.	Statewide	Currently Under Consideration							
29	Berkshire Gas Home Energy Report Program Evaluation	Residential	2013-2015 Term Report	App. D, Study 15-13	Gas	2016-13-4	Berkshire should adopt a savings estimate ratio of 100% in future years when third-party impact evaluations are not completed. This conservative estimate takes into account the fact that the savings estimate ratio typically falls after the first year of the program.	Statewide	Currently Under Consideration							
30	Massachusetts Residential Lighting Cross-Sector Sales Research	Residential	2016-2018 Three-Year Plan	App. U, Study 1	Electric	2015-1-1	The evaluation team recommends using a placeholder value of 7% to be applied to the Massachusetts upstream lighting program sales to reflect the proportion of residential program lighting used in commercial settings.	Statewide	Yes							

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31	Multistage Lighting Net-to-Gross Assessment: Overall Report	Residential	2016-2018 Three-Year Plan	App. U, Study 2	Electric	2015-2-1	The evaluators recommend using the NTG values identified in the study to estimate program impacts.	Statewide	Yes							
32	Multistage Lighting Net-to-Gross Assessment: Overall Report	Residential	2016-2018 Three-Year Plan	App. U, Study 2	Electric	2015-2-2	The evaluation team recommends that PAs closely monitor the market, and periodically revisit and if necessary revise the 2016-2018 NTG estimates. If these NTG estimates change substantially, the evaluation team recommends that policy makers allow PAs to apply the new NTG estimates to develop revised savings targets for the 2016-2018 period.	Statewide	Yes							
33	Lighting Market Assessment and Saturation Stagnation Overall Report	Residential	2016-2018 Three-Year Plan	App. U, Study 3	Electric	2015-3-1	The PAs should continue to provide incentives and educate consumers about LEDs in the next program cycle. At the same time, the PAs should monitor any new information that becomes available from future evaluations or other sources regarding delta Watts, measure life, price trends, and incremental costs, and be ready to shift LED strategy if providing incentives ceases to be cost effective.	Statewide	Yes							
34	Lighting Market Assessment and Saturation Stagnation Overall Report	Residential	2016-2018 Three-Year Plan	App. U, Study 3	Electric	2015-3-2	The PAs and EEAC consultants should continue to fund regular on-site saturation studies—including the continued annual panel study—at least through the early 2020s in order to track the impact of Energy Independence and Security Act (EISA), changes in LED pricing and availability, and possible changes in effectiveness of incentives for standard and specialty CFLs and LEDs.	Statewide	Yes							
35	Lighting Market Assessment and Saturation Stagnation Overall Report	Residential	2016-2018 Three-Year Plan	App. U, Study 3	Electric	2015-3-3	The PAs should work with the residential evaluation team to develop a methodology for identifying the diameter and length of fluorescent tubes in use in homes.	Statewide	Currently Under Consideration.							
36	Baseline Sensitivity Analysis 2016 - 2018	Residential	2016-2018 Three-Year Plan	App. U, Study 4	Electric/Gas	2015-4-1	No formal recommendations were made in this evaluation	N/A	N/A							
37	Lighting Interactive Effects Study Preliminary Results	Residential	2016-2018 Three-Year Plan	App. U, Study 5	Electric	2015-5-1	The evaluation team recommends reassessing the preliminary results by incorporating multi-family building types using recent data developed during the low income multi-family billing analysis and HVAC saturations and building types from the Residential Customer Profiling study.	Statewide	Currently Under Consideration.							
38	Program Assessment Tube TV Recycling	Residential	2016-2018 Three-Year Plan	App. U, Study 6	Electric	2015-6-1	The evaluation team recommends not expanding the existing recycling program to CRT-TVs.	Statewide	Yes							
39	Program Assessment Tube TV Recycling	Residential	2016-2018 Three-Year Plan	App. U, Study 6	Electric	2015-6-2	Consider a follow up study to measure natural TV replacement in the Massachusetts market.	Statewide	Currently Under Consideration.							
40	Program Assessment Tube TV Recycling	Residential	2016-2018 Three-Year Plan	App. U, Study 6	Electric	2015-6-3	Future studies should be conducted in 4-6 years to measure whether CRT-TVs are indeed being replaced naturally.	Statewide	Currently Under Consideration.							
41	Cool Smart Incremental Cost Study	Residential	2016-2018 Three-Year Plan	App. U, Study 7	Electric	2015-7-1	No formal recommendations were made in this evaluation	N/A	N/A							
42	Home Energy Services Initiative and HEAT Loan Delivery Assessment	Residential	2016-2018 Three-Year Plan	App. U, Study 8	Electric/Gas	2015-8-1	To encourage HPCs to further promote non-HES Mass Save offerings, consider exploring approaches for holding all HPCs accountable for cross-promoting programs and providing additional clarity to HPCs about non-HES program offerings.	Statewide	Yes							
43	Home Energy Services Initiative and HEAT Loan Delivery Assessment	Residential	2016-2018 Three-Year Plan	App. U, Study 8	Electric/Gas	2015-8-2	Conduct additional research with customers to test their receptivity to a customized web portal	Statewide	Yes							
44	Home Energy Services Initiative and HEAT Loan Delivery Assessment	Residential	2016-2018 Three-Year Plan	App. U, Study 8	Electric/Gas	2015-8-3	Explore approaches for optimizing assessment delivery to more effectively disseminate information, encourage cross-program participation, and increase close rates	Statewide	Yes							
45	Home Energy Services Initiative and HEAT Loan Delivery Assessment	Residential	2016-2018 Three-Year Plan	App. U, Study 8	Electric/Gas	2015-8-4	Streamline program materials by identifying needs for summary additional program materials and improving clarity and salience in program materials provided to customers in advance of home energy assessments	Statewide	Yes							
46	Home Energy Services Initiative and HEAT Loan Delivery Assessment	Residential	2016-2018 Three-Year Plan	App. U, Study 8	Electric/Gas	2015-8-5	Explore opportunities to further promote the HEAT Loan outside of the HES program.	Statewide	Yes							
47	Residential Customer Profile Study	Residential	2016-2018 Three-Year Plan	App. U, Study 9	Electric/Gas	2015-9-1	No formal recommendations were made in this evaluation	N/A	N/A							
48	Multifamily Impact Findings Memo	Residential	2016-2018 Three-Year Plan	App. U, Study 10	Electric/Gas	2015-10-1	Placeholder results from the study should not be used by the Massachusetts Program Administrators (PAs) due to concerns with data sufficiency, sample representation and broader concerns stemming from analysis performed at the premise level.	Statewide	Yes							
49	Multifamily Impact Findings Memo	Residential	2016-2018 Three-Year Plan	App. U, Study 10	Electric/Gas	2015-10-2	A new analysis at the facility level should be performed for National Grid, where facility level activity is understood to be reliably tracked in a way that allows the aggregation of consumption and tracking data for each treated building.	Statewide	Yes							
50	Ductless Mini-Split Heat Pump (DMSHP) Final Heating Season Results	Residential	2016-2018 Three-Year Plan	App. U, Study 11	Electric	2015-11-1	Evaluators have made no final recommendations at this time, except to adopt a lower heating FLH value.	Statewide	Yes							

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51	Ductless Mini-Split Heat Pump (DMSHP) Baseline Determination	Residential	2016-2018 Three-Year Plan	App. U, Study 12	Electric	2015-12-1	The evaluation team has made no formal recommendations at this time, except to present a possible baseline mix consistent with the draft scenarios presented.	N/A	Yes							
52	Massachusetts Low-Income Multifamily Initiative Impact Evaluation	Residential	2016-2018 Three-Year Plan	App. U, Study 13	Electric/Gas	2015-13-1	No formal recommendations were made in this evaluation.	N/A	N/A							
53	Comprehensive Review of Non-Residential Training and Education Programs, with a Focus on Building Operator Certification	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 14	Electric/Gas	2015-14-1	The Massachusetts PAs should employ multiple channels to promote BOC and the subsidies.	Statewide	All PAs are exploring training opportunities, and National Grid and CLC are actively sponsoring BOC and sharing their results.							
54	Comprehensive Review of Non-Residential Training and Education Programs, with a Focus on Building Operator Certification	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 14	Electric/Gas	2015-14-2	The PAs should craft BOC messaging that conveys the value proposition of certification and maintenance of certification to high-level managers.	Statewide	All PAs are exploring training opportunities, and National Grid and CLC are actively sponsoring BOC and sharing their results.							
55	Comprehensive Review of Non-Residential Training and Education Programs, with a Focus on Building Operator Certification	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 14	Electric/Gas	2015-14-3	The PAs should encourage high-level managers who take the training to also send their operators with day-to-day O&M responsibilities.	Statewide	All PAs are exploring training opportunities, and National Grid and CLC are actively sponsoring BOC and sharing their results.							
56	Comprehensive Review of Non-Residential Training and Education Programs, with a Focus on Building Operator Certification	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 14	Electric/Gas	2015-14-4	The PAs should promote BOC to participants of other energy efficiency programs.	Statewide	All PAs are exploring training opportunities, and National Grid and CLC are actively sponsoring BOC and sharing their results.							
57	Comprehensive Review of Non-Residential Training and Education Programs, with a Focus on Building Operator Certification	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 14	Electric/Gas	2015-14-5	The PAs should claim savings for each subsidized customer for eight years from the initial year of certification – that is, for the year of certification plus seven additional years.	Statewide	Yes							
58	Comprehensive Review of Non-Residential Training and Education Programs, with a Focus on Building Operator Certification	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 14	Electric/Gas	2015-14-6	The PAs should *not* claim additional savings for an individual's Level 2 certification beyond those claimed for Level 1 certification.	Statewide	Yes							
59	Comprehensive Review of Non-Residential Training and Education Programs, with a Focus on Building Operator Certification	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 14	Electric/Gas	2015-14-7	The PAs should claim two-thirds of the recommended per-operator savings for a second subsidized operator at a given workplace.	Statewide	Yes							
60	Comprehensive Review of Non-Residential Training and Education Programs, with a Focus on Building Operator Certification	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 14	Electric/Gas	2015-14-8	The PAs should consider designing and implementing additional adult efficiency education/ training programs.	Statewide	Yes							
61	Comprehensive Review of Behavior and Education Programs	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 15	Electric/Gas	2015-15-1	Test alternative residential behavior-based program offerings. Programs relying on web portals and smartphone applications can provide lower cost opportunities with comparable savings to the HER program.	Statewide	Currently Under Consideration.							
62	Comprehensive Review of Behavior and Education Programs	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 15	Electric/Gas	2015-15-2	Consider conducting an opportunity assessment of existing program offerings to identify opportunities for employing behavioral strategies, such as commitments and framing, to further enhance program participation.	Statewide	Currently Under Consideration.							
63	Comprehensive Review of Behavior and Education Programs	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 15	Electric/Gas	2015-15-3	Further explore opportunities for addressing barriers faced by PAs serving small markets in delivering behavior-based programs, particularly around partnership, evaluation methods and requirements for claiming savings, and assumptions regarding measure life.	Statewide	Currently Under Consideration.							
64	Comprehensive Review of Behavior and Education Programs	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 15	Electric/Gas	2015-15-4	Consider testing a workplace engagement program to initiate experience with small and medium commercial behavior programs.	Statewide	Currently Under Consideration.							
65	Comprehensive Review of Behavior and Education Programs	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 15	Electric/Gas	2015-15-5	Consider implementing kit-based education programs. Involve appropriate stakeholders in design and implementation to ensure behavioral savings can be quantified and claimed.	Statewide	CLC is offering kit based educational programs and will share results, and other PAs have considered implementing this.							
66	Comprehensive Review of Behavior and Education Programs	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 15	Electric/Gas	2015-15-6	Monitor the outcome of K-12 programs promoting school-wide energy-saving through culture change in similar jurisdictions with periodic, targeted reviews of key programs cited in this research.	Statewide	Will Consider for Future Studies							
67	Comprehensive Review of Behavior and Education Programs	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 15	Electric/Gas	2015-15-7	Consider the possibility of path-breaking, targeted research around behavior-based programs in higher education.	Statewide	Currently Under Consideration.							
68	Massachusetts Behavioral Programs Process Evaluation	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 16	Electric/Gas	2015-16-1	The PAs and EEAC should consider mechanisms to balance the "costs" of cross-program effects to avoid undue burden on the HER program where cross-program savings are substantial.	Statewide	No, there is no framework to support exact costs attributed to this cross-promotion							
69	Massachusetts Behavioral Programs Process Evaluation	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 16	Electric/Gas	2015-16-2	PAs should continue with the current treatment for these customers without concern of negative customer satisfaction side effects.	Statewide	Yes							

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70	Massachusetts Behavioral Programs Process Evaluation	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 16	Electric/Gas	2015-16-3	The PAs should consider conducting more comprehensive exploratory research, such as in-home ethnography, to identify the potential for home automation solutions to target plug load.	Statewide	Currently Under Consideration.							
71	2014-2015 Commercial and Industrial Natural Gas Programs Free-ridership and Spillover Study	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 17	Gas	2015-17-1	Results from this study are used by the PAs in setting prospective NTGRs in their three-year plans. When results are based on more than 10 survey records, the PAs should use PA-specific results. When sample sizes are not sufficient (10 completed surveys or less), PAs should use statewide figures. The report contains the recommended NTGR values for filing purposes.	Statewide	The PAs plan to adopt the recommendations.							
72	Efficient Neighborhoods + Incremental Cost Assessment	Special & Cross Sector	2016-2018 Three-Year Plan	App. U, Study 18	Electric/Gas	2015-18-1	No formal recommendations were made in this evaluation.	N/A	N/A							
73	Prescriptive Gas Impact Evaluation - Steam Trap Evaluation Phase 1	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 19	Gas	2015-19-1	Continue providing two steam trap programs, prescriptive and custom, to accommodate the wide variation in steam pressures and sizes, types, and number of steam traps; facility size; processes by which steam traps are repaired; and applicable savings methods and values.	Statewide	Yes							
74	Prescriptive Gas Impact Evaluation - Steam Trap Evaluation Phase 1	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 19	Gas	2015-19-2	Increase measure lifetime from three to six years based on the evaluation team's literature review and analysis of MA gas customer survey data.	Statewide	The PAs are adopting the study's recommended measure life of six years.							
75	Prescriptive Gas Impact Evaluation - Steam Trap Evaluation Phase 1	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 19	Gas	2015-19-3	Convene a steam trap stakeholder group—composed of PA staff members directly involved with steam traps, program implementation subcontractors, and steam trap repair/replacement vendors—to identify common assumptions/inputs to use in the savings algorithm, with the goal of improving program accuracy and consistency at the state-wide level.	Statewide	Yes							
76	Prescriptive Gas Impact Evaluation - Steam Trap Evaluation Phase 1	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 19	Gas	2015-19-4	Develop a new prescriptive steam trap deemed savings value using the savings algorithm developed in Phase 2.	Statewide	Yes, this is part of an ongoing study.							
77	Prescriptive Gas Impact Evaluation - Steam Trap Evaluation Phase 1	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 19	Gas	2015-19-5	Leverage the steam trap stakeholder group to identify approaches to increase program participation and savings.	Statewide	Yes							
78	Prescriptive Programmable Thermostats	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 20	Gas	2015-20-1	Perform analysis on the 2014 program data.	Statewide	Yes, this is part of an ongoing study.							
79	Prescriptive Programmable Thermostats	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 20	Gas	2015-20-2	Undertake a second participant survey that is focused on the 2014 program participants to identify and examine important consistencies, variances, and changes between the 2013 and 2014 program years, as well as to clarify the use of PTs, the pre-installed condition, and the savings.	Statewide	Yes, this is part of an ongoing study.							
80	Prescriptive Programmable Thermostats	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 20	Gas	2015-20-3	Conduct a billing analysis using data from both the 2013 and 2014 program years to increase the precision of the savings estimates results from a future billing analysis.	Statewide	Yes, this is part of an ongoing study.							
81	Prescriptive Programmable Thermostats	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 20	Gas	2015-20-4	Consider modifications to the billing analysis that would better account for exogenous change in the participant population such as including a matched sample of small businesses, collecting some additional business-level information in the survey (e.g., hours worked by or paid to employees).	Statewide	Yes, this is part of an ongoing study.							
82	Prescriptive Programmable Thermostats	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 20	Gas	2015-20-5	Given the inherent difficulties of billing analyses, continue to investigate methods to better quantify the savings achieved by PT installations, such as pre/post PT installation metering.	Statewide	Yes, this is part of an ongoing study.							
83	Impact Evaluation of PY2013 Custom Gas Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 21	Gas	2015-21-1	Realization rates should be utilized for the purposes of planning and reporting as follows: Eversource (91.8%), National Grid (77.9%), Columbia Gas (72.7%) and statewide (88.3%).	Statewide	The PAs have adopted the revised realization rates.							
84	Impact Evaluation of PY2013 Custom Gas Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 21	Gas	2015-21-2	A single guidance document that codifies the various protocols, principles, and practices used for applying realization rates across all programs, both gas and electric, in all sectors, should be developed as a common reference and to minimize ambiguity.	Statewide	Currently Under Consideration.							
85	Impact Evaluation of PY2013 Custom Gas Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 21	Gas	2015-21-3	Follow the recommendation of the "Massachusetts 2013 Prescriptive Gas Impact Evaluation Steam Trap Evaluation Phase I" to commence with a Phase II activity to standardize algorithms.	Statewide	Yes							
86	Impact Evaluation of PY2013 Custom Gas Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 21	Gas	2015-21-4	Further explore the role of the DRB method in impact evaluation planning, as future impact evaluations may benefit from a structured data collection of the M&V sample for ongoing measurement of program characteristics.	Statewide	Currently Under Consideration and part of other ongoing studies.							

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87	Impact Evaluation of PY2013 Custom Gas Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 21	Gas	2015-21-5	Comprehensive Design Analysis (CDA) natural gas tracking savings included the interactive gas penalty from electric measures. The electric measure penalties should be reported as a resource penalty to the electric program and not reported as a gas program penalty.	Statewide	Yes							
88	Impact Evaluation of PY2013 Custom Gas Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 21	Gas	2015-21-6	The application reviewers should cross-check the fraction of the natural gas bills a project is expected to save against typical savings fractions, particularly those that are high.	Statewide	Currently Under Consideration.							
89	Impact Evaluation of PY2013 Custom Gas Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 21	Gas	2015-21-7	Confirm existing condition ventilation rates and the efficient operation of the installed equipment, given the erratic and often poor savings rates of ventilation control measures (including ventilation heat recovery, demand controlled ventilation [DCV], and ventilation related EMS measures).	Statewide	Currently Under Consideration.							
90	Impact Evaluation of PY2013 Custom Gas Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 21	Gas	2015-21-8	The PAs should be diligent in gathering the technical assistance studies, spreadsheets, and models used to develop the project and include them in the electronic documentation, given that the application files are not always complete and sometimes miss significant information. Particular attention should be paid to the documentation of baseline conditions.	Statewide	Currently Under Consideration.							
91	Impact Evaluation of PY2013 Custom Gas Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 21	Gas	2015-21-9	Consider evaluating projects consisting of only deemed measures with deemed savings as part of technology specific evaluations.	Statewide	Currently Under Consideration.							
92	Impact Evaluation of PY2013 Custom Gas Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 21	Gas	2015-21-10	An error ratio of 0.60 is recommended for future evaluations.	Statewide	Will be considered for future evaluations							
93	Massachusetts Commercial New Construction Energy Code Compliance Follow-Up Study	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 22	Electric/Gas	2015-22-1	Adopt modified code baselines that reflect standard practices as the basis for determining energy efficiency incentives.	Statewide	Currently Under Consideration							
94	Massachusetts Commercial New Construction Energy Code Compliance Follow-Up Study	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 22	Electric/Gas	2015-22-2	Promote a focus on installation quality to realize greater savings from energy efficiency.	Statewide	Currently Under Consideration.							
95	Massachusetts Commercial New Construction Energy Code Compliance Follow-Up Study	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 22	Electric/Gas	2015-22-3	Promote high-performance building strategies to achieve additional energy savings.	Statewide	Yes							
96	Massachusetts Commercial New Construction Energy Code Compliance Follow-Up Study	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 22	Electric/Gas	2015-22-4	Target code training at specific provisions to achieve additional savings from improved compliance.	Statewide	Yes							
97	Massachusetts Commercial New Construction Energy Code Compliance Follow-Up Study	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 22	Electric/Gas	2015-22-5	Streamline future code compliance studies to enable more frequent, cost-effective compliance assessments.	Statewide	Yes							
98	Massachusetts LED Spillover Analysis	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 23	Electric	2015-23-1	The PAs should take steps to ensure that smaller customers are exposed to opportunities to purchase incented LED lamps through Direct Install programs and strong promotions via large home improvement stores and electronics retailers.	Statewide	Yes, where appropriate.							
99	Massachusetts LED Spillover Analysis	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 23	Electric	2015-23-2	Focus program efforts on the promotion of LED linear fixtures, which account for a very high portion (roughly 80 percent) of total commercial lighting energy consumption currently.	Statewide	Yes							
100	Impact Evaluation of Prescriptive Chiller and Compressed Air Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 24	Electric	2015-24-1	This evaluation recommends that Eversource-NSTAR utilize its own PA specific retrospective realization rates, and that all remaining PAs use the non-Eversource-NSTAR combined retrospective realization rates.	Statewide	The PAs have adopted the revised retrospective and prospective realization rates and savings factors produced in this study.							
101	Impact Evaluation of Prescriptive Chiller and Compressed Air Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 24	Electric	2015-24-2	Consider more research around the key finding that many chillers operate at very low part loads (i.e., not cycling, and therefore operating below the manufacturer-recommended part load values), particularly the implications for reliability, efficiency, and energy savings.	Statewide	Currently Under Consideration.							
102	Impact Evaluation of Prescriptive Chiller and Compressed Air Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 24	Electric	2015-24-3	Consider a closer review of chiller project applications, taking into account how chillers are currently rebated, whether they are used for comfort or data center cooling, and whether the custom track may be more appropriate for multiple chiller installations.	Statewide	Yes							

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103	Impact Evaluation of Prescriptive Chiller and Compressed Air Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 24	Electric	2015-24-4	Encourage vendors to look for additional chiller savings opportunities such as changing control set points (e.g., lower condenser water temperature, higher chilled water temperature or chilled water temperature reset).	Statewide	Yes							
104	Impact Evaluation of Prescriptive Chiller and Compressed Air Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 24	Electric	2015-24-5	Update the air compressor baseline from the current modulating with blowdown to load/unload, even though the savings calculated from these two different baselines did not vary significantly.	Statewide	Yes. Gross savings algorithms as well as net impacts have been incorporated into PA savings calculations.							
105	Impact Evaluation of Prescriptive Chiller and Compressed Air Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 24	Electric	2015-24-6	The retrospective realization rates for air compressors produced in this study are intended to be used by all PAs for their 2015 projects. The new prospective savings factors for air compressors and refrigerated dryers produced by this study, which are calculated based on the average operating kW of the sample of air compressors and dryers, may be used to update the values in the TRM.	Statewide	The PAs have adopted the revised retrospective and prospective realization rates and savings factors produced in this study.							
106	Impact Evaluation of Prescriptive Chiller and Compressed Air Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 24	Electric	2015-24-7	Recommend that compressed air vendors conduct simple short term metering to better understand their operation during off-shift periods and help improve the accuracy of the annual hours of operation.	Statewide	Currently Under Consideration.							
107	Impact Evaluation of Prescriptive Chiller and Compressed Air Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 24	Electric	2015-24-8	Consider a review of interval load data prior to finalizing applications, given that in many cases the actual operating hours were observed to be significantly higher, resulting in unclaimed savings.	Statewide	Currently Under Consideration.							
108	Impact Evaluation of Prescriptive Chiller and Compressed Air Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 24	Electric	2015-24-9	Encourage vendors to look for additional compressed air savings opportunities such as lowering the discharge pressure, and inspecting for and reducing air leaks.	Statewide	Yes							
109	Impact Evaluation of 2012 Custom HVAC Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 25	Electric	2015-25-1	Improve Baseline or Pre-Retrofit Documentation	Statewide	Yes							
110	Impact Evaluation of 2012 Custom HVAC Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 25	Electric	2015-25-2	Provide Sufficient Documentation	Statewide	Yes							
111	Impact Evaluation of 2012 Custom HVAC Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 25	Electric	2015-25-3	Clearly Document Calculations of Peak Demand Savings	Statewide	Yes.							
112	Impact Evaluation of 2012 Custom HVAC Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 25	Electric	2015-25-4	Encourage More Comprehensive Commissioning and Updating of Tracking Estimates with Findings from Commissioning	Statewide	Yes.							
113	Impact Evaluation of 2012 Custom HVAC Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 25	Electric	2015-25-5	Conduct Pre-Installation Metering for More Retrofit Projects	Statewide	Yes, when appropriate and if cost effective on a custom project basis.							
114	Impact Evaluation of 2012 Custom HVAC Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 25	Electric	2015-25-6	Improve use of Post Inspection to Verify Measure Operation	Statewide	Yes.							
115	Impact Evaluation of 2012 Custom HVAC Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 25	Electric	2015-25-7	Require Trend Data Acquisition	Statewide	Currently Under Consideration.							
116	Impact Evaluation of 2012 Custom HVAC Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 25	Electric	2015-25-8	Use of Desk Review Methodology	Statewide	Currently Under Consideration.							
117	Impact Evaluation of 2012 Custom HVAC Installations	Commercial & Industrial	2016-2018 Three-Year Plan	App. U, Study 25	Electric	2015-25-9	Consider Other Evaluation Methodologies	Statewide	Currently Under Consideration.							
118	Massachusetts Spring 2014 Survey Results: FINAL Report	Residential	2014 Plan Year Report	App. 4D, Study 14-1	Electric	2014-1-1	Future surveys should explore the reasons behind satisfaction with—and preferences for—LEDs versus CFLs among those who use both types of bulbs to understand why CFL satisfaction continues to decline. This analysis may also inform potential future trends in LED satisfaction, particularly if the results point to driving factors related to LED timing and rate of adoption.	Statewide	Yes							
119	Massachusetts Spring 2014 Survey Results: FINAL Report	Residential	2014 Plan Year Report	App. 4D, Study 14-1	Electric	2014-1-2	To increase survey response rate, the Team recommends that future replications of this survey also send a pre-paid incentive with the advance letter alerting possible respondents to the study.	Statewide	Yes							
120	Massachusetts Spring 2014 Survey Results: FINAL Report	Residential	2014 Plan Year Report	App. 4D, Study 14-1	Electric	2014-1-3	To explore more fully the reasons why web respondents differ from phone respondents, the Team recommends that the next iteration of this survey again offer a web/phone response option along with a phone-only response option. We believe that the offering of a web-based response platform may be more conducive to current social norms. If the length of the survey allows, the evaluators should also add questions to help characterize web and phone respondents by their technology, lighting, and environmental opinions. Finally, if the programming of the survey allows, the strongest study design would show pictures of various bulb types to only a portion of the web respondents to assess the extent to which these visual cues affect response.	Statewide	Yes							
121	Residential Lighting Shelf Survey and Pricing Analysis	Residential	2014 Plan Year Report	App. 4D, Study 14-2	Electric	2014-2-1	No formal recommendations were made in this evaluation.	N/A	N/A							
122	Baseline Sensitivity Analysis Spreadsheet, 2014	Residential	2014 Plan Year Report	App. 4D, Study 14-3	Electric/Gas	2014-3-1	No formal recommendations were made in this evaluation.	N/A	N/A							

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123	Market Lift Assessment FINAL Report	Residential	2014 Plan Year Report	App. 4D, Study 14-4	Electric	2014-4-1	In negotiations with retail partners, stress the continuation of previous incentives to help alleviate their concerns about the additional risk involved with market lift design.	Statewide	N/A. The PAs are no longer offering market lift measures.							
124	Market Lift Assessment FINAL Report	Residential	2014 Plan Year Report	App. 4D, Study 14-4	Electric	2014-4-2	Take into account the capabilities of manufacturers and retailers in collecting and providing the necessary data	Statewide	N/A. The PAs are no longer offering market lift measures.							
125	Market Lift Assessment FINAL Report	Residential	2014 Plan Year Report	App. 4D, Study 14-4	Electric	2014-4-3	The Team recommends more in-store events and potential in-store field events to boost sales of CFLs.	Statewide	This recommendation is no longer current. PAs are focused on boosting sales of LEDs, not CFLs.							
126	Results of the Massachusetts On-site Lighting Inventory 2014	Residential	2014 Plan Year Report	App. 4D, Study 14-5	Electric	2014-5-1	Continue pursuit of panel study, adding in 2014 saturation study participants. The panel study results helped to answer questions regarding drivers of saturation changes and bulb replacement behavior that have been valuable in assessing the ever-changing residential lighting market. Repeating this study and expanding on the panel size will reveal whether the results observed this year represent a pattern of behavior or whether they were limited to a particular group at a specific time.	Statewide	Yes							
127	Supplier and Retailer Perspectives on the Massachusetts Residential Lighting Market Final Report	Residential	2014 Plan Year Report	App. 4D, Study 14-6	Electric	2014-6-1	No formal recommendations were made in this evaluation.	N/A	N/A							
128	Saturation Comparison of Massachusetts, California, and New York: Final Report	Residential	2014 Plan Year Report	App. 4D, Study 14-7	Electric	2014-7-1	No formal recommendations were made in this evaluation.	N/A	N/A							
129	Ductless Mini-Split Heat Pump Customer Survey Results	Residential	2014 Plan Year Report	App. 4D, Study 14-8	Electric	2014-8-1	No formal recommendations were made in this evaluation.	N/A	N/A							
130	Mass Save Multifamily Program Process Evaluation Report	Residential	2014 Plan Year Report	App. 4D, Study 14-9	Electric/Gas	2014-9-1	Create a Single Point of Contact. The PAs and EEAC should consider creating a single point of contact for each project to ensure a customer deals with one entity throughout the project cycle, regardless of the sector (residential and/or commercial) and fuels (gas and/or electric) present at the project site. This could be achieved by using an outside vendor or a network of vendors.	Statewide	Yes							
131	Mass Save Multifamily Program Process Evaluation Report	Residential	2014 Plan Year Report	App. 4D, Study 14-9	Electric/Gas	2014-9-2	Improve Program Tracking Systems. The PAs should consider the following two steps to address the data issues: • Create a unique premise ID for multifamily properties that is implemented across all PAs, fuels and programs. • Consider splitting out tracking and planning for C&I multifamily from the rest of the C&I portfolio, similar to the process currently implemented for multifamily residential activity.	Statewide	Yes, in part. For 2016-2018 the PAs will be tracking C&I multi-family gas and electric separately, similar to the process currently implemented for multi-family residential activity. The PAs are still assessing the practical considerations of creating unique premise IDs for multifamily properties across all PAs, fuels and programs.							
132	Mass Save Multifamily Program Process Evaluation Report	Residential	2014 Plan Year Report	App. 4D, Study 14-9	Electric/Gas	2014-9-3	Ensure a Consistent Energy Assessment Process. A consistent assessment process is key to ensuring that there are no lost opportunities and that any forgone opportunities are recorded for future follow-up with the customer. Improvement of the process can be achieved through the training of auditors in completing a comprehensive job including a review of all the systems in common areas and major systems within unit areas. Program auditors should also be trained to involve technical engineers when required to offer an advanced engineering perspective for more customized measures.	Statewide	Yes							
133	Mass Save Multifamily Program Process Evaluation Report	Residential	2014 Plan Year Report	App. 4D, Study 14-9	Electric/Gas	2014-9-4	Feasibility of Future Impact Evaluation. Considering all aspects of the data reviewed in this study, we believe a billing analysis is a feasible approach to determining savings among participating accounts. This approach can be expected to provide electric and gas overall and PA level results, although we note that for the smaller PAs such as Berkshire, Unitil and CLC, the impact results are not likely to be reliable due to the small populations that appear to be available for the analysis. We also note that while this approach can provide a realization rate against the savings predicted at the program and PA level, it will not provide realization rates at the measure level.	Statewide	Yes							
134	High Efficiency Heating Equipment Impact Evaluation	Residential	2014 Plan Year Report	App. 4D, Study 14-10	Gas	2014-10-1	Use evaluation heating loads for HEHE-installed furnaces and boilers in calculating deemed savings. Previous deemed savings had used the same annual heating loads.	Statewide	Yes							
135	High Efficiency Heating Equipment Impact Evaluation	Residential	2014 Plan Year Report	App. 4D, Study 14-10	Gas	2014-10-2	Adjust baseline equipment efficiency assumptions to account for standby and cycling losses using evaluation determined adjustment factors.	Statewide	Yes							

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136	High Efficiency Heating Equipment Impact Evaluation	Residential	2014 Plan Year Report	App. 4D, Study 14-10	Gas	2014-10-3	Consider and research ways to improve boiler operating efficiency through quality installation and contractor and homeowner education.	Statewide	Yes							
137	High Efficiency Heating Equipment Impact Evaluation	Residential	2014 Plan Year Report	App. 4D, Study 14-10	Gas	2014-10-4	Use the revised early retirement baselines applied in this study and consider additional early retirement baseline research for units less than thirty years old if early retirement participation increases.	Statewide	Yes							
138	High Efficiency Heating Equipment Impact Evaluation	Residential	2014 Plan Year Report	App. 4D, Study 14-10	Gas	2014-10-5	Consider conducting additional baseline research and/or requiring information on the application indicating the equipment that is being replaced by combination systems.	Statewide	No, but the PAs have adjusted the baseline for combination systems to represent the current mix of baselines that was discovered during the evaluation. These results were implemented into the 2014 planning report and will continue to be used for future reporting.							
139	Furnace Baseline	Residential	2014 Plan Year Report	App. 4D, Study 14-11	Gas	2014-11-1	No formal recommendations were made in this evaluation.	N/A	N/A							
140	Variable Speed Drive Loadshape Project	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-12	Electric	2014-12-1	Continue to promote the installation of VSDs on existing equipment	Statewide	Yes							
141	Variable Speed Drive Loadshape Project	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-12	Electric	2014-12-2	PAs should integrate VSD control and commissioning requirements into program implementation activities. PAs should require specifications of the intended control strategy in their application forms, and post inspection should include verification of commissioned VSD control sequences.	PA Specific		National Grid's prescriptive VSD program is subject to a random sample of sites having post inspections, where control strategies and equipment are verified.	Eversource's prescriptive VSD program is subject to post inspection on a larger sample of installs after the study findings where what is suggested is verified.	N/A	N/A	N/A	Yes	Unitil's prescriptive VSD measures are subject to sites having post inspections, where control strategies and equipment are verified.
142	Variable Speed Drive Loadshape Project	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-12	Electric	2014-12-3	To support evaluation efforts, the PAs should add pre-retrofit data collection requirements to program application forms. At a minimum, the PAs should require customers to specify the type, working conditions, and operating schedule of their pre-retrofit baseline equipment.	Statewide	Yes							
143	Massachusetts Existing Buildings Market Characterization: Commercial and Industrial Customer Telephone Survey Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-13	Electric/Gas	2014-13-1	No formal recommendations were made in this evaluation.	N/A	N/A							
144	Retrofit Lighting Controls Measures Summary of Findings FINAL REPORT	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-14	Electric	2014-14-1	The Team recommends that the PAs focus on the following high potential technologies: advanced lighting controls, wireless controls, LED with controls, and daylight dimming.	Statewide	Yes							
145	Retrofit Lighting Controls Measures Summary of Findings FINAL REPORT	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-14	Electric	2014-14-2	The Team recommends that the PAs focus on the following high potential sectors: Offices, Small Business (<300 kW).	Statewide	Yes							
146	Retrofit Lighting Controls Measures Summary of Findings FINAL REPORT	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-14	Electric	2014-14-3	DNV GL recommends adjusting the lighting controls savings algorithm to include "% saved" rather than the currently used "delta hours" value. We recommend using the weighted average values from an LBNL study of 24% saved for occupancy sensors and 28% saved for daylight dimming.	Statewide	Yes							
147	Whole Systems Energy Efficiency Programs - Literature Review	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-15	Electric/Gas	2014-15-1	The evaluation team identified a number of next steps for further research into understanding how to capture additional energy and demand savings through whole system programs, including: • Conduct interviews/brainstorming session with MA PAs	Statewide	No further research has been planned at this time.							
148	Whole Systems Energy Efficiency Programs - Literature Review	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-15	Electric/Gas	2014-15-2	• Conduct interviews with program managers and market actors involved in successful programs in other states	Statewide	No further research has been planned at this time.							
149	Whole Systems Energy Efficiency Programs - Literature Review	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-15	Electric/Gas	2014-15-3	• Conduct interviews with the architects and engineers (A&E) community	Statewide	No further research has been planned at this time.							
150	Whole Systems Energy Efficiency Programs - Literature Review	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-15	Electric/Gas	2014-15-4	• Conduct focus groups with new construction building owners	Statewide	No further research has been planned at this time.							
151	Final Report of Massachusetts LED Market Effects: Baseline Characterization	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-16	Electric	2014-16-1	Maintain incentives for LED lamps and fixtures. PAs should continue to incentivize LEDs to reduce the first cost barrier and increase the saturation of LEDs across the Massachusetts market. Program managers should continue to monitor the decrease in LED prices to ensure incentives are at the optimal level.	Statewide	Yes							

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152	Final Report of Massachusetts LED Market Effects: Baseline Characterization	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-16	Electric	2014-16-2	Continue to support the development of product standards and testing programs. Given the number of manufacturers entering the LED market each year and consumer unfamiliarity and concerns with LED quality and performance, the need for quality standards and consumer education is even more important.	Statewide	Yes							
153	Final Report of Massachusetts LED Market Effects: Baseline Characterization	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-16	Electric	2014-16-3	Promote programs that educate consumers on LED products and applications. We recommend that PAs continue to support educational efforts to assist consumers in selecting the LED product that best meets their needs.	Statewide	Yes							
154	Final Report of Massachusetts LED Market Effects: Baseline Characterization	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-16	Electric	2014-16-4	Promote lighting controls through programs as a way to increase lighting savings. Tying controls and LEDs together will increase the savings potential of each measure and the associated cost-effectiveness.	Statewide	Yes							
155	2012 C&I Customer Profile Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-17	Electric/Gas	2014-17-1	Investigate the geographic data at more detailed granularity. Additional analysis into geographic clusters may be useful in identifying similar C&I markets across the state that have not experienced the same depth of efficiency savings as well as yield insights into market saturation levels and the drivers behind these differences.	Statewide	Yes							
156	2012 C&I Customer Profile Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-17	Electric/Gas	2014-17-2	Investigate customer segmentation though utilization of multiple attribute filters. The categorical analysis presented in this report confirms many of the high level trends first identified in the 2011 customer profile, as well as identifies opportunities for deeper analysis. Further investigation into the data by applying multiple segmentation filters (e.g. building type, consumption size, and end use) may provide greater insight into untapped opportunities for energy efficiency that are currently masked by the high level analysis.	Statewide	Yes							
157	2012 C&I Customer Profile Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-17	Electric/Gas	2014-17-3	Investigate in greater depth why load factor appears correlated with savings. For the second year in a row, low load factor accounts had the highest average percent savings. The level of granularity used to evaluate load factor is relatively coarse, and a more detailed investigation of how load factor and average savings are correlated may provide valuable insight into how PAs can target offerings to a large customer segment by population.	Statewide	Yes							
158	2012 C&I Customer Profile Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-17	Electric/Gas	2014-17-4	Investigate methods to improve PA specific match rates using PA supplied ID data. The ability to reliably and robustly link the PA tracking and billing data is a critical element of the customer profile report, and an important input into many other studies. The assumption inherent in scoping the 2011 and 2012 data is that account and other unique ID links are consistently formatted both within PA and year over year, and that minimal manipulations would be needed to link the data. However, this has proven more difficult than anticipated, and given the establishment and analysis of time series datasets, undertaking a deeper analysis of the data will be necessary to improve its value . Through the QA/QC process DNV GL believes that match rates can be further improved with PA specific explorations into how to effectively link data, and this standardization may be useful in improving the ability to link a customer between separate gas and electric service providers.	Statewide	Yes							
159	2012 C&I Customer Profile Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-17	Electric/Gas	2014-17-5	Further investigate multi-end use and multi-year participants and trends. The 2012 customer profile confirmed the presence and impact of participants that undertook multiple end use projects, and participants that participated over multiple years. Additional analysis guided by these summary level participant findings, for example evaluating drivers behind why certain segments have higher savings from multiple end use projects – may yield a greater understanding of end use trends, scale of effort, and – should national account flags become available – corporate adoption rates.	Statewide	Yes							

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160	2012 C&I Customer Profile Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-17	Electric/Gas	2014-17-6	Further investigate the retail business participation between gas and electric. The 2012 customer profile indicated that businesses classified as retail had higher participation for electric PAs relative to gas PAs. Additional analysis into potential drivers of this – for example, do most retail sites focus on measures that are not applicable to gas (e.g. lighting), and what specific measures are being undertaken at retail locations that have a gas provider, will help to evaluate if there is an opportunity to increase participation at retail locations or if this business type constitutes a harder to serve sector for gas PAs.	Statewide	Yes							
161	Learning from Successful Projects Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-18	Electric/Gas	2014-18-1	Leverage trade ally customer relationships to increase customer engagement and communication. The PAs can continue to leverage trade allies to increase the likelihood of achieving any number of the success factors related to customer engagement and communication.	Statewide	Yes.							
162	Learning from Successful Projects Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-18	Electric/Gas	2014-18-2	Increase emphasis of vendor training. By increasing the emphasis on the use of training vendors and other technical staff, the PAs will encourage and support more frequent installation of energy saving measures. Also, increased trade ally training, support and competency are important because of their strong direct relationships with customers.	Statewide	Yes.							
163	Learning from Successful Projects Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-18	Electric/Gas	2014-18-3	Promote and leverage incentives. Program implementers can educate customers about all the incentives that are being provided and offered to increase the depth and breadth of their energy efficiency projects. When customers realize they are being offered additional discounting, they are more likely to feel more successful, decide to act, and install more measures and/or projects.	Statewide	Yes.							
164	Learning from Successful Projects Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-18	Electric/Gas	2014-18-4	Explore ways for customers to build internal expertise. This may take the form of a shared energy manager position to serve a group of multiple small- and mid-sized customers.	Statewide	Yes, though not specifically on a shared energy manager.							
165	Learning from Successful Projects Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-18	Electric/Gas	2014-18-5	Emphasize the Value of NEBs and "Being Green". By marketing the NEBs and other intangibles associated with specific projects or specific project types, the PAs will increase the potential for project success. Such marketing can take the form of case studies, which both PAs and customers noted as training and education tactics that lead to project success.	Statewide	Yes, though not specifically case studies.							
166	Learning from Successful Projects Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-18	Electric/Gas	2014-18-6	Ensure the Accuracy of Technical Review and Assistance. By ensuring that the aspects of a project are technically sound and appropriate, the PAs will ensure that the project is set up for success at the outset. Even though a project that grossly overestimates project savings could still save a significant amount of energy, a customer may not view it as a success given its high expectations.	Statewide	Yes.							
167	Learning from Successful Projects Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-18	Electric/Gas	2014-18-7	Leverage the results of EM&V site reports. For PAs not doing so already, the results of individual EM&V site evaluations may be used as a mechanism for quality assurance, accuracy and project specific feedback. For example the PAs could follow up with a project receiving a particularly low (or high) realization rate to determine if there were any issues with the project that went unaddressed. It should be noted, however, that the EM&V work is driven by a random sample of projects and this type of exercise would not replace and program existing QA/QC efforts.	Statewide	Yes.							
168	Learning from Successful Projects Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-18	Electric/Gas	2014-18-8	Focus on Eliminating Project Delays and Intrusions. While the PAs can only exert so much control over the participation process, it is worth assessing participation at regular intervals to determine if there are any improvements that can be made. PAs could explore what causes project delays and develop tracking mechanisms and processes to monitor and continually improve services to ensure customer schedules and expectations are met and preferably exceeded.	Statewide	Yes.							

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169	Learning from Successful Projects Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-18	Electric/Gas	2014-18-9	Small PAs should adopt a simpler form of the MOUs used successfully by larger PAs. Having a signed memorandum of understanding (MOU) was one of the metrics used to identify customers with successful projects, and it was cited as a criterion for success during PA interviews. The PA Differences project found that the smaller PAs have very few large customers that can implement large projects, which are historically a key to achieving savings goals. To increase the critical savings stream from these large customers, we recommend that smaller PAs consider adopting a process similar to the formalized MOU that focuses on planning for energy efficiency over time.	Statewide	Currently under consideration.							
170	How PA Differences Affect Outcomes Phase 2 Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-19	Electric/Gas	2014-19-1	Small PAs should consider how to increase technical expertise relevant to their largest customers and strike long-term efficiency deals with their largest customers, perhaps in the form of memorandums of understanding (MOUs).	PA Specific		N/A	N/A	N/A	Currently under consideration	Currently under consideration	Yes	The PA is in a position to offer MOUs to its largest customers.
171	How PA Differences Affect Outcomes Phase 2 Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-19	Electric/Gas	2014-19-2	Whenever possible, comparisons between PAs should be based on multiple years of data and focus on medium- or long-term trends.	Statewide	Yes							
172	How PA Differences Affect Outcomes Phase 2 Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-19	Electric/Gas	2014-19-3	Large and small PAs should attempt to get greater savings from the small and mid-sized customers.	Statewide	Yes							
173	How PA Differences Affect Outcomes Phase 2 Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-19	Electric/Gas	2014-19-4	Expand use of subcontractors to increase PA reach to smaller customers.	Statewide	Yes							
174	How PA Differences Affect Outcomes Phase 2 Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-19	Electric/Gas	2014-19-5	Use targeted initiatives to achieve savings from specific measure types such as National Grid's spray valve initiative in 2012.	PA Specific		Yes	Yes. Please refer to the Commercial & Industrial Programs description narrative as part of the 2016-2018 energy efficiency plan for more details.	Yes	Upstream and targeted promotional activities	Upstream, and considering targeted promotional activities	Yes	Yes
175	Massachusetts Commercial Real Estate Survey Analysis - Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-20	Electric/Gas	2014-20-1	Increase outreach to building managers and owners. Additional efforts to deepen and maintain relationships with building managers and owners can provide an avenue to promote energy efficiency programs in the commercial real estate market.	Statewide	Yes							
176	Massachusetts Commercial Real Estate Survey Analysis - Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-20	Electric/Gas	2014-20-2	Leverage the role of account managers. The PAs should consider leveraging the role of their account managers. Account managers can continue to play a critical role in working with commercial real estate businesses as they can more readily communicate energy efficiency program information and assist customers in navigating through the participation process.	PA Specific		Yes	Yes.	CMA does not have "account managers", we do however leverage program managers and vendors to fill this role	No - Limited opportunities due to Liberty's territory. The PA participates in statewide offerings and marketing efforts.	No - Limited opportunities due to Berkshire's territory. The PA participates in statewide offerings and marketing efforts.	No/NA. Due to the unique CLC service territory and customer base on Cape Cod and Martha's Vineyard, there is not a traditional CRE market with large developers owning significant commercial property volumes. Nor does CLC have traditional account managers like a utility. CLC does however maintain a very active presence in our communities through ongoing outreach to local chambers, boards of selectmen, energy committees and other community venues.	No, The PA has limited opportunities in this target market and includes the small number of customers in its usual marketing efforts. The PA participates in statewide offerings or marketing efforts.
177	Massachusetts Commercial Real Estate Survey Analysis - Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-20	Electric/Gas	2014-20-3	Target marketing to commercial real estate businesses based on building vintage. The PAs should consider target marketing to commercial real estate businesses based on building vintage. The analysis showed that 65% of buildings built before 1990 have not undergone a renovation within the past five years and therefore may offer opportunities for energy savings.	PA Specific		Yes	Yes	No. CMA is reaching out to the market segment, but not by age of buildings as the study suggest. The PA does not have enough market intelligence to be able to target buildings by how old they are.	No. Limited opportunity in our service territory. PA targets these customers through statewide marketing efforts.	No. Limited opportunity in our service territory. PA targets these customers through statewide marketing efforts.	No. Due to the nature of CLC's customer base on Cape Cod and Martha's Vineyard, we do not have a traditional CRE market with large developers owning significant commercial property volumes.	No, Unitil has limited opportunities in this target market and includes the small number of customers in its usual marketing efforts. Unitil participates in statewide offerings or marketing efforts.

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178	Small Business Program Process Evaluation Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-21	Electric/Gas	2014-21-1	Contracting Process: • Find ways to build achievement of non-lighting and gas savings into the contracting process.	Statewide	Yes							
179	Small Business Program Process Evaluation Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-21	Electric/Gas	2014-21-2	Contracting Process: • Make the contract process more consistent across PAs and eliminate duplication of effort.	Statewide	Currently Under Consideration							
180	Small Business Program Process Evaluation Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-21	Electric/Gas	2014-21-3	Measure List, Checklist, and Assessment Process: • Strengthen the comprehensiveness checklist and implement a common electronic tool or app for all vendors.	Statewide	Currently Under Consideration							
181	Small Business Program Process Evaluation Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-21	Electric/Gas	2014-21-4	Measure List, Checklist, and Assessment Process: • Clearly define and document the measures covered by the program.	Statewide	Currently Under Consideration							
182	Small Business Program Process Evaluation Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-21	Electric/Gas	2014-21-5	Measure List, Checklist, and Assessment Process:• Require vendors to report and promptly share the specifications of major heating and water-heating systems for all assessments with the relevant gas PA.	Statewide	Currently Under Consideration							
183	Small Business Program Process Evaluation Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-21	Electric/Gas	2014-21-6	Measure List, Checklist, and Assessment Process:• Consider sending in two assessors at once; one focused on lighting (similar to current practice) and one focused on gas-related measures.	Statewide	Currently Under Consideration							
184	Small Business Program Process Evaluation Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-21	Electric/Gas	2014-21-7	Measure List, Checklist, and Assessment Process:• Consider providing SB vendors with additional training to increase their knowledge of non-lighting and gas-saving measures.	Statewide	Currently under consideration							
185	Small Business Program Process Evaluation Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-21	Electric/Gas	2014-21-8	Data Handling: • Tracking databases should be clearer and more consistent within and across PAs. Databases should include: clear indication of which (sub-)program measures were incented through (e.g.: SB/Direct Install, Large Retrofit, New Construction), clear indication of whether a measure was custom or prescriptive, the SB vendor associated with the measure or an explicit indication of none, and which customers received assessments, even if they did not install any measures.	PA Specific		Yes	Yes. Eversource tracking databases already provide this level of detail.	See plan	See plan	See plan	Yes	Yes.
186	Small Business Program Process Evaluation Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-21	Electric/Gas	2014-21-9	Data Handling: • PAs should automate their electronic data entry.	PA Specific		Yes	This recommendation is vague and therefore difficult to implement.	Yes, when applicable and necessary	See plan	See plan	Yes	Yes, Unitil is working with vendors to transition to a system in which project data can be directly imported into Unitil's tracking system and moving away from manual data entry.
187	Small Business Program Process Evaluation Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-21	Electric/Gas	2014-21-10	Data Handling: • PAs should have the capability to obtain and log the assessment details from their SB vendors into a data tracking system. This would help PAs identify additional potential savings from SB participants, especially from those that do not install all recommended measures.	PA Specific		Currently Under Consideration	Yes	See plan	See plan	See plan	Yes	See plan
188	Small Business Program Process Evaluation Final Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-21	Electric/Gas	2014-21-11	Data Handling: • Formalize the process to reconcile cross-PA measure tracking if one is not already in place.	Statewide	Currently Under Consideration							
189	Massachusetts Boiler Market Characterization Study	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-22	Gas	2014-22-1	Seek voluntary non-confidential feedback from boiler manufacturers who expressed an interest.	Statewide	Yes							
190	Massachusetts Boiler Market Characterization Study	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-22	Gas	2014-22-2	Conduct comparative research on boiler programs in the Northeast region.	Statewide	Currently Under Consideration							
191	Massachusetts Boiler Market Characterization Study	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-22	Gas	2014-22-3	Initiate "boiler product line mapping" by creating a simple matrix where 90 - 2,000 MBH boiler units provided by various manufacturers are identified .	Statewide	Currently Under Consideration							
192	Massachusetts Boiler Market Characterization Study	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-22	Gas	2014-22-4	Provide an overview of DOE's current NPRM for Commercial Boiler Standards (U.S. Department of Energy Notice of Proposed Rulemaking), which may mandate federal efficiency requirements for pre-packaged commercial boilers.	Statewide	Yes							

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193	Massachusetts Boiler Market Characterization Study	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-22	Gas	2014-22-5	Conduct a "Massachusetts Boiler Roundtable" (a small-group forum discussion) with a select Massachusetts market-savvy boiler panel that can more effectively provide information on the evolving complex boiler market.	Statewide	Yes							
194	Impact Evaluation of Massachusetts Prescriptive Gas Pre-Rinse Spray Valve Measure	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-23	Gas	2014-23-1	Recommendations to Increase Savings: Results showed that a percentage of change-outs (approximately 20%) resulted in small energy savings because of either low spray valve use at a site or old valves already having low flow rates. However, solutions to address these "small-savers" in the program population do not seem practical at this time, as explained below: • There is no practical method for accurately identifying low use sites. Adopting a free change-out program would quickly become very complex and un-manageable if eligibility rules were changed to target certain commercial businesses. Site level monitoring proved that spray valve use and savings are site-specific even within the same facility, business, or building type. • No practical method exists to stop a current practice of easily modifying older spray valves to increase their flow rate. The existing program implementation practice of changing all valves to the high efficiency "tamper-proof" model appears to be prudent program administration.	Statewide	Yes						
195	Impact Evaluation of Massachusetts Prescriptive Gas Pre-Rinse Spray Valve Measure	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-23	Gas	2014-23-2	Recommendation for additional spray valve research to aid future program planning: The Massachusetts program implementation of the spray valve program utilizing direct installation contractors has resulted in the change-out of two to three thousand spray valves per year with substantial gas savings. However, given that the total state-wide inventory of spray valves and its future savings potential are finite, we developed the following key questions for future research: 1. Identify the Statewide PRSV inventory, how many PRSV's are there? 2. How many program change-outs have occurred from historic program data? 3. How many more can be done? 4. What PRSV gas savings exists for each PA?	Statewide	Will Consider for Future Studies						
196	Impact Evaluation of Massachusetts Prescriptive Gas Pre-Rinse Spray Valve Measure	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-23	Gas	2014-23-3	Currently there are synergies achieved by common program implementation occurring between multiple PAs. Further investigation of the state-wide inventory of spray valves and historic program data analysis will provide meaningful planning details for the remaining overall gas savings potential and will lead to the development of feasible future strategies for this measure. The assessment can also provide greater details specific to each PA.	Statewide	Will Consider for Future Studies						
197	T12 Phaseout Market Research	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-24	Electric	2014-24-1	No formal recommendations were made in this evaluation. Because this was a market characterization study it did not contain any explicit recommendations.	N/A	N/A							
198	2013 Commercial & Industrial Customer Profile Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-25	Electric/Gas	2014-25-1	Given the increasing interest in the Customer Profile study, refine and prioritize the metrics used to expedite analyses and increase the actionable insights generated. Among other benefits, this would provide the opportunity to assess the best approach to incorporating metrics developed through other studies—such as the PA Differences and Mid-Size Customer Needs Assessment studies—to ensure that those projects continue to deliver maximum value.	Statewide	Yes						
199	2013 Commercial & Industrial Customer Profile Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-25	Electric/Gas	2014-25-2	Examine how to best continue engaging small and mid-size gas customers that may have undertaken an electric PA installed gas measure. For example, we recommend exploring whether participants view the gas spray valves as "all they would do" or "the start of something bigger." This may help smaller PAs in particular refine their approaches to ensure that small and mid-size customers continue to represent cost effective savings opportunities—rather than higher-cost converts to bring back into the efficiency space. Engaging smaller customers will become increasingly important as larger customers exhaust their savings appetite.	Statewide	Currently Under Consideration						

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200	2013 Commercial & Industrial Customer Profile Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-25	Electric/Gas	2014-25-3	Further explore ways to engage sectors where account proportion and consumption-weighted participation are low in order to identify avenues for new offerings. We recommend further study to identify sub groupings of smaller customers within these sectors—particularly the Other Services sector—in order to inform the development of new programmatic offerings. These customers may be too small to merit the assignment of an account manager, but may benefit from a somewhat standard operating nature (e.g., a car wash, or a flashing light at the top of a cell phone tower) or a sector-specific strategy that would allow a "templatized" type offering to generate savings through bulk of measures—similar to what gas spray valves have accomplished in the Accommodation and Food Service sector.	Statewide	Yes						
201	2013 Commercial & Industrial Customer Profile Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-25	Electric/Gas	2014-25-4	Continue to integrate third party data by leveraging geographic data captured in the PA billing systems. There is potential to further expand and integrate the use of tax parcel data to help PAs target customer subsets. Consider continued refinement of how the Massachusetts PAs can leverage the geographic element of their data for actionable findings. One element of feedback received in response to the 2013 Customer Profile draft was: How do we make the maps more actionable? A strong first step towards developing more predictive and actionable geographic outputs would be to identify: 1) priority questions such as "where is participation lagging," and 2) the predictor variables that the implementation teams suspect most influence the priority questions (e.g., energy use, building vintage, square footage, etc.).	Statewide	Yes						
202	2013 Commercial & Industrial Customer Profile Report	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-25	Electric/Gas	2014-25-5	Expand linking electric and gas accounts to effectively evaluate dual-PA served customers to get a complete accounting of their true energy intensity for each fuel.	Statewide	Currently Under Consideration							
203	Massachusetts Commercial and Industrial Upstream Lighting Program: "In Storage" Lamps Follow-Up Study	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-26	Electric	2014-26-1	The Team recommends that the PAs use the results of the Year 3 analysis to replace the results of the Year 1 analysis for LED and fluorescent lamps. The PAs may instead decide to use all of the individual components of the realization rates.	Statewide	Yes							
204	Massachusetts Commercial and Industrial Upstream Lighting Program: "In Storage" Lamps Follow-Up Study	Commercial & Industrial	2014 Plan Year Report	App. 4D, Study 14-26	Electric	2014-26-2	The PAs and EEAC may consider conducting a follow-up impact evaluation to assess the effectiveness of their ongoing efforts to improve the installation rate.	Statewide	Yes							
205	2013 Commercial and Industrial Electric Programs Free-ridership and Spillover Study	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-27	Electric	2014-27-1	No formal recommendations were made in this evaluation.	N/A	N/A							
206	Stage 1 Results and Stage 2 Detailed Research Plan - Commercial and Industrial New Construction Non-Energy Impacts Study	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-28	Electric/Gas	2014-28-1	• The analysis of NEIs associated with NC measures should focus on true new construction only.	Statewide	Yes							
207	Stage 1 Results and Stage 2 Detailed Research Plan - Commercial and Industrial New Construction Non-Energy Impacts Study	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-28	Electric/Gas	2014-28-2	• Self-reports by end users would not provide an effective means for estimating NEIs associated with most NC measures.	Statewide	Yes							
208	Stage 1 Results and Stage 2 Detailed Research Plan - Commercial and Industrial New Construction Non-Energy Impacts Study	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-28	Electric/Gas	2014-28-3	• Self-reports by engineering firms will provide valuable insights to estimating NEIs across the range of projects for which they perform engineering services.	Statewide	Yes							
209	Stage 1 Results and Stage 2 Detailed Research Plan - Commercial and Industrial New Construction Non-Energy Impacts Study	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-28	Electric/Gas	2014-28-4	• An engineering-based approach is warranted to estimate NEIs.	Statewide	Yes							

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210	Stage 1 Results and Stage 2 Detailed Research Plan - Commercial and Industrial New Construction Non-Energy Impacts Study	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-28	Electric/Gas	2014-28-5	• (Optional) Various individuals may be able to serve on a Delphi panel to provide valuable information regarding NEI estimates, and to ensure their soundness.	Statewide	No, the PAs did not choose to incur the optional, added expense of a Delphi panel. Instead, the study contractor conducted a series of in-depth interviews with government officials, engineering firms and contractors, and building owners to obtain information that helped guide its engineering-based analysis and validate the results.							
211	Stage 1 Results and Stage 2 Detailed Research Plan - Commercial and Industrial New Construction Non-Energy Impacts Study	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-28	Electric/Gas	2014-28-6	• A limited survey effort may be suitable for select measures. o Natural replacement o Industrial process measures	Statewide	No. In Phase 2 of this project, the study contractor ultimately did not recommend a separate survey estimate for these two groups of measures because it found that: 1) only one of the PAs distinguishes natural replacement measures in its tracking data, and NEIs associated with some natural replacement measures had already been estimated as part of the 2012 C&I NEI Retrofit study, and 2) self-reported results are unlikely to result in improved benefits over the engineering-based approach adopted in the Stage 2 study, as the sample size is likely to be small.							
212	Top-down Modeling Methods Study - Final Report	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-29	Electric/Gas	2014-29-1	Continue refinement of the PA-muni model to investigate the stability of models and possible changes to model specification that may reduce confidence intervals.	Statewide	Yes							
213	Top-down Modeling Methods Study - Final Report	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-29	Electric/Gas	2014-29-2	Investigate the possibility of a national or multi-state model that builds on the lessons learned from the PA-muni model, but using non-program states as a comparison area.	Statewide	Will Consider for Future Studies							
214	Top-down Modeling Methods Study - Final Report	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-29	Electric/Gas	2014-29-3	For the PA-data model, continue to collect data through the C&I and residential databases to extend the available data series to include five years of consumption and program tracking data, then continue collecting the necessary data going forward for future analysis. Continue to refine the existing models to incorporate multiple lag periods of the program and consumption variables.	Statewide	Yes							
215	Code Compliance Results for Single-Family Non-Program Homes in Massachusetts	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-30	Electric/Gas	2014-30-1	Future statewide compliance estimates will need to account for stretch code homes. Stretch code homes were just beginning to be built at the time of the 2009 IECC inspections and thus represented a very small portion of the overall population. As a result, they were excluded from this analysis.	Statewide	Yes							
216	Massachusetts Cross Cutting Evaluation Home Energy Report Decay Analysis	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-31	Electric/Gas	2014-31-1	Given the limitations of this study (e.g., the electric and gas cohorts experienced differing incremental levels of treatment reduction), the Team recommends that the PAs undertake further research to help inform the design of treatment reduction strategies. We recommend that future experiments plan the timing of treatment reductions to further test the potential impact of the following factors: • Treatment duration prior to the experiment: Within the same fuel, or even within a larger cohort, how does decay change when the first reduction occurs after one, two, or three years? • Seasonality of reduction: How does a treatment gap in the winter compare with one in the summer? Is there a way to optimize winter gaps to achieve greater persistence? • Duration of the reduction: How does persistence vary with the length of the treatment reduction period? • Fuel-specific differences: Test similar reductions with participants at the same "program maturity" level between electric and gas.	Statewide	Will Consider for Future Studies							
217	Efficient Neighborhoods + Initiative Evaluation Report	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-32	Electric/Gas	2014-32-1	The survey results showed that participants were more likely to learn of the initiative through door-to-door outreach, phone calls, and family and friends than from non-participants. Since learning about the initiative from a trusted source also appears to be effective, the PAs could encourage participants to tell their neighbors about the initiative or provide additional incentives for referrals. Participants were also more likely than non-participants to have learned about the initiative through multiple sources. The PAs should consider conducting a high volume marketing campaign that uses multiple tactics.	Statewide	Yes							

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218	Efficient Neighborhoods + Initiative Evaluation Report	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-32	Electric/Gas	2014-32-2	The PAs should consider using messaging that ties the assessment and improvements to current customer needs. One such way is aligning initiative messaging with seasonal needs (e.g., messaging about increased comfort due to energy efficiency during the winter months), which some PAs already do.	Statewide	Yes							
219	Efficient Neighborhoods + Initiative Evaluation Report	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-32	Electric/Gas	2014-32-3	A barrier apparent from the survey results is the belief among many assessment particiapants that the recommended improvements were unnecessary. Additional research could suggest alternative information or messaging that might help convince customers that the recommendations are worth doing.	Statewide	Yes							
220	Massachusetts Cross-Cutting Behavioral Program Evaluation Opower Results	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-33	Electric/Gas	2014-33-1	The evaluation team recommends that the PAs adopt the following savings estimate ratios in future years when third-party impact evaluations are not completed. o National Grid Electric: 95% o National Grid Gas: 98% o NSTAR Electric: 104% o NSTAR Gas: 98% o WMECo Electric: 104%	PA Specific		National Grid has adopted the recommended realization rates.	Yes	N/A	N/A	N/A	N/A. CLC is not specified in this recommendation.	N/A
221	Methods for Measuring Market Effects of Massachusetts Energy Efficiency Programs	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-34	Electric/Gas	2014-34-1	The market effects cross-cutting team should identify specific methods and data needed for measuring market effects in the high-priority program-market intersections identified through this work.	Statewide	Yes							
222	Methods for Measuring Market Effects of Massachusetts Energy Efficiency Programs	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-34	Electric/Gas	2014-34-2	Market effects work should use the established evaluation approaches identified in this document.	Statewide	Yes							
223	Recommended Methods for Assessing Market Effects of HVAC Programs	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-35	Electric/Gas	2014-35-1	Market effects studies should proceed for Residential HVAC and C&I Upstream HVAC program-market intersections.	Statewide	Yes							
224	Recommended Methods for Assessing Market Effects of HVAC Programs	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-35	Electric/Gas	2014-35-2	PAs should consider establishing a panel of HVAC manufacturers from which to collect market share and other data, as appropriate, for manufacturer-controlled sales channels. The panel would supplement residential Heating, Air-conditioning & Refrigeration Distributors International (HARDI) data (Recommendation 3) and provide some data for commercial equipment other than rooftop units (RTUs). PA program staff could play an active role in helping to design, recruit and retain market actors for this or any other HVAC market actor panel the PAs may want to establish. PA program planning staff and PA and contractor evaluation staff should also provide input to design in addition to market effects. Involving these diverse groups of staff increases the likelihood that manufacturers will participate, that future program plans will leverage market effects or utilize market effects research findings, that data collected through market actor panels will be useful to program design and marketing, and that the data will meet a broader range of evaluation needs beyond just market effects. Additionally, including a diverse group of program and evaluation staff will help ensure that long term relationships are established and well maintained between PAs and manufacturers.	Statewide	Yes							
225	Recommended Methods for Assessing Market Effects of HVAC Programs	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-35	Electric/Gas	2014-35-3	Residential HVAC market effects research can proceed with HARDI data, supplemented by market actor panel and interview data as available and appropriate (Recommendation 2). HARDI data acquisition will need to be renegotiated to ensure that the data to be purchased align with market effects research needs.	Statewide	Currently Under Consideration							
226	Recommended Methods for Assessing Market Effects of HVAC Programs	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-35	Electric/Gas	2014-35-4	PAs should build on the C&I Upstream HVAC Program's existing distributor data collection activities in order to obtain market share data for commercial RTUs. RTU market effects research can proceed with these data as well as additional data that may be collected by market actor panels and interviews. PAs may also wish to explore the viability of obtaining other kinds of market data through a panel of C&I distributors, most likely building on the Upstream HVAC program's existing relationships with distributors. Any data collection involving HVAC distributors would need to be carefully planned to complement, not duplicate or conflict with, market share or other market data to be obtained through HARDI or manufacturers, and not jeopardize the PAs' ability to obtain HARDI data.	Statewide	Yes							

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227	Recommended Methods for Assessing Market Effects of C&I Lighting and Controls Programs	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-36	Electric	2014-36-1	C&I Lighting market effects research can proceed with a study of the market effects of programs that promote high-performance (HP) T8 lamps and ballasts, including quantification of net savings attributable to those programs.	Statewide	Yes							
228	Recommended Methods for Assessing Market Effects of C&I Lighting and Controls Programs	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-36	Electric	2014-36-2	The PAs should assess the potential value of developing a baseline study on lighting controls. C&I Lighting Controls should be monitored for any significant uptick in activity, which would suggest value to a market effects study. However, no market effects study is warranted at this time.	Statewide	Yes							
229	Recommended Methods for Assessing Market Effects of Non-residential New Construction Programs	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-37	Electric/Gas	2014-37-1	The PAs should consider conducting prospective work involving the tracking of indicators that would support theory-based evaluation.	Statewide	Will Consider for Future Studies							
230	Recommended Methods for Assessing Market Effects of Non-residential New Construction Programs	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-37	Electric/Gas	2014-37-2	The PAs should consider using the net-to-gross estimates from the electric and gas net-to-gross (NTG) studies for the 2016-18 prospective estimate that is required for planning purposes. The NTG estimates from these studies are based on self-reporting by program participants and address only free ridership and some form of spillover, not including market effects.	Statewide	Yes							
231	Recommended Methods for Assessing Market Effects of Non-residential New Construction Programs	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-37	Electric/Gas	2014-37-3	PAs should gather C&I "True" New Construction data through 2017, and aim to complete a retrospective market effects evaluation by early 2018, and at the same time develop a prospective NTG estimate for the 2019-2021 period. Coordination with Codes & Standards evaluation research is essential in this market space, and any resulting savings should be split between the C&I New Construction Program and Codes & Standards, with above-code or above-prevailing practice savings attributed to the former and savings from getting buildings closer to code or prevailing practice attributed to the latter.	Statewide	Will Consider for Future Studies							
232	Cross-Cutting Code Compliance Support Initiative Evaluation Reports	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-38	Electric/Gas	2014-38-1	Provide handouts of the slides used in the trainings to the attendees.	Statewide	Yes							
233	Cross-Cutting Code Compliance Support Initiative Evaluation Reports	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-38	Electric/Gas	2014-38-2	Continue to monitor response times to Circuit Rider calls and work to improve them; response times will become more important as more calls come in concerning current projects.	Statewide	Yes							
234	Cross-Cutting Code Compliance Support Initiative Evaluation Reports	Special & Cross Sector	2014 Plan Year Report	App. 4D, Study 14-38	Electric/Gas	2014-38-3	Encourage the use of telephone calls rather than email to submit Circuit Rider questions and receive responses whenever possible.	Statewide	Yes							
235	Northeast Residential Lighting Hours-of-Use Study	Residential	2013 Plan Year Report	App. 4D, Study 13-1	Electric/Gas	2013-1-1	The Team recommends that the Sponsors consider adopting the HOU room-by-room estimates from the overall hierarchical model for all households regardless of income or home type.	Statewide	No, The PAs are investigating the cost and capability of adopting and tracking the data required to adopt this recommendation at this time. The PAs will continue to explore opportunities to improve data and reporting on lighting in the 2016-2018 plan, but since all available sockets are targeted, they do not intend to track bulbs by room at this time.							
236	Northeast Residential Lighting Hours-of-Use Study	Residential	2013 Plan Year Report	App. 4D, Study 13-1	Electric/Gas	2013-1-2	As with HOU estimates, the team recommends that the Sponsors consider adopting the Overall load curve and resulting coincidence factors across Connecticut, Massachusetts, Rhode Island, and Upstate New York.	Statewide	Yes							
237	Northeast Residential Lighting Hours-of-Use Study	Residential	2013 Plan Year Report	App. 4D, Study 13-1	Electric/Gas	2013-1-3	Consider higher HOU estimates for retrospective studies.	Statewide	Yes							
238	Massachusetts Residential New Construction Net Impacts Report	Residential	2013 Plan Year Report	App. 4D, Study 13-2	Electric/Gas	2013-2-1	Assess the net impacts of the Program's multifamily component.	Statewide	Yes							
239	Massachusetts Residential New Construction Net Impacts Report	Residential	2013 Plan Year Report	App. 4D, Study 13-2	Electric/Gas	2013-2-2	Continue to conduct baseline studies of non-program homes.	Statewide	Yes							

Rec #	Study Name	Sector	Filing/Docket	Study Location and Number	Fuel	Recommendation ID (Year - Study # - Rec #)	Recommendation	PA Specific / Statewide	Did the Program Administrator implement the recommendation (Yes, No & Explain Why not, Currently Under Consideration, Will Consider for Future Studies, N/A))	National Grid	Eversource	CMA	Liberty	Berkshire	CLC	Unitil
240	Massachusetts Residential New Construction Net Impacts Report	Residential	2013 Plan Year Report	App. 4D, Study 13-2	Electric/Gas	2013-2-3	Continue to emphasize practices such as quality insulation installation in trainings.	Statewide	Yes							
241	Massachusetts Residential New Construction Net Impacts Report	Residential	2013 Plan Year Report	App. 4D, Study 13-2	Electric/Gas	2013-2-4	Continue to carefully document any and all program actions that may affect the market.	Statewide	Yes							
242	Massachusetts Low Income Metering Study	Low-Income	2013 Plan Year Report	App. 4D, Study 13-3	Electric/Gas	2013-3-1	No formal recommendations were made by the evaluators conducting this study.	N/A	N/A							
243	Massachusetts Combined Heat and Power Program Impact Evaluation 2011-2012	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-4	Electric/Gas	2013-4-1	The PAs should continue to develop and implement a consistent modeling protocol for all sites and across all PAs.	Statewide	Yes							
244	Massachusetts Combined Heat and Power Program Impact Evaluation 2011-2012	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-4	Electric/Gas	2013-4-2	The PAs and EEAC Consultant(s) should continue to work together to define the attribution of savings to CHP systems.	Statewide	The attribution of savings have been defined since the publication of this study. PAs are currently operating under common agreement.							
245	Massachusetts Combined Heat and Power Program Impact Evaluation 2011-2012	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-4	Electric/Gas	2013-4-3	The PAs should collect metered data for at least two years after system commissioning. Data collected during the second year would provide a sufficient buffer for any metering outages during the first year and ensure twelve months of valid data would be collected.	PA Specific		Yes	No. While Eversource will continue to make metering a requirement for CHP participation, the requirement for data collection will be shifted from the program administrator to the customer.	N/A, electric only	N/A	N/A	Currently Under Consideration	The Company does very few CHP projects, and will consider recommendation on case by case basis.
246	Massachusetts Combined Heat and Power Program Impact Evaluation 2011-2012	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-4	Electric/Gas	2013-4-4	The PAs and EEAC Consultant(s) should consider conducting a future evaluation focused on medium, large, and district sized systems. These planned systems may significantly change realization rates for the program when they become operational.	Statewide	No. PAs will consider this for future studies.							
247	Massachusetts Combined Heat and Power Program Impact Evaluation 2011-2012	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-4	Electric/Gas	2013-4-5	In order to obtain a more thorough understanding of the engineering analysis and the commissioning process, the PAs and EEAC Consultant(s) should consider conducting a process evaluation of the CHP program.	Statewide	Yes. This has been considered and PAs are scoping this as a study during the 2016-2018 timeframe.							
248	Mid-size Customer Needs Assessment	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-5	Electric/Gas	2013-5-1	Increase recruitment and training of energy services firms able to provide comprehensive solutions - The PAs could better serve this market by establishing a system for recruiting and training qualified vendors to service mid-size customers. PAs should look for ways to facilitate partnerships between firms to get the right skill sets, or to develop a broader internal base of expertise.	PA Specific		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Currently under consideration
249	Mid-size Customer Needs Assessment	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-5	Electric/Gas	2013-5-2	Develop a statewide process for qualifying and coordinating energy services firms to provide comprehensive solutions – There is a need for greater access to qualified contractors to service the diverse needs of mid-size customers.	Statewide	Currently Under Consideration							
250	Mid-size Customer Needs Assessment	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-5	Electric/Gas	2013-5-3	Lower capital and administrative costs for mid-size customers and/or contractors to improve payback and margin on energy efficiency investment- While higher incentives may not be possible on many custom projects, the PAs could establish programs that increase financing options and qualifying costs to energy services firms.	Statewide	Yes							
251	Mid-size Customer Needs Assessment	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-5	Electric/Gas	2013-5-4	Increase multi-measure (comprehensive) program offerings – The PAs should review their existing comprehensive program offerings to ensure they offer incentives for multiple measures, or change the program offerings to address untapped measures.	Statewide	Yes							
252	Mid-size Customer Needs Assessment	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-5	Electric/Gas	2013-5-5	Continue to improve marketing strategies for mid-market – These efforts should include use of PEX contractors to assist in identifying the appropriate solutions for customers. In addition, these strategies should focus staff on strategic segments of customers with similar energy needs. Segmenting by industry is one approach to creating a targeted marketing process.	Statewide	Yes							

Rec #	Study Name	Sector	Filing/Docket	Study Location and Number	Fuel	Recommendation ID (Year - Study # - Rec #)	Recommendation	PA Specific / Statewide	Did the Program Administrator implement the recommendation (Yes, No & Explain Why not, Currently Under Consideration, Will Consider for Future Studies, N/A))	National Grid	Eversource	CMA	Liberty	Berkshire	CLC	Unitil
253	Mid-size Customer Needs Assessment	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-5	Electric/Gas	2013-5-6	Support energy services firms by obtaining qualifying information – The PAs could require contractors to administer simplified system inventory and gas service provider surveys when scheduling visits. Information collected by these surveys could be used to rate contractors on their thoroughness in marketing programs.	Statewide	No, the PAs do not agree with this recommendation and we will look for more cost-effective ways to optimize trade ally management							
254	Mid-size Customer Needs Assessment	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-5	Electric/Gas	2013-5-7	Standardize approaches to marketing to multi-account customers – Identifying a successful approach and standardizing it will improve the PA's ability to effectively market to those customers.	Statewide	Yes							
255	Mid-size Customer Needs Assessment	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-5	Electric/Gas	2013-5-8	There is a need to link electric and gas customers – Because identification and marketing to Direct Install customers is handled through the electric PAs, the gas-only PAs lose some autonomy regarding how their customers are marketed.	statewide	Currently Under Consideration							
256	Impact Evaluation of the Massachusetts Upstream Lighting Program	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-6	Electric	2013-6-1	LED Delta Watts –Wattage for baseline bulbs/lamps was found to be significantly higher than tracking estimates, mostly due to the fact that tracking estimates assumed a higher mix of CFLs than was found. As market penetration of LEDs increase baseline wattage will decrease. A follow-up evaluation should consider this shifting baseline as a factor in deciding when the next one should take place.	Statewide	Yes							
257	Impact Evaluation of the Massachusetts Upstream Lighting Program	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-6	Electric	2013-6-2	Quantity - This study found that approximately 82% of the purchased LED lamps and approximately 80% of the purchased fluorescent lamps were installed at the time of the evaluation. It was common to find many of these not yet installed lamps in storage at each of the facilities. It is unclear what the lag time will be for the installation of these remaining lamps, and therefore, a follow-up study should be designed to revisit sites from this study that had a large number of units still in storage or not yet installed.	Statewide	Yes							
258	Impact Evaluation of the Massachusetts Upstream Lighting Program	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-6	Electric	2013-6-3	Hours of Use - This study found that the hours of use realization rate was 88% for LEDs and 103% for fluorescent lamps. Based on lighting logger data at each of the sites, the average hours of use for LED lamps were found to be 3,979 hours per year and 3,559 hours per year for fluorescent lamps. It is recommended that the hours of use for each technology be adjusted appropriately to account for this finding for the near term.	Statewide	Yes							
259	Impact Evaluation of the Massachusetts Upstream Lighting Program	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-6	Electric	2013-6-4	Increase the Customer's Awareness of the Program - Many customers were aware that they had received discounted lamps from this program, but not all were aware that the discounts came from the PAs. Many customers were under the impression that their electrical contractors were offering the deep discounts. It is recommended that the PAs consider utilizing a program sticker or label that participating distributors would attach to a customers' shipping/purchase order.	Statewide	Yes							
260	Impact Evaluation of the Massachusetts Upstream Lighting Program	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-6	Electric	2013-6-5	Additional Supporting Information for Large Purchases - It is recommended that electrical contractors or end users be required to provide more information to support extremely large purchases so that it would be more likely that the program bulbs are installed earlier.	Statewide	Yes							

Rec #	Study Name	Sector	Filing/Docket	Study Location and Number	Fuel	Recommendation ID (Year - Study # - Rec #)	Recommendation	PA Specific / Statewide	Did the Program Administrator implement the recommendation (Yes, No & Explain Why not, Currently Under Consideration, Will Consider for Future Studies, N/A))	National Grid	Eversource	CMA	Liberty	Berkshire	CLC	Unitil
261	Impact Evaluation of the Massachusetts Upstream Lighting Program	Commercial & Industrial	2013 Plan Year Report	App. 4D, Study 13-6	Electric	2013-6-6	Follow-up Impact Evaluation - This impact evaluation provides important feedback to the PAs for reporting savings, and improving savings estimates. However, due to the relatively large error ratios found in this study, the targeted 90/10 precision was not achieved. Depending on PA needs, a follow-up study may be considered to improve the evaluation results, or to obtain statistically valid factors for some of the building types where a majority of LED and Fluorescent lamps are being installed. The PAs and EEAC may want to consider performing a third phase of impact evaluation, which could be designed in consideration of the error ratios that were found with this study to try to achieve a combined 90/10 precision at the measure category, or targeted at a measure category and building type. Alternatively, the PAs and EEAC may consider following up on those sites with lower installation rates. Follow-up discussion and long-term planning should take place to determine what the evaluation needs are on an ongoing basis, and also what the target precision levels should be based on the needs of the PAs and EEAC.	Statewide	Yes						
262	Evaluation of the Northampton Leading the Way and Powering Pittsfield Initiatives	Special & Cross Sector	2013 Plan Year Report	App. 4D, Study 13-7	Electric/Gas	2013-7-1	No formal recommendations were made in this evaluation.	N/A	N/A							
263	2013 Massachusetts Statewide Marketing Campaign Evaluation Report	Special & Cross Sector	2013 Plan Year Report	App. 4D, Study 13-8	Electric/Gas	2013-8-1	There were no recommendations from this report, as it was designed to assess the performance of the marketing campaign and attitudes toward the aforementioned statewide brands.	N/A	N/A							
264	Abbreviated Review of Methods for the Draft Top-Down Modeling Methods Study	Special & Cross Sector	2013 Plan Year Report	App. 4D, Study 13-9	Electric/Gas	2013-9-1	No formal recommendations were made in this literature review. Instead, the pros and cons of various methods were reviewed.	N/A	N/A							
265	Efficient Neighborhoods+SM – Summary of Evaluation Results	Special & Cross Sector	2013 Plan Year Report	App. 4D, Study 13-10	Electric/Gas	2013-10-1	No formal recommendations were made.	N/A	N/A							
266	2013 Massachusetts Statewide COOL SMART/GasNetworks Brand Assessment	Special & Cross Sector	2013 Plan Year Report	App. 4D, Study 13-11	Electric/Gas	2013-11-1	There were no recommendations from this report as it was designed to explore awareness and associations between the three subject statewide brands, and assess effectiveness of branding efforts.	N/A	N/A							

APPENDIX F
INVOICE SUMMARY TABLES

The tables that follow provide a summary of invoices for each core initiative, sorted by budget category. The Compact will continue to maintain all invoices associated with the implementation of its energy efficiency programs.

The invoice summary tables are a summary of how invoices were paid by the Compact. While the invoices are organized by core initiative, not all costs in the invoices are specific to each core initiative. Such costs include IT support, legal services, general marketing for the efficiency programs, and other efficiency-related overhead costs provided by third-party vendors. These costs are allocated to each core initiative based on the core initiative's planned percentage of total costs. Additionally, the tables represent vendor invoices only. They do not include costs that are not paid via an invoice to a vendor, such as internal labor costs, internal expenses, direct incentive payments to participants, or loans repaid by participants as part of multi-year financing opportunities in certain core initiatives. Therefore, the totals in the tables will not match the totals in the Term Report Data tables.

Note that a Motion for Protective Treatment of Confidential Information is being submitted as part of this filing for information included in this appendix. As discussed in that motion, the Compact requests that the Department protect from public disclosure non-public vendor pricing information. Public disclosure of this information would reveal the Compact's proprietary, confidential pricing information, disclosure of which could harm the competitive business position of the Compact and its vendors.

Vendor Invoice Summary Table

2013-2015 Term Report

Notes

Cape Light Compact

- The following tables represents vendor invoices only. They do not include costs that are not paid via an invoice to a vendor, such as internal labor costs, internal expenses, direct incentive payments to participants, or loans repaid by participants as part of multi-year financing opportunities in certain core initiatives. Therefore, the totals in these tables will not match the totals in the Term Report Data tables.
- Allocated costs are those costs that are not specific to each core initiative. Such costs include IT support, legal services, general marketing for the efficiency programs, and other efficiency-related overhead costs provided by third-party vendors. These costs are allocated to each core initiative based on the core initiative's planned percentage of total costs.

- River Energy facilitates payment to other vendors for all PAs in order to minimize the administrative burdens and associated costs of invoicing; River Energy also provides meeting facilitation and other consulting services.

Vendor Invoice Summary Table

1. Residential Whole House

Residential New Construction & Major Renovation

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Residential New Construction & Major Renovation						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs			-			
All Legal Allocated Costs		-	-	-	-	
All IT Allocated Costs		-	-	-	-	
All Marketing Allocated Costs	-		-	-	-	
All General Administration Allocated Costs			-			
CADMUS GROUP	-	-	-	-		
INV-164473	-	-	-	-		
COMPETITIVE RESOURCE	-	-	-		-	
12-806-12	-	-	-		-	
13-806-01	-	-	-		-	
13-806-02	-	-	-		-	
13-806-03	-	-	-		-	
13-806-04	-	-	-		-	
13-806-05	-	-	-		-	
13-806-06	-	-	-		-	
13-806-07	-	-	-		-	
13-806-08	-	-	-		-	
13-806-09	-	-	-		-	
13-806-10	-	-	-		-	
13-806-11	-	-	-		-	
13-806-12	-	-	-		-	
13-806UP-07	-	-	-		-	
ICF RESOURCE	-					
CLC SAV 01	-	-	-	-		
CAOE LR 86 NLI	-	-		-	-	
CAPE LR 87 NLI	-	-		-	-	
CAPE LR 89 NLI	-	-		-	-	
CAPE LR U1 NLI	-	-		-	-	
CAPE LR U10 NLI	-	-		-	-	
CAPE LR U11 NLI	-	-		-	-	
CAPE LR U3 NLI	-	-		-	-	
CAPE LR U4 NLI	-	-		-	-	
CAPE LR U5 NLI	-	-		-	-	
CAPE LR U8 NLI	-	-		-	-	
CAPE LR UW NLI	-	-		-	-	
CLC LR A09	-			-	-	
NC1212-CAPE NLI	-	-		-	-	
CLC LR A01	-		-		-	
CLC LR A02	-		-		-	
CLC LR A03	-		-		-	
CLC LR A04	-		-		-	
CLC LR A05	-		-		-	
CLC LR A06	-		-		-	
CLC LR A07	-		-		-	
CLC LR A08	-		-		-	
CLC LR A10	-		-		-	
CLC LR A11	-		-		-	
NC1212-CAPE	-	-	-		-	
NMR GROUP, INC.	-	-	-	-		
2182D	-	-	-	-		
2182E	-	-	-	-		
2182F	-	-	-	-		
TRC ENGINEERS	-	-	-		-	
10866	-	-	-		-	
11259	-	-	-		-	
11411	-	-	-		-	
11512	-	-	-		-	
11719	-	-	-		-	
Grand Total						

Vendor Invoice Summary Table

1. Residential Whole House

Residential Multi-Family Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Residential Multi-Family Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
12-806-12	-	-	-	[redacted]	-	[redacted]
13-806-01	-	-	-	[redacted]	-	[redacted]
13-806-02	-	-	-	[redacted]	-	[redacted]
13-806-03	-	-	-	[redacted]	-	[redacted]
13-806-04	-	-	-	[redacted]	-	[redacted]
13-806-05	-	-	-	[redacted]	-	[redacted]
13-806-06	-	-	-	[redacted]	-	[redacted]
13-806-07	-	-	-	[redacted]	-	[redacted]
13-806-08	-	-	-	[redacted]	-	[redacted]
13-806-09	-	-	-	[redacted]	-	[redacted]
13-806-10	-	-	-	[redacted]	-	[redacted]
13-806-11	-	-	-	[redacted]	-	[redacted]
13-806-12	-	-	-	[redacted]	-	[redacted]
RISE ENGINEERING	-	-	[redacted]	[redacted]	-	[redacted]
10771	-	-	[redacted]	-	-	[redacted]
17030	-	-	[redacted]	-	-	[redacted]
102760	-	-	[redacted]	-	-	[redacted]
102916	-	-	[redacted]	-	-	[redacted]
103356	-	-	[redacted]	-	-	[redacted]
103539	-	-	[redacted]	-	-	[redacted]
104043	-	-	[redacted]	-	-	[redacted]
104089	-	-	[redacted]	-	-	[redacted]
104874	-	-	[redacted]	-	-	[redacted]
104888	-	-	[redacted]	-	-	[redacted]
105681	-	-	[redacted]	-	-	[redacted]
105708	-	-	[redacted]	-	-	[redacted]
106414	-	-	[redacted]	-	-	[redacted]
106430	-	-	[redacted]	-	-	[redacted]
107706	-	-	[redacted]	-	-	[redacted]
108480	-	-	[redacted]	-	-	[redacted]
109350	-	-	[redacted]	-	-	[redacted]
110185	-	-	[redacted]	-	-	[redacted]
111048	-	-	[redacted]	-	-	[redacted]
111263	-	-	[redacted]	-	-	[redacted]
102743	-	-	-	[redacted]	-	[redacted]
103423	-	-	-	[redacted]	-	[redacted]
104027	-	-	-	[redacted]	-	[redacted]
104890	-	-	-	[redacted]	-	[redacted]
105631	-	-	-	[redacted]	-	[redacted]
106422	-	-	-	[redacted]	-	[redacted]
107000	-	-	-	[redacted]	-	[redacted]
107752	-	-	-	[redacted]	-	[redacted]
108457	-	-	-	[redacted]	-	[redacted]
109319	-	-	-	[redacted]	-	[redacted]
110134	-	-	-	[redacted]	-	[redacted]
110595	-	-	-	[redacted]	-	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table

1. Residential Whole House

Residential Home Energy Services

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Residential Home Energy Services						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CADMUS GROUP	-	-	-	-	[redacted]	[redacted]
INV-164473	-	-	-	-	[redacted]	[redacted]
INV-131837	-	-	-	-	[redacted]	[redacted]
INV-141302	-	-	-	-	[redacted]	[redacted]
INV-144112	-	-	-	-	[redacted]	[redacted]
INV-146655	-	-	-	-	[redacted]	[redacted]
INV-150571	-	-	-	-	[redacted]	[redacted]
INV-153535	-	-	-	-	[redacted]	[redacted]
INV-154061	-	-	-	-	[redacted]	[redacted]
INV-155966	-	-	-	-	[redacted]	[redacted]
CANNON, MATTHEW B.	-	-	-	[redacted]	-	[redacted]
1-1	-	-	-	[redacted]	-	[redacted]
10-12-13-1	-	-	-	[redacted]	-	[redacted]
CC-MC-2	-	-	-	[redacted]	-	[redacted]
MC-CC-02	-	-	-	[redacted]	-	[redacted]
MC-CC-04	-	-	-	[redacted]	-	[redacted]
MC-CC-3	-	-	-	[redacted]	-	[redacted]
MC-CC-6	-	-	-	[redacted]	-	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
12-806-12	-	-	-	[redacted]	-	[redacted]
13-806-01	-	-	-	[redacted]	-	[redacted]
13-806-02	-	-	-	[redacted]	-	[redacted]
13-806-03	-	-	-	[redacted]	-	[redacted]
13-806-04	-	-	-	[redacted]	-	[redacted]
13-806-05	-	-	-	[redacted]	-	[redacted]
13-806-06	-	-	-	[redacted]	-	[redacted]
13-806-07	-	-	-	[redacted]	-	[redacted]
13-806-08	-	-	-	[redacted]	-	[redacted]
13-806-09	-	-	-	[redacted]	-	[redacted]
13-806-10	-	-	-	[redacted]	-	[redacted]
13-806-11	-	-	-	[redacted]	-	[redacted]
13-806-12	-	-	-	[redacted]	-	[redacted]
CONSERVATION SERVICE	-	-	[redacted]	-	-	[redacted]
013113-418	-	-	[redacted]	-	-	[redacted]
022813-CLC-418	-	-	[redacted]	-	-	[redacted]
033113-CLC-418	-	-	[redacted]	-	-	[redacted]
043013-CLC-418	-	-	[redacted]	-	-	[redacted]
053113-CLC-418	-	-	[redacted]	-	-	[redacted]
063013-CLC-418	-	-	[redacted]	-	-	[redacted]
073113-CLC-418	-	-	[redacted]	-	-	[redacted]
083113-CLC-418	-	-	[redacted]	-	-	[redacted]
093013-CLC-418	-	-	[redacted]	-	-	[redacted]
103113-CLC-418	-	-	[redacted]	-	-	[redacted]
123112-CLC-418	-	-	[redacted]	-	-	[redacted]
CONSORTIUM FOR ENERG	-	-	-	-	[redacted]	[redacted]
ESS2013-16	-	-	-	-	[redacted]	[redacted]

Vendor Invoice Summary Table

1. Residential Whole House

Residential Home Energy Services

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Residential Home Energy Services						
Vendor, Invoice Number	Program Planning and Administration	Marketing and Advertising	Participant Incentive	Sales, Technical Assistance & Training	Evaluation and Market Research	Total Program Costs
CREATIVE SERVICES	-	-	-	[redacted]	-	[redacted]
12873	-	-	-	[redacted]	-	[redacted]
122419	-	-	-	[redacted]	-	[redacted]
122762	-	-	-	[redacted]	-	[redacted]
123080	-	-	-	[redacted]	-	[redacted]
123382	-	-	-	[redacted]	-	[redacted]
123394	-	-	-	[redacted]	-	[redacted]
124041	-	-	-	[redacted]	-	[redacted]
124415	-	-	-	[redacted]	-	[redacted]
124780	-	-	-	[redacted]	-	[redacted]
125228	-	-	-	[redacted]	-	[redacted]
125303	-	-	-	[redacted]	-	[redacted]
125606	-	-	-	[redacted]	-	[redacted]
125990	-	-	-	[redacted]	-	[redacted]
126387	-	-	-	[redacted]	-	[redacted]
126767	-	-	-	[redacted]	-	[redacted]
127197	-	-	-	[redacted]	-	[redacted]
127561	-	-	-	[redacted]	-	[redacted]
127920	-	-	-	[redacted]	-	[redacted]
128658	-	-	-	[redacted]	-	[redacted]
129032	-	-	-	[redacted]	-	[redacted]
129447	-	-	-	[redacted]	-	[redacted]
129471	-	-	-	[redacted]	-	[redacted]
130147	-	-	-	[redacted]	-	[redacted]
130497	-	-	-	[redacted]	-	[redacted]
130822	-	-	-	[redacted]	-	[redacted]
DEISHER, KIMBERLY	-	-	-	[redacted]	-	[redacted]
CC 2012 KD-6	-	-	-	[redacted]	-	[redacted]
CC-2012-KD-5	-	-	-	[redacted]	-	[redacted]
CC-2013-8	-	-	-	[redacted]	-	[redacted]
KD-7	-	-	-	[redacted]	-	[redacted]
HERITAGE PRESS, INC.	-	[redacted]	-	-	-	[redacted]
91640	-	[redacted]	-	-	-	[redacted]
91782	-	[redacted]	-	-	-	[redacted]
92076	-	[redacted]	-	-	-	[redacted]
ICF RESOURCE	-	-	[redacted]	-	-	[redacted]
MR1212-CAPE	-	-	[redacted]	-	-	[redacted]
INTERNATIONAL ENERGY	-	-	-	-	[redacted]	[redacted]
03-04-13	-	-	-	-	[redacted]	[redacted]
JACOBSON ENERGY RESE	-	-	-	-	[redacted]	[redacted]
1	-	-	-	-	[redacted]	[redacted]
2	-	-	-	-	[redacted]	[redacted]
3	-	-	-	-	[redacted]	[redacted]
4	-	-	-	-	[redacted]	[redacted]
5	-	-	-	-	[redacted]	[redacted]
6	-	-	-	-	[redacted]	[redacted]
LIBERTY PRINTING	-	[redacted]	-	-	-	[redacted]
58896	-	[redacted]	-	-	-	[redacted]
59011	-	[redacted]	-	-	-	[redacted]
LOOK, ASHLEY LYNNE	-	-	-	[redacted]	-	[redacted]
CC-1	-	-	-	[redacted]	-	[redacted]
NORTHEAST ENERGY E	-	-	-	-	[redacted]	[redacted]
4502	-	-	-	-	[redacted]	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
7647C APE313	-	-	-	-	[redacted]	[redacted]
7647CAEP11/13	-	-	-	-	[redacted]	[redacted]
7647CAPE413	-	-	-	-	[redacted]	[redacted]
7647CAPE513	-	-	-	-	[redacted]	[redacted]
7647CAPE613	-	-	-	-	[redacted]	[redacted]
7647CAPE713	-	-	-	-	[redacted]	[redacted]
7647CAPE813	-	-	-	-	[redacted]	[redacted]
7647CAPE913	-	-	-	-	[redacted]	[redacted]
7647CAPEFEB13	-	-	-	-	[redacted]	[redacted]

Vendor Invoice Summary Table

1. Residential Whole House

Residential Home Energy Services

Cape Light Compact

2013 Residential Home Energy Services						
Vendor, Invoice Number	Program Planning and Administration	Marketing and Advertising	Participant Incentive	Sales, Technical Assistance & Training	Evaluation and Market Research	Total Program Costs
RISE ENGINEERING	-	-	[redacted]	[redacted]	-	[redacted]
10771	-	-		-	-	
102916	-	-		-	-	
103539	-	-		-	-	
104089	-	-		-	-	
104874	-	-		-	-	
105708	-	-		-	-	
106414	-	-		-	-	
102752	-	-		-	-	
102761	-	-		[redacted]	-	
103091	-	-		-	-	
103355	-	-		[redacted]	-	
103712	-	-		-	-	
104047	-	-		[redacted]	-	
104565	-	-		-	-	
104607	-	-		-	-	
104608	-	-		-	-	
104885	-	-		-	-	
104899	-	-		[redacted]	-	
105221	-	-		-	-	
105706	-	-		[redacted]	-	
105975	-	-		-	-	
105986	-	-		-	-	
106408	-	-		[redacted]	-	
106711	-	-		-	-	
107028	-	-		-	-	
107035	-	-		[redacted]	-	
107427	-	-		-	-	
107711	-	-		[redacted]	-	
108112	-	-		-	-	
108487	-	-		[redacted]	-	
108972	-	-		-	-	
109352	-	-		[redacted]	-	
109859	-	-		-	-	
110197	-	-		[redacted]	-	
110690	-	-		-	-	
111121	-	-		-	-	
111262	-	-		[redacted]	-	
W/E 02/22/2013	-	-		-	-	
W/E 02-01-13	-	-		-	-	
W/E 02-08-13	-	-		-	-	
W/E 02-15-13	-	-		-	-	
W/E 03/01/2013	-	-		-	-	
W/E 03/15/2013	-	-		-	-	
W/E 03/29/13	-	-		-	-	
W/E 03-08-2013	-	-		-	-	
W/E 04/12/2013	-	-		-	-	
W/E 04/26/2013	-	-		-	-	
W/E 04-05-13	-	-		-	-	
W/E 04-19-13	-	-		-	-	
W/E 05/10/2013	-	-		-	-	
W/E 05/17/2013	-	-		-	-	
W/E 06/01/2013	-	-		-	-	
W/E 06/14/13	-	-		-	-	
W/E 06/28/2013	-	-		-	-	
W/E 06-21-2013	-	-		-	-	
W/E 07/19/2013	-	-		-	-	
W/E 07-05-13	-	-		-	-	
W/E 08/28/13	-	-		-	-	
W/E 08/30/2013	-	-		-	-	
W/E 09/20/2013	-	-		-	-	
W/E 1/3/2014	-	-		-	-	
W/E 1/6/2014	-	-		-	-	
W/E 10/11/2013	-	-		-	-	
W/E 10/18/2013	-	-		-	-	
W/E 10/25/2013	-	-		-	-	
W/E 10/31/2013	-	-		-	-	
W/E 10/4/2013	-	-		-	-	
W/E 11/15/2013	-	-		-	-	
W/E 11/22/2013	-	-		-	-	
W/E 11/27/2013	-	-		-	-	
W/E 11/8/2013	-	-		-	-	
W/E 12/13/2013	-	-		-	-	
W/E 12/20/2013	-	-		-	-	
W/E 12/27/2013	-	-		-	-	
W/E 12/6/2013	-	-		-	-	
W/E 3-22-2013	-	-		-	-	
W/E 5/24/2013	-	-		-	-	
W/E 5/3/2013	-	-		-	-	
W/E 6/7/2013	-	-		-	-	
W/E 7/12/2013	-	-		-	-	
W/E 7/26/2013	-	-		-	-	
W/E 8/16/2013	-	-		-	-	
W/E 8/2/2013	-	-		-	-	
W/E 8/9/2013	-	-		-	-	
W/E 9/13/2013	-	-		-	-	
W/E 9/27/2013	-	-		-	-	
W/E-9/6/2013	-	-		-	-	
103709	-	-	-	[redacted]	-	
105709	-	-	-		-	

Vendor Invoice Summary Table

1. Residential Whole House

Residential Home Energy Services

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Residential Home Energy Services						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
RIVER ENERGY CONSULT - Ansafone, Honeywell, River Energy Consultants, Sprint	-	[redacted]	-	[redacted]	-	[redacted]
5923	-		-	-	-	
6043	-		-	-	-	
6628	-		-	-	-	
6833	-		-	-	-	
6991	-		-	-	-	
7091	-		-	-	-	
6299	-		-	[redacted]	-	
6485	-		-		-	
7236	-		-	-	-	
6183	-	-	-	[redacted]	-	
6410	-	-	-		-	
6752	-	-	-		-	
RIVER ENERGY CONSULT - Forefront	-	-	-		-	
6798	-	-	-		-	
RIVER ENERGY CONSULT - Greater Media	-	[redacted]	-	-	-	[redacted]
6307	-		-	-	-	
6437	-		-	-	-	
6512	-		-	-	-	
6645	-		-	-	-	
6743	-		-	-	-	
6861	-		-	-	-	
6930	-		-	-	-	
7041	-		-	-	-	
RIVER ENERGY CONSULT - RichMay	-	-	-	[redacted]	-	[redacted]
5883	-	-	-		-	
6015	-	-	-		-	
6099	-	-	-		-	
6241	-	-	-		-	
6400	-	-	-		-	
6538	-	-	-		-	
6616	-	-	-		-	
6888	-	-	-		-	
6913	-	-	-		-	
7159	-	-	-		-	
RIVER ENERGY CONSULT - Waltham Woods	-	-	-		-	
5968	-	-	-		-	
SCHAFER, PAULINE	-	-	-		-	
05-26-13	-	-	-		-	
SYNAPSE ENERGY ECON	-	-	-	-	[redacted]	[redacted]
13-029-CL-1	-	-	-	-		
13-029-CL-2	-	-	-	-		
13-029-CL-3	-	-	-	-		
13-029-CL-4	-	-	-	-		
13-029-CL-5	-	-	-	-		
TETRA TECH MA, INC.	-	-	-	-		
50719449	-	-	-	-		
50752426	-	-	-	-		
Grand Total	[redacted]					

Vendor Invoice Summary Table

2. Residential Products

Residential Cooling & Heating Equipment

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Residential Cooling & Heating Equipment						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CADMUS GROUP	-	-	-	-	[redacted]	[redacted]
INV-144112	-	-	-	-	[redacted]	[redacted]
INV-146655	-	-	-	-	[redacted]	[redacted]
INV-155966	-	-	-	-	[redacted]	[redacted]
INV-142534	-	-	-	-	[redacted]	[redacted]
INV-150907	-	-	-	-	[redacted]	[redacted]
CONSERVATION SERVICE	-	-	[redacted]	[redacted]	-	[redacted]
49- CAPE LIGHT	-	-	[redacted]	[redacted]	-	[redacted]
50-CAPE LIGHT	-	-	[redacted]	[redacted]	-	[redacted]
51-CAPE LIGHT	-	-	[redacted]	[redacted]	-	[redacted]
52-CAPE LIGHT	-	-	[redacted]	[redacted]	-	[redacted]
53-CAPE-LIGHT	-	-	[redacted]	[redacted]	-	[redacted]
54-CAPE-LIGHT	-	-	[redacted]	[redacted]	-	[redacted]
55-CAPE-LIGHT	-	-	[redacted]	[redacted]	-	[redacted]
56-CAPE LIGHT	-	-	[redacted]	[redacted]	-	[redacted]
57-CAPE-LIGHT	-	-	[redacted]	[redacted]	-	[redacted]
58-CAPE LIGHT	-	-	[redacted]	[redacted]	-	[redacted]
59-CAPE LIGHT	-	-	[redacted]	[redacted]	-	[redacted]
60-CAPE LIGHT	-	-	[redacted]	[redacted]	-	[redacted]
HELGESON ENTERPRISES	-	-	[redacted]	[redacted]	-	[redacted]
0000063-IN	-	-	[redacted]	-	-	[redacted]
0077505-IN	-	-	[redacted]	-	-	[redacted]
0077712-IN	-	-	[redacted]	-	-	[redacted]
0078103-IN	-	-	[redacted]	-	-	[redacted]
0079140-IN	-	-	[redacted]	-	-	[redacted]
0079141-IN	-	-	[redacted]	-	-	[redacted]
0079152-IN	-	-	[redacted]	-	-	[redacted]
0079255-IN	-	-	[redacted]	-	-	[redacted]
0079334-IN	-	-	[redacted]	-	-	[redacted]
0079394-IN	-	-	[redacted]	-	-	[redacted]
0079427-IN	-	-	[redacted]	-	-	[redacted]
0079471-IN	-	-	[redacted]	-	-	[redacted]
0079597-IN	-	-	[redacted]	-	-	[redacted]
0079602-IN	-	-	[redacted]	-	-	[redacted]
0079641-IN	-	-	[redacted]	-	-	[redacted]
0079642-IN	-	-	[redacted]	-	-	[redacted]
0080162-IN	-	-	[redacted]	-	-	[redacted]
0080227-IN	-	-	[redacted]	-	-	[redacted]
0080246-IN	-	-	[redacted]	-	-	[redacted]
0080323-IN	-	-	[redacted]	-	-	[redacted]
00814133-IN	-	-	[redacted]	-	-	[redacted]
0081454-IN	-	-	[redacted]	-	-	[redacted]
0081467-IN	-	-	[redacted]	-	-	[redacted]
0081527-IN	-	-	[redacted]	-	-	[redacted]
0081633-IN	-	-	[redacted]	-	-	[redacted]
0081639-IN	-	-	[redacted]	-	-	[redacted]
0081926-IN	-	-	[redacted]	-	-	[redacted]
0082112-IN	-	-	[redacted]	-	-	[redacted]
0082173-IN	-	-	[redacted]	-	-	[redacted]
008226-IN	-	-	[redacted]	-	-	[redacted]
0082334-IN	-	-	[redacted]	-	-	[redacted]
0082337-IN	-	-	[redacted]	-	-	[redacted]
0082338-IN	-	-	[redacted]	-	-	[redacted]
0082348-IN	-	-	[redacted]	-	-	[redacted]
0082405-IN	-	-	[redacted]	-	-	[redacted]
0082858-IN	-	-	[redacted]	-	-	[redacted]
0083122-IN	-	-	[redacted]	-	-	[redacted]
0083124-IN	-	-	[redacted]	-	-	[redacted]
0083152-IN	-	-	[redacted]	-	-	[redacted]
0083183-IN	-	-	[redacted]	-	-	[redacted]
0083536-IN	-	-	[redacted]	-	-	[redacted]
0083638-IN	-	-	[redacted]	-	-	[redacted]
0083768-IN	-	-	[redacted]	-	-	[redacted]
0083905-IN	-	-	[redacted]	-	-	[redacted]
0084301-IN	-	-	[redacted]	-	-	[redacted]
0084362-IN	-	-	[redacted]	-	-	[redacted]
0084418-IN	-	-	[redacted]	-	-	[redacted]
0084988-IN	-	-	[redacted]	-	-	[redacted]
0084989-IN	-	-	[redacted]	-	-	[redacted]
0085491-IN	-	-	[redacted]	-	-	[redacted]
0085601-IN	-	-	[redacted]	-	-	[redacted]
0079211-IN	-	-	-	[redacted]	-	[redacted]
0079991-IN	-	-	-	[redacted]	-	[redacted]
0081880-IN	-	-	-	[redacted]	-	[redacted]
0082670-IN	-	-	-	[redacted]	-	[redacted]
0083481-IN	-	-	-	[redacted]	-	[redacted]
0084109-IN	-	-	-	[redacted]	-	[redacted]
0085354-IN	-	-	-	[redacted]	-	[redacted]
0085884-IN	-	-	-	[redacted]	-	[redacted]
0085963-IN	-	-	-	[redacted]	-	[redacted]

Vendor Invoice Summary Table

2. Residential Products

Residential Cooling & Heating Equipment

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Residential Cooling & Heating Equipment						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
PARAGO SERVICES CORP	-	-	[redacted]	[redacted]	-	[redacted]
0000216-IN	-	-	[redacted]	-	-	[redacted]
0000220-IN	-	-	[redacted]	-	-	[redacted]
0090013-IN	-	-	[redacted]	-	-	[redacted]
0090035-IN	-	-	[redacted]	-	-	[redacted]
0090418-IN	-	-	[redacted]	-	-	[redacted]
0090459-IN	-	-	[redacted]	-	-	[redacted]
0090523-IN	-	-	[redacted]	-	-	[redacted]
0090683-IN	-	-	[redacted]	-	-	[redacted]
0090717-IN	-	-	[redacted]	-	-	[redacted]
0091673-IN	-	-	[redacted]	-	-	[redacted]
0091862-IN	-	-	[redacted]	-	-	[redacted]
0092963-IN	-	-	[redacted]	-	-	[redacted]
0093038-IN	-	-	[redacted]	-	-	[redacted]
0093122-IN	-	-	[redacted]	-	-	[redacted]
0093483-IN	-	-	[redacted]	-	-	[redacted]
0093570-IN	-	-	[redacted]	-	-	[redacted]
0093753-IN	-	-	[redacted]	-	-	[redacted]
0093829-IN	-	-	[redacted]	-	-	[redacted]
0094950-IN	-	-	[redacted]	-	-	[redacted]
0094978-IN	-	-	[redacted]	-	-	[redacted]
0095055-IN	-	-	[redacted]	-	-	[redacted]
0090346-IN	-	-	-	[redacted]	-	[redacted]
0091950-IN	-	-	-	[redacted]	-	[redacted]
0093432-IN	-	-	-	[redacted]	-	[redacted]
0094701-IN	-	-	-	[redacted]	-	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table

2. Residential Products

Residential Lighting

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Residential Lighting						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CADMUS GROUP	-	[redacted]	-	-	-	[redacted]
INV-140578	-	[redacted]	-	-	-	[redacted]
INV-140583	-	[redacted]	-	-	-	[redacted]
INV-142608	-	[redacted]	-	-	-	[redacted]
INV-142613	-	[redacted]	-	-	-	[redacted]
INV-145259	-	[redacted]	-	-	-	[redacted]
INV-145266	-	[redacted]	-	-	-	[redacted]
INV-148036	-	[redacted]	-	-	-	[redacted]
INV-148041	-	[redacted]	-	-	-	[redacted]
INV-150708	-	[redacted]	-	-	-	[redacted]
INV-150746	-	[redacted]	-	-	-	[redacted]
INV-152883	-	[redacted]	-	-	-	[redacted]
INV-152888	-	[redacted]	-	-	-	[redacted]
INV-155309	-	[redacted]	-	-	-	[redacted]
INV-155314	-	[redacted]	-	-	-	[redacted]
INV-158089	-	[redacted]	-	-	-	[redacted]
INV-158093	-	[redacted]	-	-	-	[redacted]
INV-159678	-	[redacted]	-	-	-	[redacted]
INV-159682	-	[redacted]	-	-	-	[redacted]
INV-161347	-	[redacted]	-	-	-	[redacted]
INV-161354	-	[redacted]	-	-	-	[redacted]
INV-162363	-	[redacted]	-	-	-	[redacted]
INV-162367	-	[redacted]	-	-	-	[redacted]
INV-165936	-	[redacted]	-	-	-	[redacted]
ENERGY FEDERATION	-	-	[redacted]	-	-	[redacted]
0741854-IN	-	-	[redacted]	-	-	[redacted]
0747652-IN	-	-	[redacted]	-	-	[redacted]
0761793-IN	-	-	[redacted]	-	-	[redacted]
0772623-IN	-	-	[redacted]	-	-	[redacted]
0778465-IN	-	-	[redacted]	-	-	[redacted]
0778468-IN	-	-	[redacted]	-	-	[redacted]
0778508-IN	-	-	[redacted]	-	-	[redacted]
0778518-IN	-	-	[redacted]	-	-	[redacted]
0778530-IN	-	-	[redacted]	-	-	[redacted]
0782253-IN	-	-	[redacted]	-	-	[redacted]
0791563-IN	-	-	[redacted]	-	-	[redacted]
0794922-IN	-	-	[redacted]	-	-	[redacted]
0802539-IN	-	-	[redacted]	-	-	[redacted]
0808571-IN	-	-	[redacted]	-	-	[redacted]
0815304-IN	-	-	[redacted]	-	-	[redacted]
0820944-IN	-	-	[redacted]	-	-	[redacted]
0827693-IN	-	-	[redacted]	-	-	[redacted]
0835345-IN	-	-	[redacted]	-	-	[redacted]
08444226-IN	-	-	[redacted]	-	-	[redacted]
0847804-IN	-	-	[redacted]	-	-	[redacted]
0857160-IN	-	-	[redacted]	-	-	[redacted]
0871280-IN	-	-	[redacted]	-	-	[redacted]
0879220-IN	-	-	[redacted]	-	-	[redacted]
0881895-IN	-	-	[redacted]	-	-	[redacted]
0881963-IN	-	-	[redacted]	-	-	[redacted]
0881969-IN	-	-	[redacted]	-	-	[redacted]

Vendor Invoice Summary Table

2. Residential Products

Residential Lighting

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Residential Lighting						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
GREENLITE LIGHTING	-	-	[redacted]	-	-	[redacted]
US63297	-	-		-	-	
HELGESON ENTERPRISES	-	[redacted]		[redacted]	-	
0077333-IN	-	-		-	-	
0077532-IN	-	-		-	-	
0077541-IN	-	-		-	-	
0077853-IN	-	-		-	-	
0077855-IN	-	-		-	-	
0079502-IN	-	-		-	-	
0079503-IN	-	-		-	-	
0079884-IN	-	-		-	-	
0080122-IN	-	-		-	-	
0080128-IN	-	-		-	-	
0081456-IN	-	-		-	-	
0082034-IN	-	-		-	-	
0082035-IN	-	-		-	-	
0082223-IN	-	-		-	-	
0082335-IN	-	-		-	-	
0082720-IN	-	-		-	-	
0082721-IN	-	-		-	-	
0082934-IN	-	-		-	-	
0083529-IN	-	-		-	-	
0083531-IN	-	-		-	-	
0083762-IN	-	-		-	-	
0083764-IN	-	-		-	-	
0083978-IN	-	-		-	-	
0083980-IN	-	-		-	-	
0084419-IN	-	-		-	-	
0084942-IN	-	-		-	-	
0085613-IN	-	-		-	-	
0085637-IN	-	-		-	-	
0079478-IN	-	[redacted]	-	-	-	
0083724-IN	-		-	-	-	
0079142-IN	-	-	-	[redacted]	-	
0080066-IN	-	-	-		-	
0081770-IN	-	-	-		-	
0082509-IN	-	-	-		-	
0083290-IN	-	-	-		-	
0084025-IN	-	-	-		-	
0085478-IN	-	-	-		-	
0085814-IN	-	-	-		-	
LOCKHEED MARTIN	-	-	-		-	
2120778	-	-	-		-	
21232204	-	-	-		-	
21232221	-	-	-		-	
21243454	-	-	-		-	
21243455	-	-	-		-	
21254282	-	-	-		-	
21256254	-	-	-		-	
21266969	-	-	-		-	
21266981	-	-	-		-	
21277416	-	-	-		-	
21277420	-	-	-		-	
21290955	-	-	-		-	
21290962	-	-	-		-	
21304538	-	-	-		-	
21304554	-	-	-		-	
21316714	-	-	-		-	
21316732	-	-	-		-	
21326529	-	-	-		-	
21328279	-	-	-		-	
21334405	-	-	-		-	
21343558	-	-	-		-	
21232204C	-	-	-		-	
21232204D	-	-	-		-	

Vendor Invoice Summary Table

2. Residential Products

Residential Lighting

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Residential Lighting						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
NMR GROUP, INC.	-	-	-	-	[redacted]	[redacted]
2156AA	-	-	-	-	[redacted]	[redacted]
2156AB	-	-	-	-	[redacted]	[redacted]
2156AC	-	-	-	-	[redacted]	[redacted]
2156S	-	-	-	-	[redacted]	[redacted]
2156T	-	-	-	-	[redacted]	[redacted]
2156U	-	-	-	-	[redacted]	[redacted]
2156V	-	-	-	-	[redacted]	[redacted]
2156W	-	-	-	-	[redacted]	[redacted]
2156X	-	-	-	-	[redacted]	[redacted]
2156Y	-	-	-	-	[redacted]	[redacted]
2156Z	-	-	-	-	[redacted]	[redacted]
PARAGO SERVICES CORP	-	[redacted]	[redacted]	[redacted]	-	[redacted]
0000219-IN	-	-	[redacted]	-	-	[redacted]
0090002-IN	-	-	[redacted]	-	-	[redacted]
0090004-IN	-	-	[redacted]	-	-	[redacted]
00904-IN	-	-	[redacted]	-	-	[redacted]
0090562-IN	-	-	[redacted]	-	-	[redacted]
0090695-IN	-	-	[redacted]	-	-	[redacted]
0090718-IN	-	-	[redacted]	-	-	[redacted]
009096-IN	-	-	[redacted]	-	-	[redacted]
0091849-IN	-	-	[redacted]	-	-	[redacted]
0093016-IN	-	-	[redacted]	-	-	[redacted]
0093075-IN	-	-	[redacted]	-	-	[redacted]
0093512-IN	-	-	[redacted]	-	-	[redacted]
0093513-IN	-	-	[redacted]	-	-	[redacted]
0093746-IN	-	-	[redacted]	-	-	[redacted]
0094727-IN	-	-	[redacted]	-	-	[redacted]
0094729-IN	-	-	[redacted]	-	-	[redacted]
0094972-IN	-	-	[redacted]	-	-	[redacted]
0094973-IN	-	-	[redacted]	-	-	[redacted]
0095056-IN	-	-	[redacted]	-	-	[redacted]
0093809-IN	-	[redacted]	-	-	-	[redacted]
0093912-IN	-	[redacted]	-	-	-	[redacted]
0094968-IN	-	[redacted]	-	-	-	[redacted]
0090273-IN	-	-	-	[redacted]	-	[redacted]
0091978-IN	-	-	-	[redacted]	-	[redacted]
0093329-IN	-	-	-	[redacted]	-	[redacted]
0094640-IN	-	-	-	[redacted]	-	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table

2. Residential Products

Residential Consumer Products

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Residential Consumer Products						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CADMUS GROUP	-	[redacted]	-	-	-	[redacted]
INV-140578	-	[redacted]	-	-	-	[redacted]
INV-140583	-	[redacted]	-	-	-	[redacted]
INV-142608	-	[redacted]	-	-	-	[redacted]
INV-142613	-	[redacted]	-	-	-	[redacted]
INV-145259	-	[redacted]	-	-	-	[redacted]
INV-145266	-	[redacted]	-	-	-	[redacted]
INV-148036	-	[redacted]	-	-	-	[redacted]
INV-148041	-	[redacted]	-	-	-	[redacted]
INV-150708	-	[redacted]	-	-	-	[redacted]
INV-150746	-	[redacted]	-	-	-	[redacted]
INV-152883	-	[redacted]	-	-	-	[redacted]
INV-152888	-	[redacted]	-	-	-	[redacted]
INV-155309	-	[redacted]	-	-	-	[redacted]
INV-155314	-	[redacted]	-	-	-	[redacted]
INV-158089	-	[redacted]	-	-	-	[redacted]
ENERGY FEDERATION	-	-	[redacted]	-	-	[redacted]
0761793-IN	-	-	[redacted]	-	-	[redacted]
0778468-IN	-	-	[redacted]	-	-	[redacted]
0778508-IN	-	-	[redacted]	-	-	[redacted]
0778518-IN	-	-	[redacted]	-	-	[redacted]
0791563-IN	-	-	[redacted]	-	-	[redacted]
0815304-IN	-	-	[redacted]	-	-	[redacted]
0847804-IN	-	-	[redacted]	-	-	[redacted]
0881895-IN	-	-	[redacted]	-	-	[redacted]
0881963-IN	-	-	[redacted]	-	-	[redacted]
0881969-IN	-	-	[redacted]	-	-	[redacted]
0772624-IN	-	-	[redacted]	-	-	[redacted]
0782254-IN	-	-	[redacted]	-	-	[redacted]
0794923-IN	-	-	[redacted]	-	-	[redacted]
0802540-IN	-	-	[redacted]	-	-	[redacted]
0808575-IN	-	-	[redacted]	-	-	[redacted]
0820945-IN	-	-	[redacted]	-	-	[redacted]
0827694-IN	-	-	[redacted]	-	-	[redacted]
0835346-IN	-	-	[redacted]	-	-	[redacted]
0844227-IN	-	-	[redacted]	-	-	[redacted]
0857161-IN	-	-	[redacted]	-	-	[redacted]
0871281-IN	-	-	[redacted]	-	-	[redacted]
0879221-IN	-	-	[redacted]	-	-	[redacted]

Vendor Invoice Summary Table

2. Residential Products

Residential Consumer Products

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Residential Consumer Products						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
HELGESON ENTERPRISES	-	-	[redacted]	[redacted]	-	[redacted]
0000065-IN	-	-	[redacted]	-	-	[redacted]
0077463-IN	-	-	[redacted]	-	-	[redacted]
0077631-IN	-	-	[redacted]	-	-	[redacted]
0077757-IN	-	-	[redacted]	-	-	[redacted]
0077842-IN	-	-	[redacted]	-	-	[redacted]
0077854-IN	-	-	[redacted]	-	-	[redacted]
0079292-IN	-	-	[redacted]	-	-	[redacted]
0079294-IN	-	-	[redacted]	-	-	[redacted]
0079584-IN	-	-	[redacted]	-	-	[redacted]
0079588-IN	-	-	[redacted]	-	-	[redacted]
008019-IN	-	-	[redacted]	-	-	[redacted]
0080213-IN	-	-	[redacted]	-	-	[redacted]
0081455-IN	-	-	[redacted]	-	-	[redacted]
0081521-IN	-	-	[redacted]	-	-	[redacted]
0081562-IN	-	-	[redacted]	-	-	[redacted]
0082095-IN	-	-	[redacted]	-	-	[redacted]
0082117-IN	-	-	[redacted]	-	-	[redacted]
0082332-IN	-	-	[redacted]	-	-	[redacted]
0082339-IN	-	-	[redacted]	-	-	[redacted]
0082388-IN	-	-	[redacted]	-	-	[redacted]
0082390-IN	-	-	[redacted]	-	-	[redacted]
0082851-IN	-	-	[redacted]	-	-	[redacted]
0082856-IN	-	-	[redacted]	-	-	[redacted]
0082935-IN	-	-	[redacted]	-	-	[redacted]
0083172-IN	-	-	[redacted]	-	-	[redacted]
0083530-IN	-	-	[redacted]	-	-	[redacted]
0083627-IN	-	-	[redacted]	-	-	[redacted]
0083763-IN	-	-	[redacted]	-	-	[redacted]
0083883-IN	-	-	[redacted]	-	-	[redacted]
0083979-IN	-	-	[redacted]	-	-	[redacted]
0084344-IN	-	-	[redacted]	-	-	[redacted]
0084416-IN	-	-	[redacted]	-	-	[redacted]
0084417-IN	-	-	[redacted]	-	-	[redacted]
0085041-IN	-	-	[redacted]	-	-	[redacted]
0085532-IN	-	-	[redacted]	-	-	[redacted]
0085607-IN	-	-	[redacted]	-	-	[redacted]
0085636-IN	-	-	[redacted]	-	-	[redacted]
0077363-IN	-	-	-	[redacted]	-	[redacted]
0079206-IN	-	-	-	[redacted]	-	[redacted]
0079979-IN	-	-	-	[redacted]	-	[redacted]
0081937-IN	-	-	-	[redacted]	-	[redacted]
0082569-IN	-	-	-	[redacted]	-	[redacted]
0083475-IN	-	-	-	[redacted]	-	[redacted]
0083625-IN	-	-	-	[redacted]	-	[redacted]
0084103-IN	-	-	-	[redacted]	-	[redacted]
0085296-IN	-	-	-	[redacted]	-	[redacted]
0085878-IN	-	-	-	[redacted]	-	[redacted]
0085957-IN	-	-	-	[redacted]	-	[redacted]
JACO ENVORONMENTAL	-	-	[redacted]	[redacted]	-	[redacted]
CC530	-	-	[redacted]	[redacted]	-	[redacted]
CC532	-	-	[redacted]	[redacted]	-	[redacted]
CC533	-	-	[redacted]	[redacted]	-	[redacted]
CC534	-	-	[redacted]	[redacted]	-	[redacted]
CC535	-	-	[redacted]	[redacted]	-	[redacted]
CC536	-	-	[redacted]	[redacted]	-	[redacted]
CC537	-	-	[redacted]	[redacted]	-	[redacted]
CC538	-	-	[redacted]	[redacted]	-	[redacted]
CC539	-	-	[redacted]	[redacted]	-	[redacted]
CC540	-	-	[redacted]	[redacted]	-	[redacted]
CC541	-	-	[redacted]	[redacted]	-	[redacted]
CC542	-	-	[redacted]	[redacted]	-	[redacted]
CC543	-	-	[redacted]	[redacted]	-	[redacted]

Vendor Invoice Summary Table

2. Residential Products

Residential Consumer Products

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Residential Consumer Products						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
LOCKHEED MARTIN	-	-	-	[redacted]	-	[redacted]
2120778	-	-	-	[redacted]	-	[redacted]
21232204	-	-	-	[redacted]	-	[redacted]
21232221	-	-	-	[redacted]	-	[redacted]
21243454	-	-	-	[redacted]	-	[redacted]
21243455	-	-	-	[redacted]	-	[redacted]
21254282	-	-	-	[redacted]	-	[redacted]
21256254	-	-	-	[redacted]	-	[redacted]
21266969	-	-	-	[redacted]	-	[redacted]
21266981	-	-	-	[redacted]	-	[redacted]
21277416	-	-	-	[redacted]	-	[redacted]
21277420	-	-	-	[redacted]	-	[redacted]
21290955	-	-	-	[redacted]	-	[redacted]
21290962	-	-	-	[redacted]	-	[redacted]
21316714	-	-	-	[redacted]	-	[redacted]
21316732	-	-	-	[redacted]	-	[redacted]
21326529	-	-	-	[redacted]	-	[redacted]
21328279	-	-	-	[redacted]	-	[redacted]
21334405	-	-	-	[redacted]	-	[redacted]
21343558	-	-	-	[redacted]	-	[redacted]
21232204C	-	-	-	[redacted]	-	[redacted]
21232204D	-	-	-	[redacted]	-	[redacted]
NMR GROUP, INC.	-	-	-	-	[redacted]	[redacted]
2156S	-	-	-	-	[redacted]	[redacted]
2156T	-	-	-	-	[redacted]	[redacted]
2156U	-	-	-	-	[redacted]	[redacted]
2156V	-	-	-	-	[redacted]	[redacted]
2156W	-	-	-	-	[redacted]	[redacted]
2156X	-	-	-	-	[redacted]	[redacted]
2156Y	-	-	-	-	[redacted]	[redacted]
PARAGO SERVICES CORP	-	-	[redacted]	[redacted]	-	[redacted]
0090561	-	-	[redacted]	-	-	[redacted]
0000217-IN	-	-	[redacted]	-	-	[redacted]
0000218-IN	-	-	[redacted]	-	-	[redacted]
0090003-IN	-	-	[redacted]	-	-	[redacted]
0090424-IN	-	-	[redacted]	-	-	[redacted]
0090426-IN	-	-	[redacted]	-	-	[redacted]
0090525-IN	-	-	[redacted]	-	-	[redacted]
00907086-IN	-	-	[redacted]	-	-	[redacted]
0091931-IN	-	-	[redacted]	-	-	[redacted]
0092969-IN	-	-	[redacted]	-	-	[redacted]
0093017-IN	-	-	[redacted]	-	-	[redacted]
0093159-IN	-	-	[redacted]	-	-	[redacted]
0093514-IN	-	-	[redacted]	-	-	[redacted]
0093562-IN	-	-	[redacted]	-	-	[redacted]
0093747-IN	-	-	[redacted]	-	-	[redacted]
0093814-IN	-	-	[redacted]	-	-	[redacted]
0094728-IN	-	-	[redacted]	-	-	[redacted]
0094958-IN	-	-	[redacted]	-	-	[redacted]
0095004-IN	-	-	[redacted]	-	-	[redacted]
0090318-IN	-	-	-	[redacted]	-	[redacted]
0091861-IN	-	-	-	[redacted]	-	[redacted]
0093438-IN	-	-	-	[redacted]	-	[redacted]
0094667-IN	-	-	-	[redacted]	-	[redacted]
0095165-IN	-	-	-	[redacted]	-	[redacted]
TOPTEN USA	-	-	-	[redacted]	-	[redacted]
02-03	-	-	-	[redacted]	-	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table
4. Low-Income Whole House
Low-Income New Construction
Cape Light Compact

D.P.U. 16-127
Appendix F, 2013 Costs - CONFIDENTIAL, Redacted
H.O.s Leupold and Hale
August 1, 2016

2013 Low-Income New Construction						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	-	-	[redacted]	[redacted]	[redacted]
ICF RESOURCE	-	-	[redacted]	-	-	[redacted]
CAPE LR U3 LI	-	-	[redacted]	-	-	[redacted]
CAPE LR U5 LI	-	-	[redacted]	-	-	[redacted]
CAPE LR U7 LI	-	-	[redacted]	-	-	[redacted]
CAPE LR U8 LI	-	-	[redacted]	-	-	[redacted]
CAPE LR U8 RH	-	-	[redacted]	-	-	[redacted]
CAPE LR U9 LI	-	-	[redacted]	-	-	[redacted]
CAPE LR UW LI	-	-	[redacted]	-	-	[redacted]
Grand Total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Vendor Invoice Summary Table

4. Low-Income Whole House

Low-Income Single Family Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Low-Income Single Family Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	-	-	[redacted]	[redacted]	[redacted]
CADMUS GROUP	-	-	-	-	[redacted]	[redacted]
INV-164473	-	-	-	-	[redacted]	[redacted]
INV-141302	-	-	-	-	[redacted]	[redacted]
INV-144112	-	-	-	-	[redacted]	[redacted]
INV-146655	-	-	-	-	[redacted]	[redacted]
INV-150571	-	-	-	-	[redacted]	[redacted]
INV-155966	-	-	-	-	[redacted]	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
12-806-12	-	-	-	[redacted]	-	[redacted]
13-806-01	-	-	-	[redacted]	-	[redacted]
13-806-02	-	-	-	[redacted]	-	[redacted]
13-806-03	-	-	-	[redacted]	-	[redacted]
13-806-04	-	-	-	[redacted]	-	[redacted]
13-806-05	-	-	-	[redacted]	-	[redacted]
13-806-06	-	-	-	[redacted]	-	[redacted]
13-806-07	-	-	-	[redacted]	-	[redacted]
13-806-08	-	-	-	[redacted]	-	[redacted]
13-806-09	-	-	-	[redacted]	-	[redacted]
13-806-10	-	-	-	[redacted]	-	[redacted]
13-806-11	-	-	-	[redacted]	-	[redacted]
13-806-12	-	-	-	[redacted]	-	[redacted]
ENERGY FEDERATION	-	[redacted]	[redacted]	-	-	[redacted]
0792959-IN	-	-	[redacted]	-	-	[redacted]
0846096-IN	-	-	[redacted]	-	-	[redacted]
0853450-IN	-	[redacted]	-	-	-	[redacted]
HOUSING ASSISTANCE C	-	[redacted]	[redacted]	[redacted]	-	[redacted]
11.26.13_LIMF_WZ	-	-	[redacted]	-	-	[redacted]
BL-2013-01B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-02A	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-03A	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-03B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-04B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-04R	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-05B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-05R	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-05RB	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-06B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-06R	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-07B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-07R	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-08B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-08R	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-09B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-09R	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-10B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-10R	-	-	[redacted]	-	-	[redacted]
BL-2013-11B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-11R	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-12B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-12R	-	-	[redacted]	[redacted]	-	[redacted]
BL-2013-12RB	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2013-01A	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2013-02	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2013-03B	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2013-04	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2013-05	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2013-06	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2013-07	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2013-08	-	-	[redacted]	-	-	[redacted]
WZ-2013-09	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2013-10	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2013-11	-	-	[redacted]	[redacted]	-	[redacted]
06-19-13	-	[redacted]	-	-	-	[redacted]
12.13.13_LISF_MARKET	-	[redacted]	-	-	-	[redacted]

Vendor Invoice Summary Table

4. Low-Income Whole House

Low-Income Single Family Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Low-Income Single Family Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
INTERNATIONAL ENERGY	-	-	-	-		
03-04-13	-	-	-	-		
JACOBSON ENERGY RESE	-	-	-	-		
1	-	-	-	-		
2	-	-	-	-		
3	-	-	-	-		
4	-	-	-	-		
5	-	-	-	-		
6	-	-	-	-		
LIBERTY PRINTING	-		-	-	-	
59241	-		-	-	-	
NORTHEAST ENERGY E	-	-	-	-		
4502	-	-	-	-		
RIVER ENERGY CONSULT - Ansafone, Verizon Business	-		-	-	-	
6071	-		-	-	-	
6352	-		-	-	-	
6454	-		-	-	-	
6520	-		-	-	-	
6881	-		-	-	-	
7150	-		-	-	-	
5950	-		-	-	-	
6206	-		-	-	-	
6672	-		-	-	-	
6771	-		-	-	-	
7024	-		-	-	-	
7266	-		-	-	-	
RIVER ENERGY CONSULT - Hitchcock Printing	-		-	-	-	
7118	-		-	-	-	
SYNAPSE ENERGY ECON	-	-	-	-		
13-029-CL-1	-	-	-	-		
13-029-CL-2	-	-	-	-		
13-029-CL-3	-	-	-	-		
13-029-CL-4	-	-	-	-		
13-029-CL-5	-	-	-	-		
Grand Total						

Vendor Invoice Summary Table

4. Low-Income Whole House

Low-Income Multi-Family Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 Low-Income Multi-Family Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	-	-	[redacted]	[redacted]	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
12-806-12	-	-	-	[redacted]	-	[redacted]
13-806-01	-	-	-	[redacted]	-	[redacted]
13-806-02	-	-	-	[redacted]	-	[redacted]
13-806-03	-	-	-	[redacted]	-	[redacted]
13-806-04	-	-	-	[redacted]	-	[redacted]
13-806-05	-	-	-	[redacted]	-	[redacted]
13-806-06	-	-	-	[redacted]	-	[redacted]
13-806-07	-	-	-	[redacted]	-	[redacted]
13-806-08	-	-	-	[redacted]	-	[redacted]
13-806-09	-	-	-	[redacted]	-	[redacted]
13-806-10	-	-	-	[redacted]	-	[redacted]
13-806-11	-	-	-	[redacted]	-	[redacted]
13-806-12	-	-	-	[redacted]	-	[redacted]
HOUSING ASSISTANCE C	-	-	[redacted]	-	-	[redacted]
11.26.13_LIMF_WZ	-	-	[redacted]	-	-	[redacted]
BL-2013-05R	-	-	[redacted]	-	-	[redacted]
03.13.13 LIMF WZ	-	-	[redacted]	-	-	[redacted]
03.20.13-LIMF-WZ	-	-	[redacted]	-	-	[redacted]
03.22.13 LIMF WZ	-	-	[redacted]	-	-	[redacted]
05.28.13 MF BLB	-	-	[redacted]	-	-	[redacted]
06.04.13_LIMF_BL	-	-	[redacted]	-	-	[redacted]
07.10.13_LIMF_R	-	-	[redacted]	-	-	[redacted]
08.05.13_LIMF_BL	-	-	[redacted]	-	-	[redacted]
08.05.13_LIMF_R_BOUR	-	-	[redacted]	-	-	[redacted]
08.05.13_LIMF_R_P-TO	-	-	[redacted]	-	-	[redacted]
08.06.13_LIMF_R	-	-	[redacted]	-	-	[redacted]
08.07.13_LIMF_BLB	-	-	[redacted]	-	-	[redacted]
08.30.13_LIMF_R	-	-	[redacted]	-	-	[redacted]
10.03.2013_LIMF_R	-	-	[redacted]	-	-	[redacted]
10.03.2013_LIMF_WZ	-	-	[redacted]	-	-	[redacted]
10.18.2013_LIMF_WZ	-	-	[redacted]	-	-	[redacted]
11.06.2013_LIMF_BL_B	-	-	[redacted]	-	-	[redacted]
11.19.13_LIMF_B	-	-	[redacted]	-	-	[redacted]
11.22.13_LIMF_B	-	-	[redacted]	-	-	[redacted]
12.05.13_LIMF_R_	-	-	[redacted]	-	-	[redacted]
12.16.13_LIMF_R_VILL	-	-	[redacted]	-	-	[redacted]
12.17.13_LIMF_B&R_	-	-	[redacted]	-	-	[redacted]
12.17.13_LIMF_B_QUEE	-	-	[redacted]	-	-	[redacted]
12.20.13_LIMF_BL_B&R	-	-	[redacted]	-	-	[redacted]
12.30.2013_LIMF_WZ	-	-	[redacted]	-	-	[redacted]
7.31.13 MF BLB	-	-	[redacted]	-	-	[redacted]
CLCMF2013-2-12-	-	-	[redacted]	-	-	[redacted]
CLCMF2013-2-5-THE	-	-	[redacted]	-	-	[redacted]
CLCMF2013-2-6-	-	-	[redacted]	-	-	[redacted]
CLCMF2013-2-6SEA32-	-	-	[redacted]	-	-	[redacted]
LIMF.B.2013.03-1	-	-	[redacted]	-	-	[redacted]
LIMF.B.2013.03-2	-	-	[redacted]	-	-	[redacted]
LIMF.B.2013.03-3	-	-	[redacted]	-	-	[redacted]
LIMF.R.2013.04-1	-	-	[redacted]	-	-	[redacted]
MFWZ2013-01-09-	-	-	[redacted]	-	-	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table

6. C&I New Construction

C&I New Construction

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 C&I New Construction						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	-	-	[redacted]	[redacted]	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
12-806UP-12	-	-	-	[redacted]	-	[redacted]
13-806UP-01	-	-	-	[redacted]	-	[redacted]
13-806UP-02	-	-	-	[redacted]	-	[redacted]
13-806UP-03	-	-	-	[redacted]	-	[redacted]
13-806UP-04	-	-	-	[redacted]	-	[redacted]
13-806UP-05	-	-	-	[redacted]	-	[redacted]
13-806UP-06	-	-	-	[redacted]	-	[redacted]
13-806UP-08	-	-	-	[redacted]	-	[redacted]
13-806UP-09	-	-	-	[redacted]	-	[redacted]
13-806UP-10	-	-	-	[redacted]	-	[redacted]
13-806UP-11	-	-	-	[redacted]	-	[redacted]
DEMAND MANAGEMENT	-	-	-	[redacted]	-	[redacted]
4727	-	-	-	[redacted]	-	[redacted]
4728	-	-	-	[redacted]	-	[redacted]
4729	-	-	-	[redacted]	-	[redacted]
4731	-	-	-	[redacted]	-	[redacted]
4732	-	-	-	[redacted]	-	[redacted]
4737	-	-	-	[redacted]	-	[redacted]
4740	-	-	-	[redacted]	-	[redacted]
4742	-	-	-	[redacted]	-	[redacted]
4743	-	-	-	[redacted]	-	[redacted]
4744	-	-	-	[redacted]	-	[redacted]
4745	-	-	-	[redacted]	-	[redacted]
4746	-	-	-	[redacted]	-	[redacted]
4779	-	-	-	[redacted]	-	[redacted]
4780	-	-	-	[redacted]	-	[redacted]
4783	-	-	-	[redacted]	-	[redacted]
4784	-	-	-	[redacted]	-	[redacted]
4788	-	-	-	[redacted]	-	[redacted]
4789	-	-	-	[redacted]	-	[redacted]
4790	-	-	-	[redacted]	-	[redacted]
4791	-	-	-	[redacted]	-	[redacted]
4792	-	-	-	[redacted]	-	[redacted]
4793	-	-	-	[redacted]	-	[redacted]
4794	-	-	-	[redacted]	-	[redacted]
4840	-	-	-	[redacted]	-	[redacted]
4841	-	-	-	[redacted]	-	[redacted]
4844	-	-	-	[redacted]	-	[redacted]
4845	-	-	-	[redacted]	-	[redacted]
4848	-	-	-	[redacted]	-	[redacted]
4849	-	-	-	[redacted]	-	[redacted]
4850	-	-	-	[redacted]	-	[redacted]
4851	-	-	-	[redacted]	-	[redacted]
4852	-	-	-	[redacted]	-	[redacted]
4854	-	-	-	[redacted]	-	[redacted]
4855	-	-	-	[redacted]	-	[redacted]
4858	-	-	-	[redacted]	-	[redacted]
4859	-	-	-	[redacted]	-	[redacted]
042013CS	-	-	-	[redacted]	-	[redacted]
201305CS	-	-	-	[redacted]	-	[redacted]
201306CS	-	-	-	[redacted]	-	[redacted]
201307CS	-	-	-	[redacted]	-	[redacted]
201308CS	-	-	-	[redacted]	-	[redacted]
201309CS	-	-	-	[redacted]	-	[redacted]
201310CS	-	-	-	[redacted]	-	[redacted]
201311CS	-	-	-	[redacted]	-	[redacted]
201312CS	-	-	-	[redacted]	-	[redacted]

2013 C&I New Construction						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
KEMA	-	-	-	-	[redacted]	
2133735	-	-	-	-		
20130529	-	-	-	-		
20130543	-	-	-	-		
20130548	-	-	-	-		
20130553	-	-	-	-		
20130560	-	-	-	-		
20130571	-	-	-	-		
20130580	-	-	-	-		
20130587	-	-	-	-		
20130596	-	-	-	-		
20130603	-	-	-	-		
20130614	-	-	-	-		
20130857	-	-	-	-		
20130871	-	-	-	-		
20130876	-	-	-	-		
20130881	-	-	-	-		
20130888	-	-	-	-		
20130899	-	-	-	-		
20130908	-	-	-	-		
20130915	-	-	-	-		
20130924	-	-	-	-		
20130931	-	-	-	-		
20130942	-	-	-	-		
20130964	-	-	-	-		
20131233	-	-	-	-		
20131248	-	-	-	-		
20131253	-	-	-	-		
20131258	-	-	-	-		
20131273	-	-	-	-		
20131284	-	-	-	-		
20131293	-	-	-	-		
20131300	-	-	-	-		
20131309	-	-	-	-		
20131316	-	-	-	-		
20131337	-	-	-	-		
20131654	-	-	-	-		
20131668	-	-	-	-		
20131673	-	-	-	-		
20131678	-	-	-	-		
20131685	-	-	-	-		
20131696	-	-	-	-		
20131705	-	-	-	-		
20131713	-	-	-	-		
20131721	-	-	-	-		
20131728	-	-	-	-		
20131739	-	-	-	-		
20131760	-	-	-	-		
20131777	-	-	-	-		
20132019	-	-	-	-		
20132034	-	-	-	-		
20132039	-	-	-	-		
20132044	-	-	-	-		
20132050	-	-	-	-		
20132062	-	-	-	-		
20132073	-	-	-	-		
20132080	-	-	-	-		
20132089	-	-	-	-		
20132096	-	-	-	-		
20132129	-	-	-	-		
20132142	-	-	-	-		
20132152	-	-	-	-		
20132379	-	-	-	-		
20132393	-	-	-	-		
20132400	-	-	-	-		
20132405	-	-	-	-		
20132412	-	-	-	-		
20132423	-	-	-	-		
20132432	-	-	-	-		
20132437	-	-	-	-		
20132444	-	-	-	-		
20132455	-	-	-	-		
20132478	-	-	-	-		
20132483	-	-	-	-		
20132493	-	-	-	-		
20132832	-	-	-	-		
20132837	-	-	-	-		
20132842	-	-	-	-		
20132849	-	-	-	-		
20132865	-	-	-	-		
20133011	-	-	-	-		
20133275	-	-	-	-		
20133575	-	-	-	-		
20133880	-	-	-	-		
20133890	-	-	-	-		

Vendor Invoice Summary Table

6. C&I New Construction

C&I New Construction

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 C&I New Construction						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
ECOVA, INC	-	-	[redacted]	[redacted]	-	[redacted]
1004106	-	-	[redacted]	-	-	[redacted]
1027306	-	-	[redacted]	[redacted]	-	[redacted]
1029206	-	-	[redacted]	[redacted]	-	[redacted]
1032006	-	-	[redacted]	[redacted]	-	[redacted]
1034706	-	-	[redacted]	[redacted]	-	[redacted]
1037006	-	-	[redacted]	-	-	[redacted]
1039006	-	-	[redacted]	-	-	[redacted]
1041006	-	-	[redacted]	-	-	[redacted]
1045906	-	-	[redacted]	-	-	[redacted]
1047306	-	-	[redacted]	-	-	[redacted]
1049406	-	-	[redacted]	-	-	[redacted]
1051106	-	-	[redacted]	-	-	[redacted]
104106A	-	-	[redacted]	-	-	[redacted]
10584	-	-	-	[redacted]	-	[redacted]
103706A	-	-	-	[redacted]	-	[redacted]
103906A	-	-	-	[redacted]	-	[redacted]
104416A	-	-	-	[redacted]	-	[redacted]
104596A	-	-	-	[redacted]	-	[redacted]
104736A	-	-	-	[redacted]	-	[redacted]
104946A	-	-	-	[redacted]	-	[redacted]
105116A	-	-	-	[redacted]	-	[redacted]
ENERGY FEDERATION	-	-	[redacted]	[redacted]	-	[redacted]
0822404-IN	-	-	[redacted]	-	-	[redacted]
0824457-IN	-	-	[redacted]	-	-	[redacted]
0831518-IN	-	-	[redacted]	-	-	[redacted]
0838451-IN	-	-	[redacted]	-	-	[redacted]
0844730-IN	-	-	[redacted]	-	-	[redacted]
0859110-IN	-	-	[redacted]	-	-	[redacted]
0871342-IN	-	-	[redacted]	-	-	[redacted]
0884221-IN	-	-	[redacted]	-	-	[redacted]
0864462-IN	-	-	-	[redacted]	-	[redacted]
0881508-IN	-	-	-	[redacted]	-	[redacted]
0891234-IN	-	-	-	[redacted]	-	[redacted]
HELGESON ENTERPRISES	-	-	[redacted]	-	-	[redacted]
0077575-IN	-	-	[redacted]	-	-	[redacted]
0077884-IN	-	-	[redacted]	-	-	[redacted]
0079489-IN	-	-	[redacted]	-	-	[redacted]
0081927-IN	-	-	[redacted]	-	-	[redacted]
0083123-IN	-	-	[redacted]	-	-	[redacted]
RISE ENGINEERING	-	-	-	[redacted]	-	[redacted]
10771	-	-	-	[redacted]	-	[redacted]
105677	-	-	-	[redacted]	-	[redacted]
TRC ENGINEERS	-	-	-	[redacted]	-	[redacted]
10866	-	-	-	[redacted]	-	[redacted]
11259	-	-	-	[redacted]	-	[redacted]
11411	-	-	-	[redacted]	-	[redacted]
11512	-	-	-	[redacted]	-	[redacted]
11719	-	-	-	[redacted]	-	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table

7. C&I Retrofit

C&I Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 C&I Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	-	-	[redacted]	[redacted]	[redacted]
DEMAND MANAGEMENT	-	-	-	[redacted]	-	[redacted]
042013CS	-	-	-	[redacted]	-	[redacted]
201305CS	-	-	-	[redacted]	-	[redacted]
201306CS	-	-	-	[redacted]	-	[redacted]
201307CS	-	-	-	[redacted]	-	[redacted]
201308CS	-	-	-	[redacted]	-	[redacted]
201309CS	-	-	-	[redacted]	-	[redacted]
201310CS	-	-	-	[redacted]	-	[redacted]
201311CS	-	-	-	[redacted]	-	[redacted]
201312CS	-	-	-	[redacted]	-	[redacted]
4730	-	-	-	[redacted]	-	[redacted]
4733	-	-	-	[redacted]	-	[redacted]
4734	-	-	-	[redacted]	-	[redacted]
4735	-	-	-	[redacted]	-	[redacted]
4736	-	-	-	[redacted]	-	[redacted]
4738	-	-	-	[redacted]	-	[redacted]
4739	-	-	-	[redacted]	-	[redacted]
4741	-	-	-	[redacted]	-	[redacted]
4778	-	-	-	[redacted]	-	[redacted]
4781	-	-	-	[redacted]	-	[redacted]
4782	-	-	-	[redacted]	-	[redacted]
4785	-	-	-	[redacted]	-	[redacted]
4786	-	-	-	[redacted]	-	[redacted]
4787	-	-	-	[redacted]	-	[redacted]
4839	-	-	-	[redacted]	-	[redacted]
4842	-	-	-	[redacted]	-	[redacted]
4843	-	-	-	[redacted]	-	[redacted]
4846	-	-	-	[redacted]	-	[redacted]
4847	-	-	-	[redacted]	-	[redacted]
4853	-	-	-	[redacted]	-	[redacted]
4856	-	-	-	[redacted]	-	[redacted]
4857	-	-	-	[redacted]	-	[redacted]
ENERGY FEDERATION	-	-	[redacted]	-	-	[redacted]
0873528-IN	-	-	[redacted]	-	-	[redacted]
0873529-IN	-	-	[redacted]	-	-	[redacted]
HONEYWELL	-	-	-	[redacted]	[redacted]	[redacted]
5226899609	-	-	-	-	[redacted]	[redacted]
5225962965	-	-	-	[redacted]	-	[redacted]
5227999470	-	-	-	[redacted]	-	[redacted]
5226154100R2	-	-	-	[redacted]	-	[redacted]
5226422261R1	-	-	-	[redacted]	-	[redacted]
5226422261R2	-	-	-	[redacted]	-	[redacted]
5226628877R2	-	-	-	[redacted]	-	[redacted]

Vendor Invoice Summary Table

7. C&I Retrofit

C&I Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 C&I Retrofit						
Vendor, Invoice Number	Program Planning and Administration	Marketing and Advertising	Participant Incentive	Sales, Technical Assistance & Training	Evaluation and Market Research	Total Program Costs
KEMA	-	-	-	-	[redacted]	
2133735	-	-	-	-		
20130529	-	-	-	-		
20130543	-	-	-	-		
20130548	-	-	-	-		
20130553	-	-	-	-		
20130560	-	-	-	-		
20130571	-	-	-	-		
20130580	-	-	-	-		
20130587	-	-	-	-		
20130596	-	-	-	-		
20130603	-	-	-	-		
20130614	-	-	-	-		
20130857	-	-	-	-		
20130871	-	-	-	-		
20130876	-	-	-	-		
20130881	-	-	-	-		
20130888	-	-	-	-		
20130899	-	-	-	-		
20130908	-	-	-	-		
20130915	-	-	-	-		
20130924	-	-	-	-		
20130931	-	-	-	-		
20130942	-	-	-	-		
20130964	-	-	-	-		
20131233	-	-	-	-		
20131248	-	-	-	-		
20131253	-	-	-	-		
20131258	-	-	-	-		
20131273	-	-	-	-		
20131284	-	-	-	-		
20131293	-	-	-	-		
20131300	-	-	-	-		
20131309	-	-	-	-		
20131316	-	-	-	-		
20131337	-	-	-	-		
20131654	-	-	-	-		
20131668	-	-	-	-		
20131673	-	-	-	-		
20131678	-	-	-	-		
20131685	-	-	-	-		
20131696	-	-	-	-		
20131705	-	-	-	-		
20131713	-	-	-	-		
20131721	-	-	-	-		
20131728	-	-	-	-		
20131739	-	-	-	-		
20131760	-	-	-	-		
20131777	-	-	-	-		
20132019	-	-	-	-		
20132034	-	-	-	-		
20132039	-	-	-	-		
20132044	-	-	-	-		
20132062	-	-	-	-		
20132073	-	-	-	-		
20132080	-	-	-	-		
20132089	-	-	-	-		
20132096	-	-	-	-		
20132129	-	-	-	-		
20132152	-	-	-	-		
20132379	-	-	-	-		
20132393	-	-	-	-		
20132400	-	-	-	-		
20132405	-	-	-	-		
20132412	-	-	-	-		
20132423	-	-	-	-		
20132432	-	-	-	-		
20132444	-	-	-	-		
20132455	-	-	-	-		
20132478	-	-	-	-		
20132483	-	-	-	-		
20132493	-	-	-	-		
20132832	-	-	-	-		
20132837	-	-	-	-		
20132842	-	-	-	-		
20132849	-	-	-	-		
20132865	-	-	-	-		
20133011	-	-	-	-		
20133275	-	-	-	-		
20133575	-	-	-	-		
20133880	-	-	-	-		
20133890	-	-	-	-		
20130538	-	-	-	-		
20130866	-	-	-	-		
20131242	-	-	-	-		
20131663	-	-	-	-		
20132029	-	-	-	-		
20132107	-	-	-	-		
20132388	-	-	-	-		

Vendor Invoice Summary Table

7. C&I Retrofit

C&I Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 C&I Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
RISE ENGINEERING	-	-	-	[redacted]	[redacted]	[redacted]
10771	-	-	-	[redacted]	-	[redacted]
105677	-	-	-	-	[redacted]	[redacted]
103362	-	-	-	[redacted]	-	[redacted]
105647	-	-	-	[redacted]	-	[redacted]
106904	-	-	-	[redacted]	-	[redacted]
107684	-	-	-	[redacted]	-	[redacted]
108437	-	-	-	[redacted]	-	[redacted]
109315	-	-	-	[redacted]	-	[redacted]
110217	-	-	-	[redacted]	-	[redacted]
RIVER ENERGY CONSULT - KSV	-	[redacted]	-	-	-	[redacted]
7215	-	[redacted]	-	-	-	[redacted]
SIEMENS INDUSTRY, IN	-	-	[redacted]	-	-	[redacted]
400115457	-	-	[redacted]	-	-	[redacted]
400118328	-	-	[redacted]	-	-	[redacted]
SYNAPSE ENERGY ECON	-	-	-	-	[redacted]	[redacted]
13-029-CL-1	-	-	-	-	[redacted]	[redacted]
13-029-CL-2	-	-	-	-	[redacted]	[redacted]
13-029-CL-3	-	-	-	-	[redacted]	[redacted]
13-029-CL-4	-	-	-	-	[redacted]	[redacted]
13-029-CL-5	-	-	-	-	[redacted]	[redacted]
UTS ENERGY ENGINEER	-	-	-	[redacted]	-	[redacted]
1310	-	-	-	[redacted]	-	[redacted]
1318	-	-	-	[redacted]	-	[redacted]
Grand Total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Vendor Invoice Summary Table

7. C&I Retrofit

C&I Direct Install

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 C&I Direct Install						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	-	-	[redacted]	[redacted]	[redacted]
CADMUS GROUP	-	-	-	-	[redacted]	[redacted]
INV-149308	-	-	-	-	[redacted]	[redacted]
CANNON, MATTHEW B.	-	-	-	[redacted]	-	[redacted]
1-1	-	-	-	[redacted]	-	[redacted]
CC-MC-2	-	-	-	[redacted]	-	[redacted]
MC-CC-02	-	-	-	[redacted]	-	[redacted]
MC-CC-04	-	-	-	[redacted]	-	[redacted]
MC-CC-3	-	-	-	[redacted]	-	[redacted]
MC-CC-6	-	-	-	[redacted]	-	[redacted]
MC-CC-05	-	-	-	[redacted]	-	[redacted]
MC-CC-07	-	-	-	[redacted]	-	[redacted]
MC-CC-08	-	-	-	[redacted]	-	[redacted]
MC-CC-09	-	-	-	[redacted]	-	[redacted]
MC-CC-10	-	-	-	[redacted]	-	[redacted]
DEISHER, KIMBERLY	-	-	-	[redacted]	-	[redacted]
CC 2012 KD-6	-	-	-	[redacted]	-	[redacted]
CC-2012-KD-5	-	-	-	[redacted]	-	[redacted]
CC-2013-8	-	-	-	[redacted]	-	[redacted]
KD-7	-	-	-	[redacted]	-	[redacted]
HERITAGE PRESS, INC.	-	[redacted]	-	-	-	[redacted]
91597	-	[redacted]	-	-	-	[redacted]
HONEYWELL	-	-	-	[redacted]	-	[redacted]
5225962965	-	-	-	[redacted]	-	[redacted]
5227999470	-	-	-	[redacted]	-	[redacted]
5226154100R2	-	-	-	[redacted]	-	[redacted]
5226422261R2	-	-	-	[redacted]	-	[redacted]
5226628877R2	-	-	-	[redacted]	-	[redacted]
5226899612	-	-	-	[redacted]	-	[redacted]
5227194994	-	-	-	[redacted]	-	[redacted]
5227328205	-	-	-	[redacted]	-	[redacted]
5227859557	-	-	-	[redacted]	-	[redacted]
INTERNATIONAL ENERGY	-	-	-	-	[redacted]	[redacted]
03-04-13	-	-	-	-	[redacted]	[redacted]
JACOBSON ENERGY RESE	-	-	-	-	[redacted]	[redacted]
1	-	-	-	-	[redacted]	[redacted]
2	-	-	-	-	[redacted]	[redacted]
3	-	-	-	-	[redacted]	[redacted]
4	-	-	-	-	[redacted]	[redacted]
5	-	-	-	-	[redacted]	[redacted]
6	-	-	-	-	[redacted]	[redacted]
LOOK, ASHLEY LYNNE	-	-	-	[redacted]	-	[redacted]
CC-1	-	-	-	[redacted]	-	[redacted]
NATL RESOURCE MANAG	-	-	[redacted]	-	-	[redacted]
OCTOBER 2013	-	-	[redacted]	-	-	[redacted]
APRIL 2013 SUMMARY	-	-	[redacted]	-	-	[redacted]
AUGUST 2013 SUMMARY	-	-	[redacted]	-	-	[redacted]
DEC-13-SUMMARY	-	-	[redacted]	-	-	[redacted]
FEB 2013 SUMMARY	-	-	[redacted]	-	-	[redacted]
JANUARY 2013 SUMMARY	-	-	[redacted]	-	-	[redacted]
JULY 2013 SUMMARY	-	-	[redacted]	-	-	[redacted]
JUNE 2013 SUMMARY	-	-	[redacted]	-	-	[redacted]
MARCH 2013 SUMMARY	-	-	[redacted]	-	-	[redacted]
MAY 2013 SUMMARY	-	-	[redacted]	-	-	[redacted]
NOV 2013 SUMMARY	-	-	[redacted]	-	-	[redacted]
SEPT 2013 SUMMARY	-	-	[redacted]	-	-	[redacted]
NORTHEAST ENERGY E	-	-	-	-	[redacted]	[redacted]
4502	-	-	-	-	[redacted]	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
7647C APE313	-	-	-	-	[redacted]	[redacted]
7647CAEP11/13	-	-	-	-	[redacted]	[redacted]
7647CAPE413	-	-	-	-	[redacted]	[redacted]
7647CAPE513	-	-	-	-	[redacted]	[redacted]
7647CAPE613	-	-	-	-	[redacted]	[redacted]
7647CAPE713	-	-	-	-	[redacted]	[redacted]
7647CAPE813	-	-	-	-	[redacted]	[redacted]
7647CAPE913	-	-	-	-	[redacted]	[redacted]
7647CAPEFEB13	-	-	-	-	[redacted]	[redacted]

Vendor Invoice Summary Table

7. C&I Retrofit

C&I Direct Install

Cape Light Compact

D.P.U. 16-127

Appendix F, 2013 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2013 C&I Direct Install						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
RISE ENGINEERING	-	-	[redacted]	[redacted]	-	[redacted]
10771	-	-	-	[redacted]	-	[redacted]
102916	-	-	[redacted]	[redacted]	-	[redacted]
103539	-	-	[redacted]	-	-	[redacted]
104089	-	-	[redacted]	-	-	[redacted]
104874	-	-	[redacted]	-	-	[redacted]
105708	-	-	[redacted]	-	-	[redacted]
106414	-	-	-	[redacted]	-	[redacted]
107028	-	-	-	[redacted]	-	[redacted]
105647	-	-	-	[redacted]	-	[redacted]
103361	-	-	[redacted]	-	-	[redacted]
103376	-	-	[redacted]	-	-	[redacted]
103516	-	-	[redacted]	-	-	[redacted]
103635	-	-	[redacted]	-	-	[redacted]
103636	-	-	[redacted]	-	-	[redacted]
104014	-	-	[redacted]	-	-	[redacted]
104015	-	-	[redacted]	-	-	[redacted]
104730	-	-	[redacted]	-	-	[redacted]
104861	-	-	[redacted]	-	-	[redacted]
104863	-	-	[redacted]	-	-	[redacted]
105646	-	-	[redacted]	-	-	[redacted]
105648	-	-	[redacted]	-	-	[redacted]
105655	-	-	[redacted]	-	-	[redacted]
106384	-	-	[redacted]	-	-	[redacted]
106385	-	-	[redacted]	-	-	[redacted]
106905	-	-	[redacted]	-	-	[redacted]
106906	-	-	[redacted]	-	-	[redacted]
107703	-	-	[redacted]	-	-	[redacted]
107704	-	-	[redacted]	-	-	[redacted]
107712	-	-	[redacted]	-	-	[redacted]
108441	-	-	[redacted]	-	-	[redacted]
108454	-	-	[redacted]	-	-	[redacted]
109314	-	-	[redacted]	-	-	[redacted]
109316	-	-	[redacted]	-	-	[redacted]
109972	-	-	[redacted]	-	-	[redacted]
110218	-	-	[redacted]	-	-	[redacted]
110219	-	-	[redacted]	-	-	[redacted]
111128	-	-	[redacted]	-	-	[redacted]
111173	-	-	[redacted]	-	-	[redacted]
102914	-	-	-	[redacted]	-	[redacted]
104037	-	-	-	[redacted]	-	[redacted]
104038	-	-	-	[redacted]	-	[redacted]
104862	-	-	-	[redacted]	-	[redacted]
105715	-	-	-	[redacted]	-	[redacted]
107034	-	-	-	[redacted]	-	[redacted]
107685	-	-	-	[redacted]	-	[redacted]
111138	-	-	-	[redacted]	-	[redacted]
SCHAFER, PAULINE	-	-	-	[redacted]	-	[redacted]
05-26-13	-	-	-	[redacted]	-	[redacted]
TETRA TECH MA, INC.	-	-	-	-	[redacted]	[redacted]
50719449	-	-	-	-	[redacted]	[redacted]
50752426	-	-	-	-	[redacted]	[redacted]
50645336	-	-	-	-	[redacted]	[redacted]
50745860	-	-	-	-	[redacted]	[redacted]
50752409	-	-	-	-	[redacted]	[redacted]
Grand Total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Vendor Invoice Summary Table

1. Residential Whole House

Residential New Construction & Major Renovation

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Residential New Construction & Major Renovation						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs			-			
All Legal Allocated Costs		-	-	-	-	
All IT Allocated Costs		-	-	-	-	
All Marketing Allocated Costs	-		-	-	-	
All General Administration Allocated Costs			-			
CADMUS GROUP	-	-	-	-		
INV-169701	-	-	-	-		
COMPETITIVE RESOURCE	-	-	-		-	
14-806-01	-	-	-		-	
14-806-02	-	-	-		-	
14-806-03	-	-	-		-	
14-806-04	-	-	-		-	
14-806-05	-	-	-		-	
14-806-06	-	-	-		-	
14-806-07	-	-	-		-	
14-806-10	-	-	-		-	
14-806-8	-	-	-		-	
14-806-9	-	-	-		-	
CONSERVATION SERVICE	-	-	-		-	
4883	-	-	-		-	
4927	-	-	-		-	
4946	-	-	-		-	
4991	-	-	-		-	
5039	-	-	-		-	
5067	-	-	-		-	
ECOVA, INC	-	-	-		-	
106906A	-	-	-		-	
ENERGY FEDERATION	-	-	-		-	
0104242-IN	-	-	-		-	
ICF RESOURCE	-				-	
CAPE LR U12 NLI	-	-		-	-	
CAPE U1 NLI	-	-		-	-	
CAPE U10-14 NLI	-	-		-	-	
CAPE U11-14 NLI	-	-		-	-	
CAPE U2 NLI	-	-		-	-	
CAPE U3 NLI	-	-		-	-	
CAPE U5-14 NLI	-	-		-	-	
CAPE U6-14 NLI	-	-		-	-	
CAPE U9-14 NLI	-	-		-	-	
CAPE-U4-14-NLI	-	-		-	-	
CAPE-U7-14 NLI	-	-		-	-	
CAPE-U8-14-NLI	-	-		-	-	
CLC A001	-		-		-	
CLC A002	-		-		-	
CLC A003	-		-		-	
CLC A004-14	-		-		-	
CLC A005-14	-		-		-	
CLC A006-14	-		-		-	
CLC A008-14	-		-		-	
CLC A009-14	-		-		-	
CLC LR A12	-		-		-	
CLC-A007-14	-		-		-	
OPINION DYNAMICS	-	-	-	-		
06-24-14	-	-	-	-		
7831APR14	-	-	-	-		
7831AUG14	-	-	-	-		
7831JUL14	-	-	-	-		
7831JUN14	-	-	-	-		
7831SEP14	-	-	-	-		
RIVER ENERGY CONSULT - Baker's Best	-	-	-		-	
8465	-	-	-		-	
RIVER ENERGY CONSULT - Stop & Shop	-	-	-		-	
8511	-	-	-		-	
TRC ENGINEERS	-	-	-		-	
12052	-	-	-		-	
12865	-	-	-		-	
Grand Total						

Vendor Invoice Summary Table

1. Residential Whole House

Residential Multi-Family Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Residential Multi-Family Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CADMUS GROUP	-	-	-	-	[redacted]	[redacted]
INV-175319	-	-	-	-	[redacted]	[redacted]
INV-178771	-	-	-	-	[redacted]	[redacted]
INV-182765	-	-	-	-	[redacted]	[redacted]
INV-185002	-	-	-	-	[redacted]	[redacted]
INV-188175	-	-	-	-	[redacted]	[redacted]
INV-192091	-	-	-	-	[redacted]	[redacted]
INV-194354	-	-	-	-	[redacted]	[redacted]
INV-200492	-	-	-	-	[redacted]	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
14-806-01	-	-	-	[redacted]	-	[redacted]
14-806-02	-	-	-	[redacted]	-	[redacted]
14-806-03	-	-	-	[redacted]	-	[redacted]
14-806-04	-	-	-	[redacted]	-	[redacted]
14-806-05	-	-	-	[redacted]	-	[redacted]
14-806-06	-	-	-	[redacted]	-	[redacted]
14-806-07	-	-	-	[redacted]	-	[redacted]
14-806-10	-	-	-	[redacted]	-	[redacted]
14-806-8	-	-	-	[redacted]	-	[redacted]
14-806-9	-	-	-	[redacted]	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
06-24-14	-	-	-	-	[redacted]	[redacted]
7831APR14	-	-	-	-	[redacted]	[redacted]
7831AUG14	-	-	-	-	[redacted]	[redacted]
7831JUL14	-	-	-	-	[redacted]	[redacted]
7831JUN14	-	-	-	-	[redacted]	[redacted]
7831SEP14	-	-	-	-	[redacted]	[redacted]
RISE ENGINEERING	-	-	[redacted]	[redacted]	-	[redacted]
111725	-	-	[redacted]	[redacted]	-	[redacted]
112542	-	-	[redacted]	[redacted]	-	[redacted]
113697	-	-	[redacted]	[redacted]	-	[redacted]
114397	-	-	[redacted]	[redacted]	-	[redacted]
115354	-	-	[redacted]	[redacted]	-	[redacted]
116378	-	-	[redacted]	[redacted]	-	[redacted]
117060	-	-	[redacted]	[redacted]	-	[redacted]
118072	-	-	[redacted]	[redacted]	-	[redacted]
118855	-	-	[redacted]	[redacted]	-	[redacted]
119948	-	-	[redacted]	[redacted]	-	[redacted]
121038	-	-	[redacted]	[redacted]	-	[redacted]
121611	-	-	[redacted]	[redacted]	-	[redacted]
121613	-	-	[redacted]	-	-	[redacted]
111898	-	-	-	[redacted]	-	[redacted]
112595	-	-	-	[redacted]	-	[redacted]
114135	-	-	-	[redacted]	-	[redacted]
114389	-	-	-	[redacted]	-	[redacted]
115363	-	-	-	[redacted]	-	[redacted]
116310	-	-	-	[redacted]	-	[redacted]
117089	-	-	-	[redacted]	-	[redacted]
117816	-	-	-	[redacted]	-	[redacted]
118829	-	-	-	[redacted]	-	[redacted]
119839	-	-	-	[redacted]	-	[redacted]
120821	-	-	-	[redacted]	-	[redacted]
121102	-	-	-	[redacted]	-	[redacted]
121452	-	-	-	[redacted]	-	[redacted]
RIVER ENERGY CONSULT - Baker's Best	-	-	-	[redacted]	-	[redacted]
8465	-	-	-	[redacted]	-	[redacted]
RIVER ENERGY CONSULT - Stop & Shop	-	-	-	[redacted]	-	[redacted]
8511	-	-	-	[redacted]	-	[redacted]
Grand Total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Vendor Invoice Summary Table

1. Residential Whole House

Residential Home Energy Services

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Residential Home Energy Services						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CADMUS GROUP	-	-	-	-	[redacted]	[redacted]
INV-169701	-	-	-	-	[redacted]	[redacted]
INV-178771	-	-	-	-	[redacted]	[redacted]
INV-182765	-	-	-	-	[redacted]	[redacted]
INV-185002	-	-	-	-	[redacted]	[redacted]
INV-188175	-	-	-	-	[redacted]	[redacted]
INV-192091	-	-	-	-	[redacted]	[redacted]
INV-194354	-	-	-	-	[redacted]	[redacted]
INV-200492	-	-	-	-	[redacted]	[redacted]
166922	-	-	-	-	[redacted]	[redacted]
INV-172308	-	-	-	-	[redacted]	[redacted]
INV-190123	-	-	-	-	[redacted]	[redacted]
CANNON, MATTHEW B.	-	-	-	[redacted]	-	[redacted]
MC-CC-10	-	-	-	[redacted]	-	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
14-806-01	-	-	-	[redacted]	-	[redacted]
14-806-02	-	-	-	[redacted]	-	[redacted]
14-806-03	-	-	-	[redacted]	-	[redacted]
14-806-04	-	-	-	[redacted]	-	[redacted]
14-806-05	-	-	-	[redacted]	-	[redacted]
14-806-06	-	-	-	[redacted]	-	[redacted]
14-806-07	-	-	-	[redacted]	-	[redacted]
14-806-10	-	-	-	[redacted]	-	[redacted]
14-806-8	-	-	-	[redacted]	-	[redacted]
14-806-9	-	-	-	[redacted]	-	[redacted]
CONSERVATION SERVICE	-	-	[redacted]	-	-	[redacted]
013114-CLC-418	-	-	[redacted]	-	-	[redacted]
022814-CLC-418	-	-	[redacted]	-	-	[redacted]
033114-CLC-418	-	-	[redacted]	-	-	[redacted]
053114-CLC-418	-	-	[redacted]	-	-	[redacted]
063014-CLC-418	-	-	[redacted]	-	-	[redacted]
073114-CLC-418	-	-	[redacted]	-	-	[redacted]
083114-CLC-418	-	-	[redacted]	-	-	[redacted]
093014-CLC-418	-	-	[redacted]	-	-	[redacted]
103114-CLC-418	-	-	[redacted]	-	-	[redacted]
113013-CLC-418	-	-	[redacted]	-	-	[redacted]
123113-CLC-418	-	-	[redacted]	-	-	[redacted]
CRANE APPLIANCE	-	-	-	-	[redacted]	[redacted]
7186	-	-	-	-	[redacted]	[redacted]
CREATIVE SERVICES	-	-	-	[redacted]	-	[redacted]
131156	-	-	-	[redacted]	-	[redacted]
131552	-	-	-	[redacted]	-	[redacted]
131923	-	-	-	[redacted]	-	[redacted]
132258	-	-	-	[redacted]	-	[redacted]
132684	-	-	-	[redacted]	-	[redacted]
1319780	-	-	-	[redacted]	-	[redacted]
1320164	-	-	-	[redacted]	-	[redacted]
1320610	-	-	-	[redacted]	-	[redacted]
1321453	-	-	-	[redacted]	-	[redacted]
1323168	-	-	-	[redacted]	-	[redacted]
1323169	-	-	-	[redacted]	-	[redacted]
1324298	-	-	-	[redacted]	-	[redacted]
1324680	-	-	-	[redacted]	-	[redacted]
1324690	-	-	-	[redacted]	-	[redacted]
1325450	-	-	-	[redacted]	-	[redacted]
1325778	-	-	-	[redacted]	-	[redacted]
1325803	-	-	-	[redacted]	-	[redacted]
1325811	-	-	-	[redacted]	-	[redacted]
1320602R	-	-	-	[redacted]	-	[redacted]

Vendor Invoice Summary Table

1. Residential Whole House

Residential Home Energy Services

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Residential Home Energy Services						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
D&R INTERNATIONAL	-	-	-	-	[redacted]	[redacted]
7	-	-	-	-		
GUEY-LEE, DOUGLAS	-	-	-	[redacted]	-	[redacted]
CC-1	-	-	-		-	
CC-2	-	-	-		-	
CC-3	-	-	-		-	
CC-4	-	-	-		-	
HERITAGE PRESS, INC.	-	[redacted]	-	-	-	[redacted]
93276	-		-	-	-	
93445	-		-	-	-	
93806	-		-	-	-	
94425	-		-	-	-	
JACOBSON ENERGY RESE	-	-	-	-	[redacted]	[redacted]
7	-	-	-	-		
8	-	-	-	-		
9	-	-	-	-		
10	-	-	-	-		
11	-	-	-	-		
12	-	-	-	-		
13	-	-	-	-		
14	-	-	-	-		
15	-	-	-	-		
16	-	-	-	-		
LIBERTY PRINTING	-	[redacted]	-	-	-	[redacted]
59405	-		-	-	-	
59489	-		-	-	-	
LOOK, ASHLEY LYNNE	-	-	-	[redacted]	-	[redacted]
CC2	-	-	-		-	
CC3	-	-	-		-	
CC4	-	-	-		-	
MATTO, EMILY	-	-	-	[redacted]	-	[redacted]
1	-	-	-		-	
CC-2	-	-	-		-	
CC-3	-	-	-		-	
CC-4	-	-	-		-	
CC-5	-	-	-		-	
CC-6	-	-	-		-	
CC-7	-	-	-		-	
NEXANT, INC	-	-	-	-	[redacted]	[redacted]
172151E	-	-	-	-		
NORTHEAST ENERGY E	-	-	-	-	[redacted]	[redacted]
4804	-	-	-	-		
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
06-24-14	-	-	-	-		
7831APR14	-	-	-	-		
7831AUG14	-	-	-	-		
7831JUL14	-	-	-	-		
7831JUN14	-	-	-	-		
7831SEP14	-	-	-	-		
7647CAPE314	-	-	-	-		
7647CAPEAPR14	-	-	-	-		
7647CAPEAUG14	-	-	-	-		
7647CAPEDEC13	-	-	-	-		
7647CAPEFEB1	-	-	-	-		
7647CAPEJAN14	-	-	-	-		

Vendor Invoice Summary Table

1. Residential Whole House

Residential Home Energy Services

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Residential Home Energy Services						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
RISE ENGINEERING	-	-	[redacted]	[redacted]	-	[redacted]
111768	-	-	[redacted]	[redacted]	-	[redacted]
112075	-	-	[redacted]	-	-	[redacted]
112606	-	-	[redacted]	[redacted]	-	[redacted]
112967	-	-	[redacted]	-	-	[redacted]
113449	-	-	[redacted]	[redacted]	-	[redacted]
113919	-	-	[redacted]	-	-	[redacted]
114405	-	-	[redacted]	[redacted]	-	[redacted]
115003	-	-	[redacted]	-	-	[redacted]
115326	-	-	[redacted]	[redacted]	-	[redacted]
115833	-	-	[redacted]	-	-	[redacted]
116377	-	-	[redacted]	[redacted]	-	[redacted]
116879	-	-	[redacted]	-	-	[redacted]
117061	-	-	[redacted]	[redacted]	-	[redacted]
117519	-	-	[redacted]	-	-	[redacted]
117895	-	-	[redacted]	[redacted]	-	[redacted]
118400	-	-	[redacted]	-	-	[redacted]
119147	-	-	[redacted]	[redacted]	-	[redacted]
119472	-	-	[redacted]	-	-	[redacted]
119950	-	-	[redacted]	[redacted]	-	[redacted]
120485	-	-	[redacted]	-	-	[redacted]
121103	-	-	[redacted]	[redacted]	-	[redacted]
121615	-	-	[redacted]	[redacted]	-	[redacted]
CM119319	-	-	[redacted]	-	-	[redacted]
W/E 06/06/14	-	-	[redacted]	-	-	[redacted]
W/E 1/17/2014	-	-	[redacted]	-	-	[redacted]
W/E 1/24/2014	-	-	[redacted]	-	-	[redacted]
W/E 10/17/2014	-	-	[redacted]	-	-	[redacted]
W/E 10/24/2014	-	-	[redacted]	-	-	[redacted]
W/E 10/3/2014	-	-	[redacted]	-	-	[redacted]
W/E 10/31/2014	-	-	[redacted]	-	-	[redacted]
W/E 11/14/2014	-	-	[redacted]	-	-	[redacted]
W/E 11/21/2014	-	-	[redacted]	-	-	[redacted]
W/E 11/26/2014	-	-	[redacted]	-	-	[redacted]
W/E 11/7/2014	-	-	[redacted]	-	-	[redacted]
W/E 12/12/2014	-	-	[redacted]	-	-	[redacted]
W/E 12/19/2014	-	-	[redacted]	-	-	[redacted]
W/E 12/26/2014	-	-	[redacted]	-	-	[redacted]
W/E 12/31/2014	-	-	[redacted]	-	-	[redacted]
W/E 12/5/2014	-	-	[redacted]	-	-	[redacted]
W/E 2/14/2014	-	-	[redacted]	-	-	[redacted]
W/E 2/21/2014	-	-	[redacted]	-	-	[redacted]
W/E 2/28/14	-	-	[redacted]	-	-	[redacted]
W/E 2/3/14	-	-	[redacted]	-	-	[redacted]
W/E 2/7/14	-	-	[redacted]	-	-	[redacted]
W/E 3/14/2014	-	-	[redacted]	-	-	[redacted]
W/E 3/21/2014	-	-	[redacted]	-	-	[redacted]
W/E 3/28/2014	-	-	[redacted]	-	-	[redacted]
W/E 3/7/2014	-	-	[redacted]	-	-	[redacted]
W/E 4/11/2014	-	-	[redacted]	-	-	[redacted]
W/E 4/18/2014	-	-	[redacted]	-	-	[redacted]
W/E 4/25/2014	-	-	[redacted]	-	-	[redacted]
W/E 4/4/2014	-	-	[redacted]	-	-	[redacted]
W/E 5/16/2014	-	-	[redacted]	-	-	[redacted]
W/E 5/2/2014	-	-	[redacted]	-	-	[redacted]
W/E 5-23-14	-	-	[redacted]	-	-	[redacted]
W/E 5-9-2014	-	-	[redacted]	-	-	[redacted]
W/E 6/13/2014	-	-	[redacted]	-	-	[redacted]
W/E 6/20/14	-	-	[redacted]	-	-	[redacted]
W/E 6/27/2014	-	-	[redacted]	-	-	[redacted]
W/E 7/11/2014	-	-	[redacted]	-	-	[redacted]
W/E 7/18/2014-R	-	-	[redacted]	-	-	[redacted]
W/E 7/25/2014	-	-	[redacted]	-	-	[redacted]
W/E 7/3/2014	-	-	[redacted]	-	-	[redacted]
W/E 8/1/2014	-	-	[redacted]	-	-	[redacted]
W/E 8/15/2014	-	-	[redacted]	-	-	[redacted]
W/E 8/29/2014	-	-	[redacted]	-	-	[redacted]
W/E 8/8/2014	-	-	[redacted]	-	-	[redacted]
W/E 9/12/14	-	-	[redacted]	-	-	[redacted]
W/E 9/19/2014	-	-	[redacted]	-	-	[redacted]
W/E 9/26/2014	-	-	[redacted]	-	-	[redacted]
W/E 9/5/2014	-	-	[redacted]	-	-	[redacted]
W/E08-22-14	-	-	[redacted]	-	-	[redacted]
W/E10-10-14	-	-	[redacted]	-	-	[redacted]
117812	-	-	-	[redacted]	-	[redacted]
W/E 5/30/2014	-	-	-	[redacted]	-	[redacted]

Vendor Invoice Summary Table

1. Residential Whole House

Residential Home Energy Services

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Residential Home Energy Services						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
RIVER ENERGY CONSULT - Ansafone, River Energy Consultants, Sprint	-	[redacted]	-	[redacted]	-	[redacted]
8209	-		-	-	-	
7311	-		-	[redacted]	-	
7602	-		-		-	
7697	-		-		-	
7794	-		-		-	
8036	-		-		-	
7447	-		-		-	
7881	-	-	-		-	
8336	-	-	-		-	
8502	-	-	-		-	
8699	-	-	-		-	
RIVER ENERGY CONSULT - Baker's Best	-	-	-		-	
8465	-	-	-		-	
RIVER ENERGY CONSULT - CBS Radio	-	[redacted]	-	-	-	
7936	-		-	-	-	
RIVER ENERGY CONSULT - Endicott Estate	-	-	-	[redacted]	-	
8218	-	-	-		-	
RIVER ENERGY CONSULT - Greater Media Radio	-	[redacted]	-	-	-	
7909	-		-	-	-	
8073	-		-	-	-	
8236	-		-	-	-	
8368	-		-	-	-	
8537	-		-	-	-	
8598	-		-	-	-	
8744	-		-	-	-	
RIVER ENERGY CONSULT - Residential Meetings	-	-	-	[redacted]		
8719	-	-	-			
RIVER ENERGY CONSULT - Stop & Shop	-	-	-		-	
8511	-	-	-		-	
TETRA TECH MA, INC.	-	-	-	-	[redacted]	
50773141	-	-	-	-		
50776627	-	-	-	-		
50789453	-	-	-	-		
50789474	-	-	-	-		
50789483	-	-	-	-		
50789610	-	-	-	-		
50789659	-	-	-	-		
50800432	-	-	-	-		
50800461	-	-	-	-		
50800475	-	-	-	-		
50814613	-	-	-	-		
50814650	-	-	-	-		
50822044	-	-	-	-		
50822062	-	-	-	-		
50825145	-	-	-	-		
50825181	-	-	-	-		
50832020	-	-	-	-		
50832038	-	-	-	-		
50834639	-	-	-	-		
50834675	-	-	-	-		
50834693	-	-	-	-		
50848296	-	-	-	-		
50848335	-	-	-	-		
50848359	-	-	-	-		
50848683	-	-	-	-		
50848701	-	-	-	-		
50860344	-	-	-	-		
50860376	-	-	-	-		
50860413	-	-	-	-		
50860431	-	-	-	-		
50860449	-	-	-	-		
50861006	-	-	-	-		
50861025	-	-	-	-		
50861034	-	-	-	-		
Grand Total	[redacted]					

Vendor Invoice Summary Table

1. Residential Whole House

Residential Behavior/Feedback Program

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Residential Behavior/Feedback Program						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
PEOPLE POWER COMPANY	-	[redacted]	[redacted]	[redacted]	-	[redacted]
CLC006	-	-	[redacted]	[redacted]	-	[redacted]
CLC007	-	-	[redacted]	[redacted]	-	[redacted]
CLC009	-	-	[redacted]	[redacted]	-	[redacted]
CLC010	-	-	[redacted]	-	-	[redacted]
CLC011	-	-	[redacted]	-	-	[redacted]
CLC012	-	[redacted]	[redacted]	-	-	[redacted]
CLC 001	-	[redacted]	-	[redacted]	-	[redacted]
CLC 003	-	[redacted]	-	[redacted]	-	[redacted]
CLC004	-	-	-	[redacted]	-	[redacted]
CLC005	-	-	-	[redacted]	-	[redacted]
Grand Total	**-**	[redacted]	[redacted]	[redacted]	**-**	[redacted]

Vendor Invoice Summary Table

2. Residential Products

Residential Cooling & Heating Equipment

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Residential Cooling & Heating Equipment						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CADMUS GROUP	-	-	-	-	[redacted]	[redacted]
INV-178771	-	-	-	-	[redacted]	[redacted]
INV-182765	-	-	-	-	[redacted]	[redacted]
INV-192091	-	-	-	-	[redacted]	[redacted]
INV-194354	-	-	-	-	[redacted]	[redacted]
INV-172308	-	-	-	-	[redacted]	[redacted]
INV-190123	-	-	-	-	[redacted]	[redacted]
CONSERVATION SERVICE	-	[redacted]	[redacted]	[redacted]	-	[redacted]
61-CAPE LIGHT	-	[redacted]	[redacted]	[redacted]	-	[redacted]
62-CAPE-LIGHT	-	[redacted]	[redacted]	[redacted]	-	[redacted]
63-CAPE LIGHT	-	[redacted]	[redacted]	[redacted]	-	[redacted]
64-CAPE LIGHT	-	[redacted]	[redacted]	[redacted]	-	[redacted]
65-CAPE-LIGHT	-	[redacted]	[redacted]	[redacted]	-	[redacted]
66-CAPE-LIGHT	-	[redacted]	[redacted]	[redacted]	-	[redacted]
67-CAPE LIGHT	-	[redacted]	[redacted]	[redacted]	-	[redacted]
68-CAPE-LIGHT	-	[redacted]	[redacted]	[redacted]	-	[redacted]
69-CAPE LIGHT	-	-	[redacted]	-	-	[redacted]
70-CAPE LIGHT	-	-	[redacted]	-	-	[redacted]
71-CAPE LIGHT	-	-	[redacted]	[redacted]	-	[redacted]
72-CAPELIGHT	-	-	[redacted]	-	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
06-24-14	-	-	-	-	[redacted]	[redacted]
7831APR14	-	-	-	-	[redacted]	[redacted]
7831AUG14	-	-	-	-	[redacted]	[redacted]
7831JUL14	-	-	-	-	[redacted]	[redacted]
7831JUN14	-	-	-	-	[redacted]	[redacted]
7831SEP14	-	-	-	-	[redacted]	[redacted]
RIVER ENERGY CONSULT - Baker's Best	-	-	-	[redacted]	-	[redacted]
8465	-	-	-	[redacted]	-	[redacted]
RIVER ENERGY CONSULT - Stop & Shop	-	-	-	[redacted]	-	[redacted]
8511	-	-	-	[redacted]	-	[redacted]

Vendor Invoice Summary Table

2. Residential Products

Residential Cooling & Heating Equipment

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Residential Cooling & Heating Equipment						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
PARAGO SERVICES CORP	-	-	[redacted]	[redacted]	-	[redacted]
200003	-	-	[redacted]	-	-	[redacted]
240002	-	-	[redacted]	-	-	[redacted]
240040	-	-	[redacted]	-	-	[redacted]
240072	-	-	[redacted]	-	-	[redacted]
244021	-	-	[redacted]	-	-	[redacted]
250005	-	-	[redacted]	-	-	[redacted]
250012	-	-	[redacted]	-	-	[redacted]
0096315-IN	-	-	[redacted]	-	-	[redacted]
0096342-IN	-	-	[redacted]	-	-	[redacted]
0096343-IN	-	-	[redacted]	-	-	[redacted]
0096344-IN	-	-	[redacted]	-	-	[redacted]
0097242-IN	-	-	[redacted]	-	-	[redacted]
0097458-IN	-	-	[redacted]	-	-	[redacted]
0097610-IN	-	-	[redacted]	-	-	[redacted]
0097772-IN	-	-	[redacted]	-	-	[redacted]
0097851-IN	-	-	[redacted]	-	-	[redacted]
0098205-IN	-	-	[redacted]	-	-	[redacted]
0098326-IN	-	-	[redacted]	-	-	[redacted]
0098484-IN	-	-	[redacted]	-	-	[redacted]
0098641-IN	-	-	[redacted]	-	-	[redacted]
0100585-IN	-	-	[redacted]	-	-	[redacted]
0100683-IN	-	-	[redacted]	-	-	[redacted]
4Q 240188	-	-	[redacted]	-	-	[redacted]
4Q 240211	-	-	[redacted]	-	-	[redacted]
4Q 240237	-	-	[redacted]	-	-	[redacted]
4Q 240261	-	-	[redacted]	-	-	[redacted]
4Q 240290	-	-	[redacted]	-	-	[redacted]
4Q 240318	-	-	[redacted]	-	-	[redacted]
4Q 240346	-	-	[redacted]	-	-	[redacted]
4Q 240375	-	-	[redacted]	-	-	[redacted]
4Q-240100	-	-	[redacted]	-	-	[redacted]
4Q240125	-	-	[redacted]	-	-	[redacted]
4Q240159	-	-	[redacted]	-	-	[redacted]
5G 250017	-	-	[redacted]	-	-	[redacted]
5G 250039	-	-	[redacted]	-	-	[redacted]
5G 250046	-	-	[redacted]	-	-	[redacted]
5G 250053	-	-	[redacted]	-	-	[redacted]
5G 250060	-	-	[redacted]	-	-	[redacted]
5G 250067	-	-	[redacted]	-	-	[redacted]
5G 250074	-	-	[redacted]	-	-	[redacted]
5G-250024	-	-	[redacted]	-	-	[redacted]
5G-250031	-	-	[redacted]	-	-	[redacted]
5G-250033	-	-	[redacted]	-	-	[redacted]
5G250081	-	-	[redacted]	-	-	[redacted]
5G250088	-	-	[redacted]	-	-	[redacted]
5G250095	-	-	[redacted]	-	-	[redacted]
0095310-IN	-	-	-	[redacted]	-	[redacted]
0097685-IN	-	-	-	[redacted]	-	[redacted]
0098282-IN	-	-	-	[redacted]	-	[redacted]
0100549-IN	-	-	-	[redacted]	-	[redacted]
25ME005	-	-	-	[redacted]	-	[redacted]
5G 25ME017	-	-	-	[redacted]	-	[redacted]
5G 25ME023	-	-	-	[redacted]	-	[redacted]
5G 25ME035	-	-	-	[redacted]	-	[redacted]
5G 25ME041	-	-	-	[redacted]	-	[redacted]
5G 25ME047	-	-	-	[redacted]	-	[redacted]
5G-25ME011	-	-	-	[redacted]	-	[redacted]
5G25ME053	-	-	-	[redacted]	-	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table

2. Residential Products

Residential Lighting

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Residential Lighting						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CADMUS GROUP	-	[redacted]	-	-	[redacted]	[redacted]
INV-169701	-	-	-	-	[redacted]	[redacted]
INV-175319	-	-	-	-	[redacted]	[redacted]
INV-178771	-	-	-	-	[redacted]	[redacted]
INV-182765	-	-	-	-	[redacted]	[redacted]
INV-185002	-	-	-	-	[redacted]	[redacted]
INV-188175	-	-	-	-	[redacted]	[redacted]
INV-192091	-	-	-	-	[redacted]	[redacted]
INV-194354	-	-	-	-	[redacted]	[redacted]
INV-200492	-	-	-	-	[redacted]	[redacted]
INV-172308	-	-	-	-	[redacted]	[redacted]
INV-190123	-	-	-	-	[redacted]	[redacted]
INV-169476	-	[redacted]	-	-	-	[redacted]
INV-169481	-	[redacted]	-	-	-	[redacted]
INV-170667	-	[redacted]	-	-	-	[redacted]
INV-170672	-	[redacted]	-	-	-	[redacted]
INV-173680	-	[redacted]	-	-	-	[redacted]
INV-173685	-	[redacted]	-	-	-	[redacted]
INV-177250	-	[redacted]	-	-	-	[redacted]
INV-177255	-	[redacted]	-	-	-	[redacted]
INV-179844	-	[redacted]	-	-	-	[redacted]
INV-179849	-	[redacted]	-	-	-	[redacted]
INV-183431	-	[redacted]	-	-	-	[redacted]
INV-183436	-	[redacted]	-	-	-	[redacted]
INV-186076	-	[redacted]	-	-	-	[redacted]
INV-186082	-	[redacted]	-	-	-	[redacted]
INV-188964	-	[redacted]	-	-	-	[redacted]
INV-188970	-	[redacted]	-	-	-	[redacted]
INV-191835	-	[redacted]	-	-	-	[redacted]
INV-191840	-	[redacted]	-	-	-	[redacted]
INV-193362	-	[redacted]	-	-	-	[redacted]
INV-193364	-	[redacted]	-	-	-	[redacted]
INV-199829	-	[redacted]	-	-	-	[redacted]
INV-199835	-	[redacted]	-	-	-	[redacted]
CONSORTIUM FOR ENERG	-	-	-	[redacted]	-	[redacted]
LFT2014-05	-	-	-	[redacted]	-	[redacted]

Vendor Invoice Summary Table

2. Residential Products

Residential Lighting

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Residential Lighting						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
ENERGY FEDERATION	-	[redacted]	[redacted]	-	-	[redacted]
0115579-IN	-	-	[redacted]	-	-	[redacted]
0155462-IN	-	-	[redacted]	-	-	[redacted]
0892406-IN	-	-	[redacted]	-	-	[redacted]
0895906-IN	-	-	[redacted]	-	-	[redacted]
0897148-IN	-	-	[redacted]	-	-	[redacted]
0897165-IN	-	-	[redacted]	-	-	[redacted]
0897199-IN	-	-	[redacted]	-	-	[redacted]
0908097-IN	-	-	[redacted]	-	-	[redacted]
0921154-IN	-	-	[redacted]	-	-	[redacted]
0921155-IN	-	-	[redacted]	-	-	[redacted]
0923015-IN	-	-	[redacted]	-	-	[redacted]
0926564-IN	-	-	[redacted]	-	-	[redacted]
0934437-IN	-	-	[redacted]	-	-	[redacted]
0960612-IN	-	-	[redacted]	-	-	[redacted]
0971936-IN	-	-	[redacted]	-	-	[redacted]
0979925-IN	-	-	[redacted]	-	-	[redacted]
0992398-IN	-	-	[redacted]	-	-	[redacted]
0946687-IN	-	[redacted]	-	-	-	[redacted]
LOCKHEED MARTIN	-	-	-	[redacted]	-	[redacted]
21352876	-	-	-	[redacted]	-	[redacted]
21352886	-	-	-	[redacted]	-	[redacted]
21369786	-	-	-	[redacted]	-	[redacted]
21369795	-	-	-	[redacted]	-	[redacted]
21394356	-	-	-	[redacted]	-	[redacted]
21394366	-	-	-	[redacted]	-	[redacted]
21410243	-	-	-	[redacted]	-	[redacted]
21410255	-	-	-	[redacted]	-	[redacted]
21427804	-	-	-	[redacted]	-	[redacted]
21427857	-	-	-	[redacted]	-	[redacted]
21441761	-	-	-	[redacted]	-	[redacted]
21441763	-	-	-	[redacted]	-	[redacted]
21461693	-	-	-	[redacted]	-	[redacted]
21461694	-	-	-	[redacted]	-	[redacted]
21475001	-	-	-	[redacted]	-	[redacted]
21475002	-	-	-	[redacted]	-	[redacted]
21491074	-	-	-	[redacted]	-	[redacted]
21491075	-	-	-	[redacted]	-	[redacted]
21506863	-	-	-	[redacted]	-	[redacted]
21506864	-	-	-	[redacted]	-	[redacted]
21521644	-	-	-	[redacted]	-	[redacted]
21521645	-	-	-	[redacted]	-	[redacted]
21529337	-	-	-	[redacted]	-	[redacted]
21532371	-	-	-	[redacted]	-	[redacted]
MAXLITE, INC	-	-	[redacted]	-	-	[redacted]
504889	-	-	[redacted]	-	-	[redacted]
507553	-	-	[redacted]	-	-	[redacted]
NMR GROUP, INC.	-	-	-	-	[redacted]	[redacted]
2156AD	-	-	-	-	[redacted]	[redacted]
2156AE	-	-	-	-	[redacted]	[redacted]
NORTHEAST ENERGY E	-	-	-	[redacted]	-	[redacted]
NEEP-2014	-	-	-	[redacted]	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
06-24-14	-	-	-	-	[redacted]	[redacted]
7831APR14	-	-	-	-	[redacted]	[redacted]
7831AUG14	-	-	-	-	[redacted]	[redacted]
7831JUL14	-	-	-	-	[redacted]	[redacted]
7831JUN14	-	-	-	-	[redacted]	[redacted]
7831SEP14	-	-	-	-	[redacted]	[redacted]

Vendor Invoice Summary Table

2. Residential Products

Residential Lighting

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Residential Lighting						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
PARAGO SERVICES CORP	-	[redacted]	[redacted]	[redacted]	-	[redacted]
220000	-	-	[redacted]	-	-	[redacted]
220002	-	-	[redacted]	-	-	[redacted]
220024	-	-	[redacted]	-	-	[redacted]
220026	-	-	[redacted]	-	-	[redacted]
220042	-	-	[redacted]	-	-	[redacted]
220044	-	-	[redacted]	-	-	[redacted]
0097262-IN	-	-	[redacted]	-	-	[redacted]
0097264-IN	-	-	[redacted]	-	-	[redacted]
0097770-IN	-	-	[redacted]	-	-	[redacted]
0097899-IN	-	-	[redacted]	-	-	[redacted]
0098158-IN	-	-	[redacted]	-	-	[redacted]
0098160-IN	-	-	[redacted]	-	-	[redacted]
0098493-IN	-	-	[redacted]	-	-	[redacted]
0100618-IN	-	-	[redacted]	-	-	[redacted]
0100631-IN	-	-	[redacted]	-	-	[redacted]
2E 220060	-	-	[redacted]	-	-	[redacted]
2E 220062	-	-	[redacted]	-	-	[redacted]
2E 220127	-	-	[redacted]	-	-	[redacted]
2E 220164	-	-	[redacted]	-	-	[redacted]
2E 220166	-	-	[redacted]	-	-	[redacted]
2E 220183	-	-	[redacted]	-	-	[redacted]
2E 220185	-	-	[redacted]	-	-	[redacted]
2E 220204	-	-	[redacted]	-	-	[redacted]
2E 220224	-	-	[redacted]	-	-	[redacted]
2E 220226	-	-	[redacted]	-	-	[redacted]
2E 220243	-	-	[redacted]	-	-	[redacted]
2E 220248	-	-	[redacted]	-	-	[redacted]
2E 220250	-	-	[redacted]	-	-	[redacted]
2E 220267	-	-	[redacted]	-	-	[redacted]
2E 220269	-	-	[redacted]	-	-	[redacted]
2E 220287	-	-	[redacted]	-	-	[redacted]
2E 220289	-	-	[redacted]	-	-	[redacted]
2E-220082	-	-	[redacted]	-	-	[redacted]
2E-220084	-	-	[redacted]	-	-	[redacted]
2E-220104	-	-	[redacted]	-	-	[redacted]
2E-220106	-	-	[redacted]	-	-	[redacted]
2E220144	-	-	[redacted]	-	-	[redacted]
2E220146	-	-	[redacted]	-	-	[redacted]
2E220290	-	-	[redacted]	-	-	[redacted]
2E220292	-	-	[redacted]	-	-	[redacted]
0098506-IN	-	[redacted]	-	-	-	[redacted]
0097567-IN	-	-	-	[redacted]	-	[redacted]
0098186-IN	-	-	-	[redacted]	-	[redacted]
0100521-IN	-	-	-	[redacted]	-	[redacted]
22ME005	-	-	-	[redacted]	-	[redacted]
22ME011	-	-	-	[redacted]	-	[redacted]
22ME017	-	-	-	[redacted]	-	[redacted]
22ME023	-	-	-	[redacted]	-	[redacted]
2E 22ME029	-	-	-	[redacted]	-	[redacted]
2E 22ME035	-	-	-	[redacted]	-	[redacted]
2E22ME047	-	-	-	[redacted]	-	[redacted]
2eE22ME041	-	-	-	[redacted]	-	[redacted]
RIVER ENERGY CONSULT - Baker's Best	-	-	-	[redacted]	-	[redacted]
8465	-	-	-	[redacted]	-	[redacted]
RIVER ENERGY CONSULT - Stop & Shop	-	-	-	[redacted]	-	[redacted]
8511	-	-	-	[redacted]	-	[redacted]
TECHNIART, INC.	-	[redacted]	[redacted]	-	-	[redacted]
11289	-	-	[redacted]	-	-	[redacted]
11290	-	-	[redacted]	-	-	[redacted]
11030	-	[redacted]	-	-	-	[redacted]
11291	-	[redacted]	-	-	-	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table

2. Residential Products

Residential Consumer Products

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Residential Consumer Products						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CADMUS GROUP	-	[redacted]	-	-	[redacted]	[redacted]
INV-169701	-	-	-	-	[redacted]	[redacted]
INV-169476	-	[redacted]	-	-	-	[redacted]
INV-169481	-	[redacted]	-	-	-	[redacted]
INV-170667	-	[redacted]	-	-	-	[redacted]
INV-170672	-	[redacted]	-	-	-	[redacted]
INV-173680	-	[redacted]	-	-	-	[redacted]
INV-173685	-	[redacted]	-	-	-	[redacted]
INV-177250	-	[redacted]	-	-	-	[redacted]
INV-177255	-	[redacted]	-	-	-	[redacted]
INV-179844	-	[redacted]	-	-	-	[redacted]
INV-179849	-	[redacted]	-	-	-	[redacted]
INV-183431	-	[redacted]	-	-	-	[redacted]
INV-183436	-	[redacted]	-	-	-	[redacted]
INV-186076	-	[redacted]	-	-	-	[redacted]
INV-186082	-	[redacted]	-	-	-	[redacted]
INV-188964	-	[redacted]	-	-	-	[redacted]
INV-188970	-	[redacted]	-	-	-	[redacted]
INV-191835	-	[redacted]	-	-	-	[redacted]
INV-191840	-	[redacted]	-	-	-	[redacted]
INV-193362	-	[redacted]	-	-	-	[redacted]
INV-193364	-	[redacted]	-	-	-	[redacted]
INV-199829	-	[redacted]	-	-	-	[redacted]
INV-199835	-	[redacted]	-	-	-	[redacted]
CAPE COD MEDIA GROUP	-	[redacted]	-	-	-	[redacted]
0000030625	-	[redacted]	-	-	-	[redacted]

Vendor Invoice Summary Table

2. Residential Products

Residential Consumer Products

Cape Light Compact

2014 Residential Consumer Products						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
ENERGY FEDERATION	-	-	[redacted]	-	-	[redacted]
0897148-IN	-	-		-	-	
0897165-IN	-	-		-	-	
0897199-IN	-	-		-	-	
0921154-IN	-	-		-	-	
0921155-IN	-	-		-	-	
0926564-IN	-	-		-	-	
0115580-IN	-	-		-	-	
0115581-IN	-	-		-	-	
0155463-IN	-	-		-	-	
0155464-IN	-	-		-	-	
0895907-IN	-	-		-	-	
0901277-IN	-	-		-	-	
0908098-IN	-	-		-	-	
0908100-IN	-	-		-	-	
0923017-IN	-	-		-	-	
0923020-IN	-	-		-	-	
0934440-IN	-	-		-	-	
0946690-IN	-	-		-	-	
0960617-IN	-	-		-	-	
0971938-IN	-	-		-	-	
0979927-IN	-	-		-	-	
0992399-IN	-	-		-	-	
0992400-IN	-	-		-	-	
HERITAGE PRESS, INC.	-	[redacted]	-	-	-	
93805	-		-	-	-	
JACO ENVORONMENTAL	-	-	[redacted]		-	
CC544	-	-			-	
CC545	-	-			-	
CC546	-	-			-	
CC547	-	-			-	
CC548	-	-			-	
CC549	-	-			-	
CC550	-	-			-	
CC551	-	-			-	
CC552	-	-			-	
CC553	-	-			-	
CC554	-	-			-	
LOCKHEED MARTIN	-	-	-	[redacted]	-	
21352876	-	-	-		-	
21352886	-	-	-		-	
21369786	-	-	-		-	
21369795	-	-	-		-	
21394356	-	-	-		-	
21394366	-	-	-		-	
21410243	-	-	-		-	
21410255	-	-	-		-	
21427804	-	-	-		-	
21427857	-	-	-		-	
21441761	-	-	-		-	
21441763	-	-	-		-	
21461693	-	-	-		-	
21461694	-	-	-		-	
21475001	-	-	-		-	
21475002	-	-	-		-	
21491074	-	-	-		-	
21491075	-	-	-		-	
21506863	-	-	-		-	
21506864	-	-	-		-	
21521644	-	-	-		-	
21521645	-	-	-		-	
21529337	-	-	-		-	
21532371	-	-	-		-	
NORTHEAST ENERGY E	-	-	-		-	
NEEP-2014	-	-	-		-	
OPINION DYNAMICS	-	-	-	-	[redacted]	
06-24-14	-	-	-	-		
7831APR14	-	-	-	-		
7831AUG14	-	-	-	-		
7831JUL14	-	-	-	-		
7831JUN14	-	-	-	-		
7831SEP14	-	-	-	-		

Vendor Invoice Summary Table

2. Residential Products

Residential Consumer Products

Cape Light Compact

2014 Residential Consumer Products						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
PARAGO SERVICES CORP	-	[redacted]	[redacted]	[redacted]	-	[redacted]
210006	-	-	[redacted]	-	-	[redacted]
220001	-	-	[redacted]	-	-	[redacted]
220043	-	-	[redacted]	-	-	[redacted]
2100000	-	-	[redacted]	-	-	[redacted]
0095350-IN	-	-	[redacted]	-	-	[redacted]
0097251-IN	-	-	[redacted]	-	-	[redacted]
0097263-IN	-	-	[redacted]	-	-	[redacted]
0097424-IN	-	-	[redacted]	-	-	[redacted]
0097771-IN	-	-	[redacted]	-	-	[redacted]
0097900-IN	-	-	[redacted]	-	-	[redacted]
0097968-IN	-	-	[redacted]	-	-	[redacted]
0098159-IN	-	-	[redacted]	-	-	[redacted]
0098372-IN	-	-	[redacted]	-	-	[redacted]
0098436-IN	-	-	[redacted]	-	-	[redacted]
0100459-IN	-	-	[redacted]	-	-	[redacted]
0100617-IN	-	-	[redacted]	-	-	[redacted]
0100746-IN	-	-	[redacted]	-	-	[redacted]
1F 210044	-	-	[redacted]	-	-	[redacted]
1P 210019	-	-	[redacted]	-	-	[redacted]
1P 210026	-	-	[redacted]	-	-	[redacted]
1P 210037	-	-	[redacted]	-	-	[redacted]
1P 210043	-	-	[redacted]	-	-	[redacted]
1P 210049	-	-	[redacted]	-	-	[redacted]
1P 210055	-	-	[redacted]	-	-	[redacted]
1P 210061	-	-	[redacted]	-	-	[redacted]
1P 210078	-	-	[redacted]	-	-	[redacted]
1P 211067	-	-	[redacted]	-	-	[redacted]
1P-210013	-	-	[redacted]	-	-	[redacted]
1P-210031	-	-	[redacted]	-	-	[redacted]
1P210086	-	-	[redacted]	-	-	[redacted]
1P210092	-	-	[redacted]	-	-	[redacted]
2E 220165	-	-	[redacted]	-	-	[redacted]
2E 220205	-	-	[redacted]	-	-	[redacted]
2E 220225	-	-	[redacted]	-	-	[redacted]
2E 220288	-	-	[redacted]	-	-	[redacted]
2E 220291	-	-	[redacted]	-	-	[redacted]
2E 220291A	-	-	[redacted]	-	-	[redacted]
2E-220083	-	-	[redacted]	-	-	[redacted]
2E-220105	-	-	[redacted]	-	-	[redacted]
2E220145	-	-	[redacted]	-	-	[redacted]
2E220268	-	-	[redacted]	-	-	[redacted]
IF 210075	-	-	[redacted]	-	-	[redacted]
2E 220310	-	[redacted]	-	-	-	[redacted]
0095304-IN	-	-	-	[redacted]	-	[redacted]
0097697-IN	-	-	-	[redacted]	-	[redacted]
0098308-IN	-	-	-	[redacted]	-	[redacted]
0100515-IN	-	-	-	[redacted]	-	[redacted]
1F 21ME017	-	-	-	[redacted]	-	[redacted]
1F 21ME029	-	-	-	[redacted]	-	[redacted]
1F 21ME035	-	-	-	[redacted]	-	[redacted]
1F 21ME047	-	-	-	[redacted]	-	[redacted]
1F-21ME011	-	-	-	[redacted]	-	[redacted]
1F21ME023	-	-	-	[redacted]	-	[redacted]
21ME005	-	-	-	[redacted]	-	[redacted]
IF 21ME041	-	-	-	[redacted]	-	[redacted]
RIVER ENERGY CONSULT - Baker's Best	-	-	-	[redacted]	-	[redacted]
8465	-	-	-	[redacted]	-	[redacted]
RIVER ENERGY CONSULT - Stop & Shop	-	-	-	[redacted]	-	[redacted]
8511	-	-	-	[redacted]	-	[redacted]
TECHNIART, INC.	-	-	[redacted]	-	-	[redacted]
11289	-	-	[redacted]	-	-	[redacted]
11290	-	-	[redacted]	-	-	[redacted]
TOPTEN USA	-	-	-	[redacted]	-	[redacted]
24	-	-	-	[redacted]	-	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table

4. Low-Income Whole House

Low-Income New Construction

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Low-Income New Construction						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
ICF RESOURCE	-	-	[redacted]	-	-	[redacted]
CAPE U11-14 LI	-	-	[redacted]	-	-	[redacted]
CAPE U3 LI	-	-	[redacted]	-	-	[redacted]
CAPE U9-14 LI	-	-	[redacted]	-	-	[redacted]
CAPE-U4-14-LI	-	-	[redacted]	-	-	[redacted]
CAPE-U8-14-LI	-	-	[redacted]	-	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
06-24-14	-	-	-	-	[redacted]	[redacted]
7831APR14	-	-	-	-	[redacted]	[redacted]
7831AUG14	-	-	-	-	[redacted]	[redacted]
7831JUL14	-	-	-	-	[redacted]	[redacted]
7831JUN14	-	-	-	-	[redacted]	[redacted]
7831SEP14	-	-	-	-	[redacted]	[redacted]
Grand Total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Vendor Invoice Summary Table

4. Low-Income Whole House

Low-Income Single Family Retrofit

Cape Light Compact

2014 Low-Income Single Family Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
14-806-01	-	-	-	[redacted]	-	[redacted]
14-806-02	-	-	-	[redacted]	-	[redacted]
14-806-03	-	-	-	[redacted]	-	[redacted]
14-806-04	-	-	-	[redacted]	-	[redacted]
14-806-05	-	-	-	[redacted]	-	[redacted]
14-806-06	-	-	-	[redacted]	-	[redacted]
14-806-07	-	-	-	[redacted]	-	[redacted]
14-806-10	-	-	-	[redacted]	-	[redacted]
14-806-8	-	-	-	[redacted]	-	[redacted]
14-806-9	-	-	-	[redacted]	-	[redacted]
ENERGY FEDERATION	-	[redacted]	[redacted]	-	-	[redacted]
CR0159627-CM	-	-	[redacted]	-	-	[redacted]
0925827-IN	-	[redacted]	-	-	-	[redacted]
HERITAGE PRESS, INC.	-	[redacted]	-	-	-	[redacted]
94535	-	[redacted]	-	-	-	[redacted]
HOUSING ASSISTANCE C	-	[redacted]	[redacted]	[redacted]	-	[redacted]
BL-2014-01B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-01BR	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-02B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-02BR	-	-	[redacted]	-	-	[redacted]
BL-2014-03B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-03BR	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-03BR2	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-04BR	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-05B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-05BR	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-06B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-06BR	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-07B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-07BR	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-08	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-08BR	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-09B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-09BR1	-	-	[redacted]	-	-	[redacted]
BL-2014-09BR2	-	-	[redacted]	-	-	[redacted]
BL-2014-10B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-11B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2014-11BR	-	-	[redacted]	-	-	[redacted]
BL-25014-04B	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2013-12	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2014-01	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2014-02	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2014-03	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2014-05	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2014-06	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2014-07	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2014-08	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2014-09	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2014-10A	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2014-10B	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2014-11	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2014-14	-	-	[redacted]	[redacted]	-	[redacted]
09.17.14_LISF_MARKET	-	[redacted]	-	-	-	[redacted]
12.11.14_LISF_	-	[redacted]	-	-	-	[redacted]

Vendor Invoice Summary Table

4. Low-Income Whole House

Low-Income Single Family Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Low-Income Single Family Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
JACOBSON ENERGY RESE	-	-	-	-	[redacted]	[redacted]
7	-	-	-	-	[redacted]	[redacted]
8	-	-	-	-	[redacted]	[redacted]
9	-	-	-	-	[redacted]	[redacted]
10	-	-	-	-	[redacted]	[redacted]
11	-	-	-	-	[redacted]	[redacted]
12	-	-	-	-	[redacted]	[redacted]
13	-	-	-	-	[redacted]	[redacted]
14	-	-	-	-	[redacted]	[redacted]
15	-	-	-	-	[redacted]	[redacted]
16	-	-	-	-	[redacted]	[redacted]
LIBERTY PRINTING	-	[redacted]	-	-	-	[redacted]
59404	-	[redacted]	-	-	-	[redacted]
NEXANT, INC	-	-	-	-	[redacted]	[redacted]
172151E	-	-	-	-	[redacted]	[redacted]
NORTHEAST ENERGY E	-	-	-	-	[redacted]	[redacted]
4804	-	-	-	-	[redacted]	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
06-24-14	-	-	-	-	[redacted]	[redacted]
7831APR14	-	-	-	-	[redacted]	[redacted]
7831AUG14	-	-	-	-	[redacted]	[redacted]
7831JUL14	-	-	-	-	[redacted]	[redacted]
7831JUN14	-	-	-	-	[redacted]	[redacted]
7831SEP14	-	-	-	-	[redacted]	[redacted]
RIVER ENERGY CONSULT - Ansafone, Verizon Business	-	[redacted]	-	-	-	[redacted]
8055	-	[redacted]	-	-	-	[redacted]
7628	-	[redacted]	-	-	-	[redacted]
7723	-	[redacted]	-	-	-	[redacted]
8429	-	[redacted]	-	-	-	[redacted]
8753	-	[redacted]	-	-	-	[redacted]
7395	-	[redacted]	-	-	-	[redacted]
7524	-	[redacted]	-	-	-	[redacted]
7822	-	[redacted]	-	-	-	[redacted]
7918	-	[redacted]	-	-	-	[redacted]
8259	-	[redacted]	-	-	-	[redacted]
8555	-	[redacted]	-	-	-	[redacted]
TETRA TECH MA, INC.	-	-	-	-	[redacted]	[redacted]
50789453	-	-	-	-	[redacted]	[redacted]
50789610	-	-	-	-	[redacted]	[redacted]
50800432	-	-	-	-	[redacted]	[redacted]
50814613	-	-	-	-	[redacted]	[redacted]
50822044	-	-	-	-	[redacted]	[redacted]
50825145	-	-	-	-	[redacted]	[redacted]
50832020	-	-	-	-	[redacted]	[redacted]
50834639	-	-	-	-	[redacted]	[redacted]
50848296	-	-	-	-	[redacted]	[redacted]
50848683	-	-	-	-	[redacted]	[redacted]
50860344	-	-	-	-	[redacted]	[redacted]
50860376	-	-	-	-	[redacted]	[redacted]
50861006	-	-	-	-	[redacted]	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table

4. Low-Income Whole House

Low-Income Multi-Family Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 Low-Income Multi-Family Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CADMUS GROUP	-	-	-	-	[redacted]	[redacted]
INV-192091	-	-	-	-	[redacted]	[redacted]
INV-194354	-	-	-	-	[redacted]	[redacted]
INV-190123	-	-	-	-	[redacted]	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
14-806-01	-	-	-	[redacted]	-	[redacted]
14-806-02	-	-	-	[redacted]	-	[redacted]
14-806-03	-	-	-	[redacted]	-	[redacted]
14-806-04	-	-	-	[redacted]	-	[redacted]
14-806-05	-	-	-	[redacted]	-	[redacted]
14-806-06	-	-	-	[redacted]	-	[redacted]
14-806-07	-	-	-	[redacted]	-	[redacted]
14-806-10	-	-	-	[redacted]	-	[redacted]
14-806-8	-	-	-	[redacted]	-	[redacted]
14-806-9	-	-	-	[redacted]	-	[redacted]
HOUSING ASSISTANCE C	-	-	[redacted]	[redacted]	-	[redacted]
02.05.2014_LIMF_BR_	-	-	[redacted]	[redacted]	-	[redacted]
02.05.2014LIMFBRKING	-	-	[redacted]	[redacted]	-	[redacted]
02.19.2014LIMFWZ50VI	-	-	[redacted]	[redacted]	-	[redacted]
02.20.2014_LIMF_WZ	-	-	[redacted]	[redacted]	-	[redacted]
03.14.14LIMFRQUEENST	-	-	[redacted]	[redacted]	-	[redacted]
04.29.2014_LIMF_B_	-	-	[redacted]	[redacted]	-	[redacted]
04.29.2014_LIMF_B_HU	-	-	[redacted]	[redacted]	-	[redacted]
06.04.2014_LIMF_B_MA	-	-	[redacted]	[redacted]	-	[redacted]
06.05.2014_LIMF_B_IN	-	-	[redacted]	[redacted]	-	[redacted]
08.14.2014_LIMF_B_14	-	-	[redacted]	[redacted]	-	[redacted]
08.14.2014_LIMF_BR_	-	-	[redacted]	[redacted]	-	[redacted]
08.15.2014_LIMF_B_71	-	-	[redacted]	[redacted]	-	[redacted]
08.18.2014_LIMF_B_58	-	-	[redacted]	[redacted]	-	[redacted]
08.19.2014_LIMF_BR_	-	-	[redacted]	[redacted]	-	[redacted]
08.31.2014_LIMF_B&BR	-	-	[redacted]	[redacted]	-	[redacted]
10.07.2014_LIMF_BR_7	-	-	[redacted]	[redacted]	-	[redacted]
10.08.2014_LIMF_B_IN	-	-	[redacted]	[redacted]	-	[redacted]
10.09.2014_LIMF_BR_I	-	-	[redacted]	-	-	[redacted]
11.03.2014_LIMF_WZ_	-	-	[redacted]	[redacted]	-	[redacted]
11.07.2014_LIMF_B_	-	-	[redacted]	[redacted]	-	[redacted]
11.10.2014_LIMF_B_	-	-	[redacted]	[redacted]	-	[redacted]
11.11.2014_LIMF_B_	-	-	[redacted]	[redacted]	-	[redacted]
11.21.2014_LIMF_BR_	-	-	[redacted]	[redacted]	-	[redacted]
11.24.2014_LIMF_BR_	-	-	[redacted]	[redacted]	-	[redacted]
12.02.2014_LIMF_B_	-	-	[redacted]	[redacted]	-	[redacted]
12.05.2014_LIMF_B_	-	-	[redacted]	[redacted]	-	[redacted]
12.10.2014_LIMF_WZ_	-	-	[redacted]	[redacted]	-	[redacted]
12.11.2014_LIMF_FIX_	-	-	[redacted]	[redacted]	-	[redacted]
12.12.2014_LIMF_11_B	-	-	[redacted]	[redacted]	-	[redacted]
LIMF-BR-FREDRICK-CT	-	-	[redacted]	[redacted]	-	[redacted]
LIMF-BR-INDIVIDUAL	-	-	[redacted]	[redacted]	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
06-24-14	-	-	-	-	[redacted]	[redacted]
7831APR14	-	-	-	-	[redacted]	[redacted]
7831AUG14	-	-	-	-	[redacted]	[redacted]
7831JUL14	-	-	-	-	[redacted]	[redacted]
7831JUN14	-	-	-	-	[redacted]	[redacted]
7831SEP14	-	-	-	-	[redacted]	[redacted]
Grand Total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Vendor Invoice Summary Table

6. C&I New Construction

C&I New Construction

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 C&I New Construction						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
13-806UP-12	-	-	-	[redacted]	-	[redacted]
14-806HV-06	-	-	-	[redacted]	-	[redacted]
14-806HV07	-	-	-	[redacted]	-	[redacted]
14-806HV-08	-	-	-	[redacted]	-	[redacted]
14-806HV-09	-	-	-	[redacted]	-	[redacted]
14-806HV-10	-	-	-	[redacted]	-	[redacted]
14-806HV-11	-	-	-	[redacted]	-	[redacted]
14-806UP-01	-	-	-	[redacted]	-	[redacted]
14-806UP-02	-	-	-	[redacted]	-	[redacted]
14-806UP-03	-	-	-	[redacted]	-	[redacted]
14-806UP-04	-	-	-	[redacted]	-	[redacted]
14-806UP-05	-	-	-	[redacted]	-	[redacted]
14-806UP-06	-	-	-	[redacted]	-	[redacted]
14-806UP-07	-	-	-	[redacted]	-	[redacted]
14-806UP-08	-	-	-	[redacted]	-	[redacted]
14-806UP-09	-	-	-	[redacted]	-	[redacted]
14-806UP-10	-	-	-	[redacted]	-	[redacted]
14-806UP-11	-	-	-	[redacted]	-	[redacted]
CONSERVATION SERVICE	-	-	-	[redacted]	-	[redacted]
4883	-	-	-	[redacted]	-	[redacted]
4927	-	-	-	[redacted]	-	[redacted]
4946	-	-	-	[redacted]	-	[redacted]
4991	-	-	-	[redacted]	-	[redacted]
5039	-	-	-	[redacted]	-	[redacted]
5067	-	-	-	[redacted]	-	[redacted]
CONSORTIUM FOR ENERG	-	-	-	[redacted]	-	[redacted]
M2014-25	-	-	-	[redacted]	-	[redacted]
DEMAND MANAGEMENT	-	-	-	[redacted]	-	[redacted]
201401CS	-	-	-	[redacted]	-	[redacted]
201402CS	-	-	-	[redacted]	-	[redacted]
201403CS	-	-	-	[redacted]	-	[redacted]
201404CS	-	-	-	[redacted]	-	[redacted]
201405CS	-	-	-	[redacted]	-	[redacted]
201406CS	-	-	-	[redacted]	-	[redacted]
201407CS	-	-	-	[redacted]	-	[redacted]
201408CS	-	-	-	[redacted]	-	[redacted]
201409CS	-	-	-	[redacted]	-	[redacted]
201410CS	-	-	-	[redacted]	-	[redacted]
201411CS	-	-	-	[redacted]	-	[redacted]
ECOVA, INC	-	-	[redacted]	[redacted]	-	[redacted]
1054506	-	-	[redacted]	-	-	[redacted]
1055806	-	-	[redacted]	-	-	[redacted]
1057306	-	-	[redacted]	-	-	[redacted]
1059206	-	-	[redacted]	-	-	[redacted]
1061006	-	-	[redacted]	-	-	[redacted]
1062506	-	-	[redacted]	-	-	[redacted]
1064006	-	-	[redacted]	-	-	[redacted]
1065406	-	-	[redacted]	-	-	[redacted]
1067206	-	-	[redacted]	-	-	[redacted]
2480086	-	-	[redacted]	-	-	[redacted]
105736A	-	-	[redacted]	-	-	[redacted]
10690CL	-	-	[redacted]	-	-	[redacted]
10704CL	-	-	[redacted]	-	-	[redacted]
105266A	-	-	-	[redacted]	-	[redacted]
105456A	-	-	-	[redacted]	-	[redacted]
105586A	-	-	-	[redacted]	-	[redacted]
105926A	-	-	-	[redacted]	-	[redacted]
106106A	-	-	-	[redacted]	-	[redacted]
106256A	-	-	-	[redacted]	-	[redacted]
106406A	-	-	-	[redacted]	-	[redacted]
106546A	-	-	-	[redacted]	-	[redacted]
106726A	-	-	-	[redacted]	-	[redacted]
107046A	-	-	-	[redacted]	-	[redacted]

Vendor Invoice Summary Table

6. C&I New Construction

C&I New Construction

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 C&I New Construction						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
ENERGY FEDERATION	-	-	[redacted]	[redacted]	-	[redacted]
0157586-IN	-	-	[redacted]	-	-	[redacted]
0164539-IN	-	-	[redacted]	-	-	[redacted]
0946092-IN	-	-	[redacted]	-	-	[redacted]
0971262-IN	-	-	[redacted]	-	-	[redacted]
0971621-IN	-	-	[redacted]	-	-	[redacted]
0994222-IN	-	-	[redacted]	-	-	[redacted]
0147603-IN	-	-	-	[redacted]	-	[redacted]
0905271-IN	-	-	-	[redacted]	-	[redacted]
0917675-IN	-	-	-	[redacted]	-	[redacted]
0929013-IN	-	-	-	[redacted]	-	[redacted]
0941102-IN	-	-	-	[redacted]	-	[redacted]
0955584-IN	-	-	-	[redacted]	-	[redacted]
0966631-IN	-	-	-	[redacted]	-	[redacted]
0976838-IN	-	-	-	[redacted]	-	[redacted]
0990341-IN	-	-	-	[redacted]	-	[redacted]
KEMA	-	-	-	-	[redacted]	[redacted]
20140081	-	-	-	-	[redacted]	[redacted]
20140238	-	-	-	-	[redacted]	[redacted]
20140519	-	-	-	-	[redacted]	[redacted]
20140546	-	-	-	-	[redacted]	[redacted]
20140778	-	-	-	-	[redacted]	[redacted]
20140850	-	-	-	-	[redacted]	[redacted]
20141077	-	-	-	-	[redacted]	[redacted]
20141265	-	-	-	-	[redacted]	[redacted]
20141537	-	-	-	-	[redacted]	[redacted]
20141729	-	-	-	-	[redacted]	[redacted]
20141856	-	-	-	-	[redacted]	[redacted]
20142040	-	-	-	-	[redacted]	[redacted]
20142084	-	-	-	-	[redacted]	[redacted]
20142323	-	-	-	-	[redacted]	[redacted]
20142378	-	-	-	-	[redacted]	[redacted]
20142529	-	-	-	-	[redacted]	[redacted]
20142676	-	-	-	-	[redacted]	[redacted]
20142873	-	-	-	-	[redacted]	[redacted]
20142988	-	-	-	-	[redacted]	[redacted]
20143338	-	-	-	-	[redacted]	[redacted]
20143467	-	-	-	-	[redacted]	[redacted]
20143621	-	-	-	-	[redacted]	[redacted]
20143854	-	-	-	-	[redacted]	[redacted]
20143870	-	-	-	-	[redacted]	[redacted]
NEW BUILDING INSTITU	-	-	-	[redacted]	-	[redacted]
2971	-	-	-	[redacted]	-	[redacted]
NORTHEAST ENERGY E	-	-	-	[redacted]	-	[redacted]
NEEP-2014	-	-	-	[redacted]	-	[redacted]
4826	-	-	-	[redacted]	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
06-24-14	-	-	-	-	[redacted]	[redacted]
7831APR14	-	-	-	-	[redacted]	[redacted]
7831AUG14	-	-	-	-	[redacted]	[redacted]
7831JUL14	-	-	-	-	[redacted]	[redacted]
7831JUN14	-	-	-	-	[redacted]	[redacted]
7831SEP14	-	-	-	-	[redacted]	[redacted]
PARAGO SERVICES CORP	-	-	[redacted]	-	-	[redacted]
0096345-IN	-	-	[redacted]	-	-	[redacted]
0098003-IN	-	-	[redacted]	-	-	[redacted]
0098390-IN	-	-	[redacted]	-	-	[redacted]

Vendor Invoice Summary Table

6. C&I New Construction

C&I New Construction

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 C&I New Construction						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
TETRA TECH MA, INC.	-	-	-	-	[redacted]	[redacted]
50789453	-	-	-	-	[redacted]	[redacted]
50789474	-	-	-	-	[redacted]	[redacted]
50789610	-	-	-	-	[redacted]	[redacted]
50800432	-	-	-	-	[redacted]	[redacted]
50800461	-	-	-	-	[redacted]	[redacted]
50814613	-	-	-	-	[redacted]	[redacted]
50814650	-	-	-	-	[redacted]	[redacted]
50822044	-	-	-	-	[redacted]	[redacted]
50825145	-	-	-	-	[redacted]	[redacted]
50832020	-	-	-	-	[redacted]	[redacted]
50834639	-	-	-	-	[redacted]	[redacted]
50834675	-	-	-	-	[redacted]	[redacted]
50848296	-	-	-	-	[redacted]	[redacted]
50848335	-	-	-	-	[redacted]	[redacted]
50848683	-	-	-	-	[redacted]	[redacted]
50848701	-	-	-	-	[redacted]	[redacted]
50860344	-	-	-	-	[redacted]	[redacted]
50789463	-	-	-	-	[redacted]	[redacted]
50789668	-	-	-	-	[redacted]	[redacted]
50800446	-	-	-	-	[redacted]	[redacted]
50814631	-	-	-	-	[redacted]	[redacted]
50822080	-	-	-	-	[redacted]	[redacted]
50825163	-	-	-	-	[redacted]	[redacted]
50834657	-	-	-	-	[redacted]	[redacted]
50848315	-	-	-	-	[redacted]	[redacted]
50860394	-	-	-	-	[redacted]	[redacted]
50861016	-	-	-	-	[redacted]	[redacted]
TRC ENGINEERS	-	-	-	[redacted]	-	[redacted]
12052	-	-	-	[redacted]	-	[redacted]
12865	-	-	-	[redacted]	-	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table

7. C&I Retrofit

C&I Retrofit

Cape Light Compact

2014 C&I Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CONSORTIUM FOR ENERG	-	-	-	[redacted]	-	[redacted]
M2014-25	-	-	-	[redacted]	-	[redacted]
DEMAND MANAGEMENT	-	-	-	[redacted]	-	[redacted]
201401CS	-	-	-	[redacted]	-	[redacted]
201402CS	-	-	-	[redacted]	-	[redacted]
201403CS	-	-	-	[redacted]	-	[redacted]
201404CS	-	-	-	[redacted]	-	[redacted]
201405CS	-	-	-	[redacted]	-	[redacted]
201406CS	-	-	-	[redacted]	-	[redacted]
201407CS	-	-	-	[redacted]	-	[redacted]
201408CS	-	-	-	[redacted]	-	[redacted]
201409CS	-	-	-	[redacted]	-	[redacted]
201410CS	-	-	-	[redacted]	-	[redacted]
201411CS	-	-	-	[redacted]	-	[redacted]
HONEYWELL	-	-	-	[redacted]	-	[redacted]
5227999471	-	-	-	[redacted]	-	[redacted]
5228063259	-	-	-	[redacted]	-	[redacted]
5228379715	-	-	-	[redacted]	-	[redacted]
5228582040	-	-	-	[redacted]	-	[redacted]
5228917612	-	-	-	[redacted]	-	[redacted]
5229098692	-	-	-	[redacted]	-	[redacted]
5229722064	-	-	-	[redacted]	-	[redacted]
5230144810	-	-	-	[redacted]	-	[redacted]
5230340185	-	-	-	[redacted]	-	[redacted]
5230730405	-	-	-	[redacted]	-	[redacted]
5231007091	-	-	-	[redacted]	-	[redacted]
5231277313	-	-	-	[redacted]	-	[redacted]
KELSEY-KENNARD PHOTO	-	-	[redacted]	-	-	[redacted]
32244	-	-	[redacted]	-	-	[redacted]
798756	-	-	[redacted]	-	-	[redacted]
KEMA	-	-	-	-	[redacted]	[redacted]
20140081	-	-	-	-	[redacted]	[redacted]
20140238	-	-	-	-	[redacted]	[redacted]
20140519	-	-	-	-	[redacted]	[redacted]
20140546	-	-	-	-	[redacted]	[redacted]
20140778	-	-	-	-	[redacted]	[redacted]
20140850	-	-	-	-	[redacted]	[redacted]
20141077	-	-	-	-	[redacted]	[redacted]
20141265	-	-	-	-	[redacted]	[redacted]
20141537	-	-	-	-	[redacted]	[redacted]
20141729	-	-	-	-	[redacted]	[redacted]
20141856	-	-	-	-	[redacted]	[redacted]
20142040	-	-	-	-	[redacted]	[redacted]
20142084	-	-	-	-	[redacted]	[redacted]
20142323	-	-	-	-	[redacted]	[redacted]
20142378	-	-	-	-	[redacted]	[redacted]
20142529	-	-	-	-	[redacted]	[redacted]
20142676	-	-	-	-	[redacted]	[redacted]
20142873	-	-	-	-	[redacted]	[redacted]
20142988	-	-	-	-	[redacted]	[redacted]
20143338	-	-	-	-	[redacted]	[redacted]
20143467	-	-	-	-	[redacted]	[redacted]
20143621	-	-	-	-	[redacted]	[redacted]
20143854	-	-	-	-	[redacted]	[redacted]
20143870	-	-	-	-	[redacted]	[redacted]
NORTHEAST ENERGY E	-	-	-	[redacted]	-	[redacted]
NEEP-2014	-	-	-	[redacted]	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
06-24-14	-	-	-	-	[redacted]	[redacted]
7831APR14	-	-	-	-	[redacted]	[redacted]
7831AUG14	-	-	-	-	[redacted]	[redacted]
7831JUL14	-	-	-	-	[redacted]	[redacted]
7831JUN14	-	-	-	-	[redacted]	[redacted]
7831SEP14	-	-	-	-	[redacted]	[redacted]
PEREGRINE ENERGY	-	-	-	[redacted]	-	[redacted]
3988	-	-	-	[redacted]	-	[redacted]
RISE ENGINEERING	-	-	-	[redacted]	-	[redacted]
111693	-	-	-	[redacted]	-	[redacted]
112472	-	-	-	[redacted]	-	[redacted]
112473	-	-	-	[redacted]	-	[redacted]
113384	-	-	-	[redacted]	-	[redacted]
114395	-	-	-	[redacted]	-	[redacted]
114403	-	-	-	[redacted]	-	[redacted]
115298	-	-	-	[redacted]	-	[redacted]
116318	-	-	-	[redacted]	-	[redacted]
121579	-	-	-	[redacted]	-	[redacted]

Vendor Invoice Summary Table

7. C&I Retrofit

C&I Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 C&I Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
RIVER ENERGY CONSULT - C&I Meetings	-	-	-		-	
8727	-	-	-		-	
RIVER ENERGY CONSULT - C&I Retreat	-	-	-		-	
8359	-	-	-		-	
RIVER ENERGY CONSULT - Naomi Mermin Consulting	-	-	-		-	
7803	-	-	-		-	
7953	-	-	-		-	
8276	-	-	-		-	
8411	-	-	-		-	
8520	-	-	-		-	
8636	-	-	-		-	
RIVER ENERGY CONSULT - North Atlantice Energy Advisors	-	-	-		-	
7784	-	-	-		-	
RIVER ENERGY CONSULT - Umass Amherst	-		-	-	-	
7582	-		-	-	-	
SIEMENS INDUSTRY, IN	-	-		-	-	
5610000308	-	-		-	-	
5610001324	-	-		-	-	
5610002148	-	-		-	-	
5610002193	-	-		-	-	
5610002357	-	-		-	-	
5610002795	-	-		-	-	
5610002800	-	-		-	-	
5610002805	-	-		-	-	
5610002882	-	-		-	-	
5610003102	-	-		-	-	
5610003635	-	-		-	-	
5610004435	-	-		-	-	
5610004954	-	-		-	-	
5610005047	-	-		-	-	
5610006175	-	-		-	-	
400119084	-	-		-	-	
5610002531	-	-		-	-	
TETRA TECH MA, INC.	-	-	-	-		
50776627	-	-	-	-		
50789483	-	-	-	-		
50789659	-	-	-	-		
50800475	-	-	-	-		
50822062	-	-	-	-		
50825181	-	-	-	-		
50832038	-	-	-	-		
50834693	-	-	-	-		
50848359	-	-	-	-		
50860431	-	-	-	-		
50861034	-	-	-	-		
50776618	-	-	-	-		
50800423	-	-	-	-		
50814595	-	-	-	-		
50825131	-	-	-	-		
50834619	-	-	-	-		
50860357	-	-	-	-		
50860989	-	-	-	-		
Grand Total						

Vendor Invoice Summary Table

7. C&I Retrofit

C&I Direct Install

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 C&I Direct Install						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CANNON, MATTHEW B.	-	-	-	[redacted]	-	[redacted]
MC-CC-10	-	-	-	[redacted]	-	[redacted]
CONSORTIUM FOR ENERG	-	-	-	[redacted]	-	[redacted]
M2014-25	-	-	-	[redacted]	-	[redacted]
D&R INTERNATIONAL	-	-	-	-	[redacted]	[redacted]
7	-	-	-	-	[redacted]	[redacted]
GUEY-LEE, DOUGLAS	-	-	-	[redacted]	-	[redacted]
CC-1	-	-	-	[redacted]	-	[redacted]
CC-2	-	-	-	[redacted]	-	[redacted]
CC-3	-	-	-	[redacted]	-	[redacted]
CC-4	-	-	-	[redacted]	-	[redacted]
HONEYWELL	-	-	-	[redacted]	-	[redacted]
5228063259	-	-	-	[redacted]	-	[redacted]
5228379715	-	-	-	[redacted]	-	[redacted]
5228582040	-	-	-	[redacted]	-	[redacted]
5228917612	-	-	-	[redacted]	-	[redacted]
5229098692	-	-	-	[redacted]	-	[redacted]
5229722064	-	-	-	[redacted]	-	[redacted]
5230144810	-	-	-	[redacted]	-	[redacted]
5230340185	-	-	-	[redacted]	-	[redacted]
5230730405	-	-	-	[redacted]	-	[redacted]
5231007091	-	-	-	[redacted]	-	[redacted]
5231277313	-	-	-	[redacted]	-	[redacted]
5229486048	-	-	-	[redacted]	-	[redacted]
JACOBSON ENERGY RESE	-	-	-	-	[redacted]	[redacted]
7	-	-	-	-	[redacted]	[redacted]
8	-	-	-	-	[redacted]	[redacted]
9	-	-	-	-	[redacted]	[redacted]
10	-	-	-	-	[redacted]	[redacted]
11	-	-	-	-	[redacted]	[redacted]
12	-	-	-	-	[redacted]	[redacted]
13	-	-	-	-	[redacted]	[redacted]
14	-	-	-	-	[redacted]	[redacted]
15	-	-	-	-	[redacted]	[redacted]
16	-	-	-	-	[redacted]	[redacted]
KEMA	-	-	-	-	[redacted]	[redacted]
20140238	-	-	-	-	[redacted]	[redacted]
20140519	-	-	-	-	[redacted]	[redacted]
20140546	-	-	-	-	[redacted]	[redacted]
20140778	-	-	-	-	[redacted]	[redacted]
20141077	-	-	-	-	[redacted]	[redacted]
20141265	-	-	-	-	[redacted]	[redacted]
20141537	-	-	-	-	[redacted]	[redacted]
20141729	-	-	-	-	[redacted]	[redacted]
20141856	-	-	-	-	[redacted]	[redacted]
20142084	-	-	-	-	[redacted]	[redacted]
20142323	-	-	-	-	[redacted]	[redacted]
20142378	-	-	-	-	[redacted]	[redacted]
20142529	-	-	-	-	[redacted]	[redacted]
20142676	-	-	-	-	[redacted]	[redacted]
20142873	-	-	-	-	[redacted]	[redacted]
20142988	-	-	-	-	[redacted]	[redacted]
20143338	-	-	-	-	[redacted]	[redacted]
20143467	-	-	-	-	[redacted]	[redacted]
20143621	-	-	-	-	[redacted]	[redacted]
20143854	-	-	-	-	[redacted]	[redacted]
20143870	-	-	-	-	[redacted]	[redacted]

Vendor Invoice Summary Table

7. C&I Retrofit

C&I Direct Install

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 C&I Direct Install						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
LOOK, ASHLEY LYNNE	-	-	-	[redacted]	-	[redacted]
CC2	-	-	-	[redacted]	-	[redacted]
CC3	-	-	-	[redacted]	-	[redacted]
CC4	-	-	-	[redacted]	-	[redacted]
MATTO, EMILY	-	-	-	[redacted]	-	[redacted]
1	-	-	-	[redacted]	-	[redacted]
CC-2	-	-	-	[redacted]	-	[redacted]
CC-3	-	-	-	[redacted]	-	[redacted]
CC-4	-	-	-	[redacted]	-	[redacted]
CC-5	-	-	-	[redacted]	-	[redacted]
CC-6	-	-	-	[redacted]	-	[redacted]
CC-7	-	-	-	[redacted]	-	[redacted]
CC-10	-	-	-	[redacted]	-	[redacted]
CC-9	-	-	-	[redacted]	-	[redacted]
NATL RESOURCE MANAG	-	-	[redacted]	-	-	[redacted]
APRIL 2014 SUMMARY	-	-	[redacted]	-	-	[redacted]
FEBRUARY 2014 SUMMAR	-	-	[redacted]	-	-	[redacted]
JANUARY 2014 SUMMARY	-	-	[redacted]	-	-	[redacted]
JULY 2014 SUMMARY	-	-	[redacted]	-	-	[redacted]
JUNE 2014 SUMMARY	-	-	[redacted]	-	-	[redacted]
MARCH 2014 SUMMARY	-	-	[redacted]	-	-	[redacted]
MAY 2014 SUMMARY	-	-	[redacted]	-	-	[redacted]
NOVEMBER 2014 SUMMAR	-	-	[redacted]	-	-	[redacted]
OCTOBER 2014 SUMMARY	-	-	[redacted]	-	-	[redacted]
SEPT-2014-SUMMARY	-	-	[redacted]	-	-	[redacted]
NEXANT, INC	-	-	-	-	[redacted]	[redacted]
172151E	-	-	-	-	[redacted]	[redacted]
NORTHEAST ENERGY E	-	-	-	[redacted]	[redacted]	[redacted]
4804	-	-	-	-	[redacted]	[redacted]
NEEP-2014	-	-	-	[redacted]	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
06-24-14	-	-	-	-	[redacted]	[redacted]
7831APR14	-	-	-	-	[redacted]	[redacted]
7831AUG14	-	-	-	-	[redacted]	[redacted]
7831JUL14	-	-	-	-	[redacted]	[redacted]
7831JUN14	-	-	-	-	[redacted]	[redacted]
7831SEP14	-	-	-	-	[redacted]	[redacted]
7647CAPE314	-	-	-	-	[redacted]	[redacted]
7647CAPEAPR14	-	-	-	-	[redacted]	[redacted]
7647CAPEAUG14	-	-	-	-	[redacted]	[redacted]
7647CAPEDEC13	-	-	-	-	[redacted]	[redacted]
7647CAPEFEB1	-	-	-	-	[redacted]	[redacted]
PEOPLE POWER COMPANY	-	[redacted]	[redacted]	[redacted]	-	[redacted]
CLC006	-	-	[redacted]	[redacted]	-	[redacted]
CLC007	-	-	[redacted]	[redacted]	-	[redacted]
CLC009	-	-	[redacted]	[redacted]	-	[redacted]
CLC010	-	-	[redacted]	-	-	[redacted]
CLC011	-	-	[redacted]	-	-	[redacted]
CLC012	-	[redacted]	-	-	-	[redacted]
CLC 001	-	[redacted]	-	[redacted]	-	[redacted]
CLC 003	-	[redacted]	-	[redacted]	-	[redacted]
CLC004	-	-	-	[redacted]	-	[redacted]
CLC005	-	-	-	[redacted]	-	[redacted]
CLC008-R	-	-	-	[redacted]	-	[redacted]

Vendor Invoice Summary Table

7. C&I Retrofit

C&I Direct Install

Cape Light Compact

D.P.U. 16-127

Appendix F, 2014 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2014 C&I Direct Install						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
RISE ENGINEERING	-	-	[redacted]	[redacted]	-	[redacted]
121613	-	-	[redacted]	-	-	[redacted]
116318	-	-	-	[redacted]	-	[redacted]
111694	-	-	[redacted]	-	-	[redacted]
111720	-	-	[redacted]	-	-	[redacted]
112475	-	-	[redacted]	-	-	[redacted]
112476	-	-	[redacted]	-	-	[redacted]
113382	-	-	[redacted]	-	-	[redacted]
113400	-	-	[redacted]	-	-	[redacted]
114396	-	-	[redacted]	-	-	[redacted]
114404	-	-	[redacted]	-	-	[redacted]
115299	-	-	[redacted]	-	-	[redacted]
115300	-	-	[redacted]	-	-	[redacted]
116328	-	-	[redacted]	-	-	[redacted]
116335	-	-	[redacted]	-	-	[redacted]
117052	-	-	[redacted]	-	-	[redacted]
117053	-	-	[redacted]	-	-	[redacted]
117797	-	-	[redacted]	-	-	[redacted]
117799	-	-	[redacted]	-	-	[redacted]
118785	-	-	[redacted]	-	-	[redacted]
118847	-	-	[redacted]	-	-	[redacted]
119836	-	-	[redacted]	-	-	[redacted]
119845	-	-	[redacted]	-	-	[redacted]
121022	-	-	[redacted]	-	-	[redacted]
121023	-	-	[redacted]	-	-	[redacted]
121608	-	-	[redacted]	-	-	[redacted]
121614	-	-	[redacted]	-	-	[redacted]
113383	-	-	-	[redacted]	-	[redacted]
116327	-	-	-	[redacted]	-	[redacted]
117078	-	-	-	[redacted]	-	[redacted]
117801	-	-	-	[redacted]	-	[redacted]
118786	-	-	-	[redacted]	-	[redacted]
119835	-	-	-	[redacted]	-	[redacted]
121580	-	-	-	[redacted]	-	[redacted]
TETRA TECH MA, INC.	-	-	-	-	[redacted]	[redacted]
50773141	-	-	-	-	[redacted]	[redacted]
50860376	-	-	-	-	[redacted]	[redacted]
50860413	-	-	-	-	[redacted]	[redacted]
50860449	-	-	-	-	[redacted]	[redacted]
50861006	-	-	-	-	[redacted]	[redacted]
50861025	-	-	-	-	[redacted]	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table

1. Residential Whole House

Residential New Construction & Major Renovation

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Residential New Construction & Major Renovation						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CLEARESULT OPERATING	-	-	-	[redacted]	-	[redacted]
5706	-	-	-	[redacted]	-	[redacted]
5840	-	-	-	[redacted]	-	[redacted]
5894	-	-	-	[redacted]	-	[redacted]
6036	-	-	-	[redacted]	-	[redacted]
CMC ENERGY SERVICES	-	-	-	[redacted]	-	[redacted]
15-806-07	-	-	-	[redacted]	-	[redacted]
15-806-08	-	-	-	[redacted]	-	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
15-806-01	-	-	-	[redacted]	-	[redacted]
15-806-03	-	-	-	[redacted]	-	[redacted]
15-806-04	-	-	-	[redacted]	-	[redacted]
15-806-05	-	-	-	[redacted]	-	[redacted]
15-806-06	-	-	-	[redacted]	-	[redacted]
15-806-2	-	-	-	[redacted]	-	[redacted]
CONSERVATION SERVICE	-	-	-	[redacted]	-	[redacted]
5174	-	-	-	[redacted]	-	[redacted]
5258	-	-	-	[redacted]	-	[redacted]
5363	-	-	-	[redacted]	-	[redacted]
5409	-	-	-	[redacted]	-	[redacted]
5493	-	-	-	[redacted]	-	[redacted]
5522	-	-	-	[redacted]	-	[redacted]
5659	-	-	-	[redacted]	-	[redacted]
ICF RESOURCE	-	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2015-020084	-	-	-	-	[redacted]	[redacted]
CAPE U02-15 NLI	-	-	[redacted]	-	-	[redacted]
CAPE U03-15 NLI	-	-	[redacted]	-	-	[redacted]
CAPE U04-15 NLI	-	-	[redacted]	-	-	[redacted]
CAPE U05-15 NLI	-	-	[redacted]	-	-	[redacted]
CAPE U06-15 NLI	-	-	[redacted]	-	-	[redacted]
CAPE U07-15 NLI	-	-	[redacted]	-	-	[redacted]
CAPE U08-15 NLI	-	-	[redacted]	-	-	[redacted]
CAPE U09-15 NLI	-	-	[redacted]	-	-	[redacted]
CAPE U10-15 NLI	-	-	[redacted]	-	-	[redacted]
CAPE U11-15 NLI	-	-	[redacted]	-	-	[redacted]
CAPE U12-14 NLI	-	-	[redacted]	-	-	[redacted]
CLC A001-15	-	[redacted]	-	[redacted]	-	[redacted]
CLC A002-15	-	[redacted]	-	[redacted]	-	[redacted]
CLC A004-15	-	[redacted]	-	[redacted]	-	[redacted]
CLC A005-15	-	[redacted]	-	[redacted]	-	[redacted]
CLC A006-15	-	[redacted]	-	[redacted]	-	[redacted]
CLC A007-15	-	[redacted]	-	[redacted]	-	[redacted]
CLC A008-15	-	[redacted]	-	[redacted]	-	[redacted]
CLC A009-15	-	[redacted]	-	[redacted]	-	[redacted]
CLC A010-15	-	[redacted]	-	[redacted]	-	[redacted]
CLC-A003-15	-	[redacted]	-	[redacted]	-	[redacted]
CLC-A011-15	-	[redacted]	-	[redacted]	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
7831DEC14	-	-	-	-	[redacted]	[redacted]
7831FEBMAR15	-	-	-	-	[redacted]	[redacted]
7831JAN15	-	-	-	-	[redacted]	[redacted]
7831MAY15	-	-	-	-	[redacted]	[redacted]
7831NOV14	-	-	-	-	[redacted]	[redacted]
7831NOV15	-	-	-	-	[redacted]	[redacted]
7831OCT14	-	-	-	-	[redacted]	[redacted]
Grand Total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Vendor Invoice Summary Table

1. Residential Whole House

Residential Multi-Family Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Residential Multi-Family Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CADMUS GROUP	-	-	-	-	[redacted]	[redacted]
INV-204750	-	-	-	-	[redacted]	[redacted]
INV-206050	-	-	-	-	[redacted]	[redacted]
INV-208947	-	-	-	-	[redacted]	[redacted]
INV-217413	-	-	-	-	[redacted]	[redacted]
INV-218632	-	-	-	-	[redacted]	[redacted]
CAPE COD MEDIA GROUP	-	-	-	[redacted]	-	[redacted]
0000070927	-	-	-	[redacted]	-	[redacted]
CMC ENERGY SERVICES	-	-	-	[redacted]	-	[redacted]
15-806-08	-	-	-	[redacted]	-	[redacted]
15-806-09	-	-	-	[redacted]	-	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
15-806-01	-	-	-	[redacted]	-	[redacted]
15-806-06	-	-	-	[redacted]	-	[redacted]
15-806-2	-	-	-	[redacted]	-	[redacted]
GALLIGAN ENERGY CONS	-	-	-	[redacted]	-	[redacted]
2015-GECI-01CLC	-	-	-	[redacted]	-	[redacted]
2015-GECI-02CLC	-	-	-	[redacted]	-	[redacted]
2015-08BCLC	-	-	-	[redacted]	-	[redacted]
2015-09BCLC	-	-	-	[redacted]	-	[redacted]
2015-10BCLC	-	-	-	[redacted]	-	[redacted]
2015-122	-	-	-	[redacted]	-	[redacted]
2015-GECI-03BCLC	-	-	-	[redacted]	-	[redacted]
2015-GECI-04BCLC	-	-	-	[redacted]	-	[redacted]
2015-GECI-05BCLC	-	-	-	[redacted]	-	[redacted]
2015-GECI-07BCLC	-	-	-	[redacted]	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
7831DEC14	-	-	-	-	[redacted]	[redacted]
7831FEBMAR15	-	-	-	-	[redacted]	[redacted]
7831JAN15	-	-	-	-	[redacted]	[redacted]
7831MAY15	-	-	-	-	[redacted]	[redacted]
7831NOV14	-	-	-	-	[redacted]	[redacted]
7831NOV15	-	-	-	-	[redacted]	[redacted]
7831OCT14	-	-	-	-	[redacted]	[redacted]
RISE ENGINEERING	-	-	[redacted]	[redacted]	[redacted]	[redacted]
123175	-	-	-	-	[redacted]	[redacted]
135536	-	-	-	-	[redacted]	[redacted]
123311	-	-	[redacted]	[redacted]	-	[redacted]
124152	-	-	[redacted]	[redacted]	-	[redacted]
125184	-	-	[redacted]	[redacted]	-	[redacted]
126388	-	-	[redacted]	-	-	[redacted]
126393	-	-	[redacted]	[redacted]	-	[redacted]
127471	-	-	[redacted]	-	-	[redacted]
127568	-	-	[redacted]	[redacted]	-	[redacted]
128682	-	-	[redacted]	[redacted]	-	[redacted]
129856	-	-	[redacted]	[redacted]	-	[redacted]
130988	-	-	[redacted]	[redacted]	-	[redacted]
132262	-	-	[redacted]	[redacted]	-	[redacted]
133642	-	-	[redacted]	[redacted]	-	[redacted]
134864	-	-	[redacted]	[redacted]	-	[redacted]
136653	-	-	[redacted]	[redacted]	-	[redacted]
123287	-	-	-	[redacted]	-	[redacted]
124074	-	-	-	[redacted]	-	[redacted]
125139	-	-	-	[redacted]	-	[redacted]
126336	-	-	-	[redacted]	-	[redacted]
127413	-	-	-	[redacted]	-	[redacted]
128667	-	-	-	[redacted]	-	[redacted]
129834	-	-	-	[redacted]	-	[redacted]
130958	-	-	-	[redacted]	-	[redacted]
132201	-	-	-	[redacted]	-	[redacted]
133575	-	-	-	[redacted]	-	[redacted]
134705	-	-	-	[redacted]	-	[redacted]
Grand Total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Vendor Invoice Summary Table

1. Residential Whole House

Residential Home Energy Services

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Residential Home Energy Services						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CADMUS GROUP	-	-	-	-	[redacted]	[redacted]
INV-204750	-	-	-	-	[redacted]	[redacted]
INV-206050	-	-	-	-	[redacted]	[redacted]
INV-208947	-	-	-	-	[redacted]	[redacted]
INV-217413	-	-	-	-	[redacted]	[redacted]
INV-218632	-	-	-	-	[redacted]	[redacted]
INV-200601	-	-	-	-	[redacted]	[redacted]
INV-203774	-	-	-	-	[redacted]	[redacted]
INV-207748	-	-	-	-	[redacted]	[redacted]
INV-210989	-	-	-	-	[redacted]	[redacted]
INV-212646	-	-	-	-	[redacted]	[redacted]
INV-214284	-	-	-	-	[redacted]	[redacted]
CAPE COD MEDIA GROUP	-	[redacted]	-	-	-	[redacted]
0000065598	-	[redacted]	-	-	-	[redacted]
CMC ENERGY SERVICES	-	-	-	[redacted]	-	[redacted]
15-806-07	-	-	-	[redacted]	-	[redacted]
15-806-08	-	-	-	[redacted]	-	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
15-806-01	-	-	-	[redacted]	-	[redacted]
15-806-03	-	-	-	[redacted]	-	[redacted]
15-806-04	-	-	-	[redacted]	-	[redacted]
15-806-05	-	-	-	[redacted]	-	[redacted]
15-806-06	-	-	-	[redacted]	-	[redacted]
15-806-2	-	-	-	[redacted]	-	[redacted]
CONSERVATION SERVICE	-	-	[redacted]	-	-	[redacted]
013115-CLC-418	-	-	[redacted]	-	-	[redacted]
02282015-CLC-418	-	-	[redacted]	-	-	[redacted]
033115-CLC-418	-	-	[redacted]	-	-	[redacted]
043014-CLC-418	-	-	[redacted]	-	-	[redacted]
043015-CLC-418	-	-	[redacted]	-	-	[redacted]
053115-CLC-418	-	-	[redacted]	-	-	[redacted]
063015-CLC-418	-	-	[redacted]	-	-	[redacted]
073115-CLC-418	-	-	[redacted]	-	-	[redacted]
083115-CLC-418	-	-	[redacted]	-	-	[redacted]
093015-CLC-418	-	-	[redacted]	-	-	[redacted]
103115-CLC-418	-	-	[redacted]	-	-	[redacted]
113014-CLC-418	-	-	[redacted]	-	-	[redacted]
113015-CLC-418	-	-	[redacted]	-	-	[redacted]
123114-CLC-418	-	-	[redacted]	-	-	[redacted]
123115-CLC-418	-	-	[redacted]	-	-	[redacted]
CREATIVE SERVICES	-	-	-	[redacted]	-	[redacted]
1326486	-	-	-	[redacted]	-	[redacted]
1327191	-	-	-	[redacted]	-	[redacted]
1327543	-	-	-	[redacted]	-	[redacted]
1327547	-	-	-	[redacted]	-	[redacted]
1328263	-	-	-	[redacted]	-	[redacted]
1328657	-	-	-	[redacted]	-	[redacted]
1329075	-	-	-	[redacted]	-	[redacted]
1329475	-	-	-	[redacted]	-	[redacted]
1329875	-	-	-	[redacted]	-	[redacted]
1330296	-	-	-	[redacted]	-	[redacted]
1330696	-	-	-	[redacted]	-	[redacted]
1331110	-	-	-	[redacted]	-	[redacted]
1331536	-	-	-	[redacted]	-	[redacted]
1331541	-	-	-	[redacted]	-	[redacted]
1332319	-	-	-	[redacted]	-	[redacted]
1332679	-	-	-	[redacted]	-	[redacted]
1333055	-	-	-	[redacted]	-	[redacted]
1333391	-	-	-	[redacted]	-	[redacted]
1333782	-	-	-	[redacted]	-	[redacted]
1334202	-	-	-	[redacted]	-	[redacted]
1335003	-	-	-	[redacted]	-	[redacted]
1335267	-	-	-	[redacted]	-	[redacted]
1335957	-	-	-	[redacted]	-	[redacted]
EVERSOURCE ENERGY	-	-	-	-	[redacted]	[redacted]
03-05-15	-	-	-	-	[redacted]	[redacted]
GUEY-LEE, DOUGLAS	-	-	-	[redacted]	-	[redacted]
CC-5	-	-	-	[redacted]	-	[redacted]
CC-6	-	-	-	[redacted]	-	[redacted]
CC-7	-	-	-	[redacted]	-	[redacted]

Vendor Invoice Summary Table

1. Residential Whole House

Residential Home Energy Services

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Residential Home Energy Services						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
HERITAGE PRESS, INC.	-	[redacted]	-	-	-	[redacted]
95369	-		-	-	-	
ICF INC, LLC	-	-	-	-	[redacted]	
2015-035247	-	-	-	-		
INTERNATIONAL ENERGY	-	-	-	-		
02-16-15	-	-	-	-		
JACOBSON ENERGY RESE	-	-	-	-		
24	-	-	-	-		
17	-	-	-	-		
18	-	-	-	-		
19	-	-	-	-		
20	-	-	-	-		
21	-	-	-	-		
22	-	-	-	-		
23	-	-	-	-		
LIBERTY PRINTING	-	[redacted]	-	-	-	
60519	-		-	-	-	
MATTO, EMILY	-	-	-	[redacted]	-	
CC-11	-	-	-		-	
CC-12	-	-	-		-	
CC-15	-	-	-		-	
CC-16	-	-	-		-	
NAVIGANT CONSULTING,	-	-	-	-	[redacted]	
446487	-	-	-	-		
449264	-	-	-	-		
452009	-	-	-	-		
454225	-	-	-	-		
455485	-	-	-	-		
458920	-	-	-	-		
465331	-	-	-	-		
467067	-	-	-	-		
470545	-	-	-	-		
461976	-	-	-	-		
478261	-	-	-	-		
454225R	-	-	-	-		
NEXANT, INC	-	-	-	-		
178966G	-	-	-	-		
181466E	-	-	-	-		
182436E	-	-	-	-		
184644E	-	-	-	-		
191103E	-	-	-	-		
192514E	-	-	-	-		
NORTHEAST ENERGY E	-	-	-	-		
5094	-	-	-	-		
OPINION DYNAMICS	-	-	-	-		
7831DEC14	-	-	-	-		
7831FEBMAR15	-	-	-	-		
7831JAN15	-	-	-	-		
7831MAY15	-	-	-	-		
7831NOV14	-	-	-	-		
7831NOV15	-	-	-	-		
7831OCT14	-	-	-	-		

Vendor Invoice Summary Table

1. Residential Whole House

Residential Home Energy Services

Cape Light Compact

2015 Residential Home Energy Services						
Vendor, Invoice Number	Program Planning and Administration	Marketing and Advertising	Participant Incentive	Sales, Technical Assistance & Training	Evaluation and Market Research	Total Program Costs
RISE ENGINEERING	-	-	[redacted]	[redacted]	-	[redacted]
122876	-	-		-	-	
123546	-	-		[redacted]	-	
123737	-	-		-	-	
124171	-	-		[redacted]	-	
124668	-	-		-	-	
125211	-	-		[redacted]	-	
125894	-	-		-	-	
126412	-	-		[redacted]	-	
127092	-	-		-	-	
127574	-	-		[redacted]	-	
128254	-	-		-	-	
128681	-	-		[redacted]	-	
129407	-	-		-	-	
129863	-	-		[redacted]	-	
130429	-	-		-	-	
130990	-	-		-	-	
131653	-	-		-	-	
132283	-	-		[redacted]	-	
133166	-	-		-	-	
133653	-	-		[redacted]	-	
134603	-	-		-	-	
134865	-	-		[redacted]	-	
136143	-	-			-	
136716	-	-		-	-	
W/E 01/08/2016	-	-		-	-	
W/E 01/09/2015	-	-		-	-	
W/E 01/15/2016	-	-		-	-	
W/E 01/16/2015	-	-		-	-	
W/E 01/23/2015	-	-		-	-	
W/E 01/30/2015	-	-		-	-	
W/E 02/06/2015	-	-		-	-	
W/E 02/13/2015	-	-		-	-	
W/E 02/20/2015	-	-		-	-	
W/E 02/27/2015	-	-		-	-	
W/E 03/06/2015	-	-		-	-	
W/E 03/13/2015	-	-		-	-	
W/E 03/20/2015	-	-		-	-	
W/E 03/27/2015	-	-		-	-	
W/E 04/03/2015	-	-		-	-	
W/E 04/10/2015	-	-		-	-	
W/E 04/17/2015	-	-		-	-	
W/E 04/24/2015	-	-		-	-	
W/E 05/01/2015	-	-		-	-	
W/E 05/08/2015	-	-		-	-	
W/E 05/15/2015	-	-		-	-	
W/E 05/22/2015	-	-		-	-	
W/E 05/29/2015	-	-		-	-	
W/E 06/05/2015	-	-		-	-	
W/E 06/12/2015	-	-		-	-	
W/E 06/19/2015	-	-		-	-	
W/E 06/26/2015	-	-		-	-	
W/E 07/03/2015	-	-		-	-	
W/E 07/10/2015	-	-		-	-	
W/E 07/17/2015	-	-		-	-	
W/E 07/24/2015	-	-		-	-	
W/E 07/31/2015	-	-		-	-	
W/E 08/07/2015	-	-		-	-	
W/E 08/14/2015	-	-		-	-	
W/E 08/28/2015	-	-		-	-	
W/E 09/04/2015	-	-		-	-	
W/E 09/11/2015	-	-		-	-	
W/E 09/18/2015	-	-		-	-	
W/E 09/25/2015	-	-		-	-	
W/E 09/30/2015	-	-		-	-	
W/E 10/09/2015	-	-		-	-	
W/E 10/16/2015	-	-		-	-	
W/E 10/23/2015	-	-		-	-	
W/E 10/30/15	-	-		-	-	
W/E 11/06/2015	-	-		-	-	
W/E 11/13/2015	-	-		-	-	
W/E 11/20/2015	-	-		-	-	
W/E 11/27/2015	-	-		-	-	
W/E 12/04/2015	-	-		-	-	
W/E 12/11/2015	-	-		-	-	
W/E 12/18/2015	-	-		-	-	
W/E 12/24/2015	-	-		-	-	
W/E 12/30/2015	-	-		-	-	
W/E08-21-15	-	-		-	-	

Vendor Invoice Summary Table

1. Residential Whole House

Residential Home Energy Services

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Residential Home Energy Services						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
RIVER ENERGY CONSULT - Ansafone, River Energy Consultants, Sprint	-	[redacted]	-	[redacted]	-	[redacted]
8838	-		-		-	
9942	-		-		-	
10274	-		-		-	
10201	-	-	-		-	
8989	-	-	-		-	
9098	-	-	-		-	
9259	-	-	-		-	
9487	-	-	-		-	
9582	-	-	-		-	
9711	-	-	-		-	
10110	-	-	-		-	
10426	-	-	-		-	
10554	-	-	-		-	
RIVER ENERGY CONSULT - Committee Meetings	-	-	-			
8891	-	-	-			
9556	-	-	-			
9650	-	-	-			
9974	-	-	-			
10385	-	-	-			
9121	-	-	-		-	
9240	-	-	-		-	
9400	-	-	-		-	
9744	-	-	-		-	
10521	-	-	-		-	
RIVER ENERGY CONSULT - Conservation Services Group	-	[redacted]	-	-	-	[redacted]
8979	-		-	-	-	
9692	-		-	-	-	
9699	-		-	-	-	
RIVER ENERGY CONSULT - Greater Media	-	[redacted]	-	-	-	[redacted]
9495	-		-	-	-	
9591	-		-	-	-	
9723	-		-	-	-	
9886	-		-	-	-	
10119	-		-	-	-	
10151	-		-	-	-	
10160	-		-	-	-	
RIVER ENERGY CONSULT - PrintSynergy	-	[redacted]	-	-	-	[redacted]
9817	-		-	-	-	
RIVER ENERGY CONSULT - Tabors Caramanis Rudkevich	-	-	-	-	[redacted]	
8792	-	-	-	-		
8905	-	-	-	-		
9427	-	-	-	-		
10623	-	-	-	-		
TETRA TECH MA, INC.	-	-	-	-		
50879239	-	-	-	-		
50879276	-	-	-	-		
50879294	-	-	-	-		
50889246	-	-	-	-		
50889267	-	-	-	-		
50889287	-	-	-	-		
50889307	-	-	-	-		
50908868	-	-	-	-		
50908909	-	-	-	-		
50908927	-	-	-	-		
1001B	-	-	-	-		
1002 B	-	-	-	-		
1003 B	-	-	-	-		
1004 B	-	-	-	-		
1005 B	-	-	-	-		
1006 B	-	-	-	-		
1008 B	-	-	-	-		
Grand Total	[redacted]					

Vendor Invoice Summary Table

1. Residential Whole House

Residential Behavior/Feedback Program

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Residential Behavior/Feedback Program						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
PEOPLE POWER COMPANY	-	-	[redacted]	[redacted]	-	[redacted]
CLC013	-	-	[redacted]	[redacted]	-	[redacted]
CLC021	-	-	[redacted]	[redacted]	-	[redacted]
CLC026	-	-	[redacted]	[redacted]	-	[redacted]
CLC014	-	-	-	[redacted]	-	[redacted]
CLC015	-	-	-	[redacted]	-	[redacted]
CLC016	-	-	-	[redacted]	-	[redacted]
CLC017	-	-	-	[redacted]	-	[redacted]
CLC019	-	-	-	[redacted]	-	[redacted]
CLC020	-	-	-	[redacted]	-	[redacted]
CLC022	-	-	-	[redacted]	-	[redacted]
CLC023	-	-	-	[redacted]	-	[redacted]
CLC024	-	-	[redacted]	-	-	[redacted]
CLC025	-	-	[redacted]	-	-	[redacted]
CLC018	-	-	-	[redacted]	-	[redacted]
Grand Total	**-**	**-**	[redacted]	[redacted]	**-**	[redacted]

Vendor Invoice Summary Table

2. Residential Products

Residential Cooling & Heating Equipment

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Residential Cooling & Heating Equipment						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs			-			
All Legal Allocated Costs		-	-	-	-	
All IT Allocated Costs		-	-	-	-	
All Marketing Allocated Costs	-		-	-	-	
All General Administration Allocated Costs			-			
BLACKHAWK ENGAGEMENT	-	-			-	
4Q 540522	-	-		-	-	
4Q 541023	-	-		-	-	
4Q 541119	-	-		-	-	
4Q 541219	-	-		-	-	
4Q 541315	-	-		-	-	
4Q 541423	-	-		-	-	
4Q 541514	-	-		-	-	
4Q 541613	-	-		-	-	
4Q 541713	-	-		-	-	
4Q 541913	-	-		-	-	
4Q 542014	-	-		-	-	
4Q 640014	-	-		-	-	
4Q540622	-	-		-	-	
4Q540722	-	-		-	-	
4Q540823	-	-		-	-	
4Q540923	-	-		-	-	
4Q541813	-	-		-	-	
5G 550566	-	-		-	-	
5G 551070	-	-		-	-	
5G 551162	-	-		-	-	
5G 551262	-	-		-	-	
5G 551360	-	-		-	-	
5G 551466	-	-		-	-	
5G 551559	-	-		-	-	
5G 551656	-	-		-	-	
5G 551756	-	-		-	-	
5G 551958	-	-		-	-	
5G 552059	-	-		-	-	
5G550768	-	-		-	-	
5G550866	-	-		-	-	
5G550970	-	-		-	-	
5G551856	-	-		-	-	
EG550666	-	-		-	-	
5G 55ME036	-	-	-		-	
5G 55ME042	-	-	-		-	
5G 55ME048	-	-	-		-	
5G 55ME054	-	-	-		-	
5G 55ME066	-	-	-		-	
5G55M3030	-	-	-		-	
5G55ME024	-	-	-		-	
5G55ME060	-	-	-		-	
CADMUS GROUP	-	-	-	-		
INV-206050	-	-	-	-		
INV-208947	-	-	-	-		
INV-217413	-	-	-	-		
INV-218632	-	-	-	-		
INV-200601	-	-	-	-		
INV-207748	-	-	-	-		
INV-210989	-	-	-	-		
INV-212646	-	-	-	-		
INV-214284	-	-	-	-		
INV-218996	-	-	-	-		
CLEARESULT OPERATING	-				-	
80-CAPE LIGHT	-				-	
81-CAPE LIGHT	-				-	
82-CAPE LIGHT	-				-	
83-CAPE LIGHT	-				-	
84-CAPE LIGHT	-				-	
CONSERVATION SERVICE	-				-	
75-CAPE LIGHT	-				-	
77-CAPE-LIGHT	-				-	
78-CAPE LIGHT	-				-	
79-CAPE LIGHT	-				-	
76-CAPE-LIGHT	-		-		-	
72 P2-CAPE LIGHT	-				-	
73-CAPE LIGHT	-				-	
74-CAPE LIGHT	-				-	

Vendor Invoice Summary Table

2. Residential Products

Residential Cooling & Heating Equipment

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Residential Cooling & Heating Equipment						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
ENERGY FEDERATION	-	-	[redacted]	[redacted]	-	[redacted]
0161878-IN	-	-	[redacted]	[redacted]	-	[redacted]
0170265-IN	-	-	-	[redacted]	-	[redacted]
0185328-IN	-	-	-	[redacted]	-	[redacted]
0211176-IN	-	-	-	[redacted]	-	[redacted]
0225018-TN	-	-	-	[redacted]	-	[redacted]
0240069-IN	-	-	-	[redacted]	-	[redacted]
0262223-IN	-	-	-	[redacted]	-	[redacted]
0283024-IN	-	-	-	[redacted]	-	[redacted]
0309379-IN	-	-	-	[redacted]	-	[redacted]
0309385-IN	-	-	-	[redacted]	-	[redacted]
0317221-IN	-	-	-	[redacted]	-	[redacted]
0343744-IN	-	-	-	[redacted]	-	[redacted]
0374670-IN	-	-	-	[redacted]	-	[redacted]
0394579-IN	-	-	-	[redacted]	-	[redacted]
0177352-IN	-	-	[redacted]	-	-	[redacted]
0211085-IN	-	-	[redacted]	-	-	[redacted]
0226686-IN	-	-	[redacted]	-	-	[redacted]
0230330-IN	-	-	[redacted]	-	-	[redacted]
0248618-IN	-	-	[redacted]	-	-	[redacted]
0261902-IN	-	-	[redacted]	-	-	[redacted]
0277526-IN	-	-	[redacted]	-	-	[redacted]
0289760-IN	-	-	[redacted]	-	-	[redacted]
0301837-IN	-	-	[redacted]	-	-	[redacted]
0317213-IN	-	-	[redacted]	-	-	[redacted]
0338953-IN	-	-	[redacted]	-	-	[redacted]
0382647-IN	-	-	[redacted]	-	-	[redacted]
0394515-IN	-	-	[redacted]	-	-	[redacted]
KELLIHER SAMETS LTD	-	[redacted]	-	-	-	[redacted]
018499-0003	-	[redacted]	-	-	-	[redacted]
018663-0003	-	[redacted]	-	-	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
7831FEBMAR15	-	-	-	-	[redacted]	[redacted]
7831MAY15	-	-	-	-	[redacted]	[redacted]
7831NOV15	-	-	-	-	[redacted]	[redacted]
PARAGO SERVICES CORP	-	-	[redacted]	[redacted]	-	[redacted]
5G 55ME012	-	-	-	[redacted]	-	[redacted]
5G25ME059	-	-	-	[redacted]	-	[redacted]
5G55ME018	-	-	-	[redacted]	-	[redacted]
5G55NE006	-	-	-	[redacted]	-	[redacted]
4Q 240432	-	-	[redacted]	-	-	[redacted]
4Q 540121	-	-	[redacted]	-	-	[redacted]
4Q240404	-	-	[redacted]	-	-	[redacted]
4Q340003	-	-	[redacted]	-	-	[redacted]
4Q540021	-	-	[redacted]	-	-	[redacted]
4Q540220	-	-	[redacted]	-	-	[redacted]
4Q540321	-	-	[redacted]	-	-	[redacted]
4Q540421	-	-	[redacted]	-	-	[redacted]
5G 250107	-	-	[redacted]	-	-	[redacted]
5G250102	-	-	[redacted]	-	-	[redacted]
5G350001	-	-	[redacted]	-	-	[redacted]
5G550059	-	-	[redacted]	-	-	[redacted]
5G550164	-	-	[redacted]	-	-	[redacted]
5G550264	-	-	[redacted]	-	-	[redacted]
5G550465	-	-	[redacted]	-	-	[redacted]
5G570364	-	-	[redacted]	-	-	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table

2. Residential Products

Residential Lighting

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Residential Lighting						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
BLACKHAWK ENGAGEMENT	-	-	[redacted]	[redacted]	-	[redacted]
2E 520574	-	-	[redacted]	-	-	[redacted]
2E 520576	-	-	[redacted]	-	-	[redacted]
2E 521078	-	-	[redacted]	-	-	[redacted]
2E 521080	-	-	[redacted]	-	-	[redacted]
2E520675	-	-	[redacted]	-	-	[redacted]
2E520677	-	-	[redacted]	-	-	[redacted]
2E520776	-	-	[redacted]	-	-	[redacted]
2E520778	-	-	[redacted]	-	-	[redacted]
2E520874	-	-	[redacted]	-	-	[redacted]
2E520876	-	-	[redacted]	-	-	[redacted]
2E520978	-	-	[redacted]	-	-	[redacted]
2E520980	-	-	[redacted]	-	-	[redacted]
2E 52ME036	-	-	-	[redacted]	-	[redacted]
2E 52ME042	-	-	-	[redacted]	-	[redacted]
2E 52ME048	-	-	-	[redacted]	-	[redacted]
2E 52ME054	-	-	-	[redacted]	-	[redacted]
2E 52ME066	-	-	-	[redacted]	-	[redacted]
2E52ME024	-	-	-	[redacted]	-	[redacted]
2E52ME030	-	-	-	[redacted]	-	[redacted]
2E52ME060	-	-	-	[redacted]	-	[redacted]
CADMUS GROUP	-	[redacted]	-	-	[redacted]	[redacted]
INV-204750	-	-	-	-	[redacted]	[redacted]
INV-206050	-	-	-	-	[redacted]	[redacted]
INV-208947	-	-	-	-	[redacted]	[redacted]
INV-217413	-	-	-	-	[redacted]	[redacted]
INV-218632	-	-	-	-	[redacted]	[redacted]
INV-200601	-	-	-	-	[redacted]	[redacted]
INV-203774	-	-	-	-	[redacted]	[redacted]
INV-207748	-	-	-	-	[redacted]	[redacted]
INV-210989	-	-	-	-	[redacted]	[redacted]
INV-212646	-	-	-	-	[redacted]	[redacted]
INV-214284	-	-	-	-	[redacted]	[redacted]
INV-218996	-	-	-	-	[redacted]	[redacted]
INV-202229	-	[redacted]	-	-	-	[redacted]
INV-202234	-	[redacted]	-	-	-	[redacted]
INV-203432	-	[redacted]	-	-	-	[redacted]
INV-203437	-	[redacted]	-	-	-	[redacted]
INV-204547	-	[redacted]	-	-	-	[redacted]
INV-204552	-	[redacted]	-	-	-	[redacted]
INV-205808	-	[redacted]	-	-	-	[redacted]
INV-205813	-	[redacted]	-	-	-	[redacted]
INV-206865	-	[redacted]	-	-	-	[redacted]
INV-206870	-	[redacted]	-	-	-	[redacted]
INV-208506	-	[redacted]	-	-	-	[redacted]
INV-208511	-	[redacted]	-	-	-	[redacted]
INV-210502	-	[redacted]	-	-	-	[redacted]
INV-210507	-	[redacted]	-	-	-	[redacted]
INV-211617	-	[redacted]	-	-	-	[redacted]
INV-211622	-	[redacted]	-	-	-	[redacted]
INV-213650	-	[redacted]	-	-	-	[redacted]
INV-213655	-	[redacted]	-	-	-	[redacted]
INV-215298	-	[redacted]	-	-	-	[redacted]
INV-215303	-	[redacted]	-	-	-	[redacted]
INV-216684	-	[redacted]	-	-	-	[redacted]
INV-216689	-	[redacted]	-	-	-	[redacted]
INV-218070	-	[redacted]	-	-	-	[redacted]
INV-218075	-	[redacted]	-	-	-	[redacted]
INV-219333	-	[redacted]	-	-	-	[redacted]

Vendor Invoice Summary Table

2. Residential Products

Residential Lighting

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Residential Lighting						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
CONSORTIUM FOR ENERG	-	-	-	[redacted]	-	[redacted]
LFT2015-06	-	-	-	[redacted]	-	[redacted]
ENERGY FEDERATION	-	[redacted]	[redacted]	[redacted]	-	[redacted]
0173006-IN	-	-	[redacted]	-	-	[redacted]
0197597-IN	-	-	[redacted]	-	-	[redacted]
0215758-IN	-	-	[redacted]	-	-	[redacted]
0230922-IN	-	-	[redacted]	-	-	[redacted]
0231597-IN	-	-	[redacted]	-	-	[redacted]
0250063-IN	-	-	[redacted]	-	-	[redacted]
0250065-IN	-	-	[redacted]	-	-	[redacted]
0268837-IN	-	-	[redacted]	-	-	[redacted]
0282984-IN	-	-	[redacted]	-	-	[redacted]
0298137-IN	-	-	[redacted]	-	-	[redacted]
0309984-IN	-	-	[redacted]	-	-	[redacted]
0318609-IN	-	-	[redacted]	-	-	[redacted]
0326333-IN	-	-	[redacted]	-	-	[redacted]
0328226-IN	-	-	[redacted]	-	-	[redacted]
0338887-IN	-	-	[redacted]	-	-	[redacted]
0352924-IN	-	-	[redacted]	-	-	[redacted]
0353478-IN	-	-	[redacted]	-	-	[redacted]
0385184-IN	-	-	[redacted]	-	-	[redacted]
0388234-IN	-	-	[redacted]	-	-	[redacted]
0389833-IN	-	-	[redacted]	-	-	[redacted]
0394063-IN	-	-	[redacted]	-	-	[redacted]
0404978-IN	-	-	[redacted]	[redacted]	-	[redacted]
0383519-IN	-	[redacted]	-	-	-	[redacted]
0316657-IN	-	-	-	[redacted]	-	[redacted]
0331624-IN	-	-	-	[redacted]	-	[redacted]
0355480-IN	-	-	-	[redacted]	-	[redacted]
0389073-IN	-	-	-	[redacted]	-	[redacted]
0403490-IN	-	-	-	[redacted]	-	[redacted]
GREENLITE LIGHTING	-	-	[redacted]	-	-	[redacted]
US69612	-	-	[redacted]	-	-	[redacted]
LOCKHEED MARTIN	-	-	-	[redacted]	-	[redacted]
21561121	-	-	-	[redacted]	-	[redacted]
21561122	-	-	-	[redacted]	-	[redacted]
21569278	-	-	-	[redacted]	-	[redacted]
21576990	-	-	-	[redacted]	-	[redacted]
21576991	-	-	-	[redacted]	-	[redacted]
21591789	-	-	-	[redacted]	-	[redacted]
21591790	-	-	-	[redacted]	-	[redacted]
21601370	-	-	-	[redacted]	-	[redacted]
21601371	-	-	-	[redacted]	-	[redacted]
21621216	-	-	-	[redacted]	-	[redacted]
21621616	-	-	-	[redacted]	-	[redacted]
21635984	-	-	-	[redacted]	-	[redacted]
21636079	-	-	-	[redacted]	-	[redacted]
21649292	-	-	-	[redacted]	-	[redacted]
21649293	-	-	-	[redacted]	-	[redacted]
21665962	-	-	-	[redacted]	-	[redacted]
21665963	-	-	-	[redacted]	-	[redacted]
21679329	-	-	-	[redacted]	-	[redacted]
21679330	-	-	-	[redacted]	-	[redacted]
21695635	-	-	-	[redacted]	-	[redacted]
21695637	-	-	-	[redacted]	-	[redacted]
21710968	-	-	-	[redacted]	-	[redacted]
21710962R	-	-	-	[redacted]	-	[redacted]
NORTHEAST ENERGY E	-	-	-	[redacted]	-	[redacted]
5080	-	-	-	[redacted]	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
7831FEBMAR15	-	-	-	-	[redacted]	[redacted]
7831MAY15	-	-	-	-	[redacted]	[redacted]
7831NOV15	-	-	-	-	[redacted]	[redacted]

Vendor Invoice Summary Table

2. Residential Products

Residential Lighting

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Residential Lighting						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
PARAGO SERVICES CORP	-	[redacted]	[redacted]	[redacted]	-	[redacted]
2E 320001	-	-	[redacted]	-	-	[redacted]
2E 320003	-	-	[redacted]	-	-	[redacted]
2E 520066	-	-	[redacted]	-	-	[redacted]
2E 520068	-	-	[redacted]	-	-	[redacted]
2E 520090	-	-	[redacted]	-	-	[redacted]
2E 520171	-	-	[redacted]	-	-	[redacted]
2E 520173	-	-	[redacted]	-	-	[redacted]
2E220315	-	-	[redacted]	-	-	[redacted]
2E220317	-	-	[redacted]	-	-	[redacted]
2E220337	-	-	[redacted]	-	-	[redacted]
2E220339	-	-	[redacted]	-	-	[redacted]
2E22ME053	-	-	[redacted]	-	-	[redacted]
2E520271	-	-	[redacted]	-	-	[redacted]
2E520273	-	-	[redacted]	-	-	[redacted]
2E520371	-	-	[redacted]	-	-	[redacted]
2E520373	-	-	[redacted]	-	-	[redacted]
2E520473	-	-	[redacted]	-	-	[redacted]
2E520475	-	-	[redacted]	-	-	[redacted]
2E220357	-	[redacted]	-	-	-	[redacted]
2E 52ME018	-	-	-	[redacted]	-	[redacted]
2E520294	-	-	-	[redacted]	-	[redacted]
2E52ME006	-	-	-	[redacted]	-	[redacted]
2E52ME012	-	-	-	[redacted]	-	[redacted]
RISE ENGINEERING	-	-	-	-	[redacted]	[redacted]
124143	-	-	-	-	[redacted]	[redacted]
TECHNIART, INC.	-	-	[redacted]	-	-	[redacted]
11441	-	-	[redacted]	-	-	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table

2. Residential Products

Residential Consumer Products

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Residential Consumer Products						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
BLACKHAWK ENGAGEMENT	-	-	[redacted]	[redacted]	-	[redacted]
2E 521078	-	-	[redacted]	-	-	[redacted]
1P 510500	-	-	[redacted]	-	-	[redacted]
1P 511000	-	-	[redacted]	-	-	[redacted]
1P 511300	-	-	[redacted]	-	-	[redacted]
1P510600	-	-	[redacted]	-	-	[redacted]
1P510700	-	-	[redacted]	-	-	[redacted]
1P510800	-	-	[redacted]	-	-	[redacted]
1P510900	-	-	[redacted]	-	-	[redacted]
1P511100	-	-	[redacted]	-	-	[redacted]
2E 520575	-	-	[redacted]	-	-	[redacted]
2E520676	-	-	[redacted]	-	-	[redacted]
2E520777	-	-	[redacted]	-	-	[redacted]
2E520875	-	-	[redacted]	-	-	[redacted]
1F 51ME048	-	-	-	[redacted]	-	[redacted]
1F 51ME054	-	-	-	[redacted]	-	[redacted]
1F 51ME060	-	-	-	[redacted]	-	[redacted]
1F 51ME066	-	-	-	[redacted]	-	[redacted]
1F51ME024	-	-	-	[redacted]	-	[redacted]
1F51ME030	-	-	-	[redacted]	-	[redacted]
1F51ME036	-	-	-	[redacted]	-	[redacted]
1F51ME042	-	-	-	[redacted]	-	[redacted]
CADMUS GROUP	-	[redacted]	-	-	[redacted]	[redacted]
INV-206050	-	-	-	-	[redacted]	[redacted]
INV-207748	-	-	-	-	[redacted]	[redacted]
INV-202229	-	[redacted]	-	-	-	[redacted]
INV-202234	-	[redacted]	-	-	-	[redacted]
INV-203432	-	[redacted]	-	-	-	[redacted]
INV-203437	-	[redacted]	-	-	-	[redacted]
INV-204547	-	[redacted]	-	-	-	[redacted]
INV-204552	-	[redacted]	-	-	-	[redacted]
INV-205808	-	[redacted]	-	-	-	[redacted]
INV-205813	-	[redacted]	-	-	-	[redacted]
INV-206865	-	[redacted]	-	-	-	[redacted]
INV-206870	-	[redacted]	-	-	-	[redacted]
INV-208506	-	[redacted]	-	-	-	[redacted]
INV-208511	-	[redacted]	-	-	-	[redacted]
INV-210502	-	[redacted]	-	-	-	[redacted]
INV-210507	-	[redacted]	-	-	-	[redacted]
INV-211617	-	[redacted]	-	-	-	[redacted]
INV-211622	-	[redacted]	-	-	-	[redacted]
INV-213650	-	[redacted]	-	-	-	[redacted]
INV-213655	-	[redacted]	-	-	-	[redacted]
INV-215298	-	[redacted]	-	-	-	[redacted]
INV-215303	-	[redacted]	-	-	-	[redacted]
INV-216684	-	[redacted]	-	-	-	[redacted]
INV-216689	-	[redacted]	-	-	-	[redacted]
INV-218070	-	[redacted]	-	-	-	[redacted]
INV-218075	-	[redacted]	-	-	-	[redacted]
INV-219333	-	[redacted]	-	-	-	[redacted]
CAPE COD MEDIA GROUP	-	[redacted]	-	-	-	[redacted]
0000070927	-	[redacted]	-	-	-	[redacted]
0000269198	-	[redacted]	-	-	-	[redacted]
0000269937	-	[redacted]	-	-	-	[redacted]

2015 Residential Consumer Products						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
ENERGY FEDERATION	-	-	[redacted]	[redacted]	-	[redacted]
0316657-IN	-	-	-	[redacted]	-	[redacted]
0331624-IN	-	-	-	[redacted]	-	[redacted]
0355480-IN	-	-	-	[redacted]	-	[redacted]
0389073-IN	-	-	-	[redacted]	-	[redacted]
0403490-IN	-	-	-	[redacted]	-	[redacted]
0173007-IN	-	-	[redacted]	-	-	[redacted]
0197598-IN	-	-	[redacted]	-	-	[redacted]
0197599-IN	-	-	[redacted]	-	-	[redacted]
0208590-IN	-	-	[redacted]	-	-	[redacted]
0215759-IN	-	-	[redacted]	-	-	[redacted]
0215760-IN	-	-	[redacted]	-	-	[redacted]
0230941-IN	-	-	[redacted]	-	-	[redacted]
0230942-IN	-	-	[redacted]	-	-	[redacted]
0268838-IN	-	-	[redacted]	-	-	[redacted]
0298138-IN	-	-	[redacted]	-	-	[redacted]
0298139-IN	-	-	[redacted]	-	-	[redacted]
0302805-IN	-	-	[redacted]	[redacted]	-	[redacted]
0304579-IN	-	-	[redacted]	[redacted]	-	[redacted]
0309985-IN	-	-	[redacted]	-	-	[redacted]
0309986-IN	-	-	[redacted]	-	-	[redacted]
0319259-IN	-	-	[redacted]	[redacted]	-	[redacted]
0319960-IN	-	-	[redacted]	[redacted]	-	[redacted]
0326334-IN	-	-	[redacted]	-	-	[redacted]
0326335-IN	-	-	[redacted]	-	-	[redacted]
0329139-IN	-	-	[redacted]	[redacted]	-	[redacted]
0336484-IN	-	-	[redacted]	[redacted]	-	[redacted]
0347217-IN	-	-	[redacted]	[redacted]	-	[redacted]
0353603-IN	-	-	[redacted]	-	-	[redacted]
0353817-IN	-	-	[redacted]	-	-	[redacted]
0371025-IN	-	-	[redacted]	[redacted]	-	[redacted]
0378158-IN	-	-	[redacted]	[redacted]	-	[redacted]
0386115-IN	-	-	[redacted]	[redacted]	-	[redacted]
0388235-IN	-	-	[redacted]	-	-	[redacted]
0388236-IN	-	-	[redacted]	-	-	[redacted]
0393403-IN	-	-	[redacted]	[redacted]	-	[redacted]
0394084-IN	-	-	[redacted]	[redacted]	-	[redacted]
0394577-IN	-	-	[redacted]	[redacted]	-	[redacted]
0405018-IN	-	-	[redacted]	-	-	[redacted]
0405019-IN	-	-	[redacted]	-	-	[redacted]
0405908-IN	-	-	[redacted]	[redacted]	-	[redacted]
ENTERPRISE	-	[redacted]	-	-	-	[redacted]
12969	-	[redacted]	-	-	-	[redacted]
INTERSTATE REFRIGERA	-	-	-	[redacted]	-	[redacted]
27516	-	-	-	[redacted]	-	[redacted]
JACO ENVORONMENTAL	-	-	[redacted]	[redacted]	-	[redacted]
CC555	-	-	[redacted]	[redacted]	-	[redacted]
CC556	-	-	[redacted]	[redacted]	-	[redacted]
CC557	-	-	[redacted]	[redacted]	-	[redacted]
CC558A	-	-	[redacted]	[redacted]	-	[redacted]
CC559	-	-	[redacted]	[redacted]	-	[redacted]
CC560	-	-	[redacted]	[redacted]	-	[redacted]
CC561	-	-	[redacted]	[redacted]	-	[redacted]
CC562	-	-	-	[redacted]	-	[redacted]
CC563	-	-	-	[redacted]	-	[redacted]
CC564	-	-	-	[redacted]	-	[redacted]
CC565	-	-	-	[redacted]	-	[redacted]
CC566	-	-	-	[redacted]	-	[redacted]
LOCKHEED MARTIN	-	-	-	[redacted]	-	[redacted]
21561121	-	-	-	[redacted]	-	[redacted]
21561122	-	-	-	[redacted]	-	[redacted]
21569278	-	-	-	[redacted]	-	[redacted]
21576990	-	-	-	[redacted]	-	[redacted]
21576991	-	-	-	[redacted]	-	[redacted]
21591789	-	-	-	[redacted]	-	[redacted]
21591790	-	-	-	[redacted]	-	[redacted]
21601370	-	-	-	[redacted]	-	[redacted]
21601371	-	-	-	[redacted]	-	[redacted]
21621216	-	-	-	[redacted]	-	[redacted]
21621616	-	-	-	[redacted]	-	[redacted]
21635984	-	-	-	[redacted]	-	[redacted]
21636079	-	-	-	[redacted]	-	[redacted]
21649292	-	-	-	[redacted]	-	[redacted]
21649293	-	-	-	[redacted]	-	[redacted]
21665962	-	-	-	[redacted]	-	[redacted]
21665963	-	-	-	[redacted]	-	[redacted]
21679329	-	-	-	[redacted]	-	[redacted]
21679330	-	-	-	[redacted]	-	[redacted]
21695635	-	-	-	[redacted]	-	[redacted]
21695637	-	-	-	[redacted]	-	[redacted]

Vendor Invoice Summary Table

2. Residential Products

Residential Consumer Products

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Residential Consumer Products						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
MARTHA'S VINEYARD TI	-	[redacted]	-	-	-	[redacted]
301071380	-		-	-	-	
OPINION DYNAMICS	-	-	-	-	[redacted]	
7831DEC14	-	-	-	-		
7831FEBMAR15	-	-	-	-		
7831JAN15	-	-	-	-		
7831MAY15	-	-	-	-		
7831NOV14	-	-	-	-		
7831NOV15	-	-	-	-		
7831OCT14	-	-	-	-		
PARAGO SERVICES CORP	-	[redacted]			-	
2E220357	-		-	-	-	
1P 210104	-	-	[redacted]	-	-	
1P 510001	-	-		-	-	
1P 510100	-	-		-	-	
1P 510200	-	-		-	-	
1P 510400	-	-		-	-	
1P210098	-	-		-	-	
1P510300	-	-		-	-	
2E 320002	-	-		-	-	
2E 520067	-	-		-	-	
2E220316	-	-		-	-	
2E220338	-	-		-	-	
2E520272	-	-		-	-	
2E520372	-	-		-	-	
2E520474	-	-		-	-	
1F 51ME006	-	-	-	[redacted]	-	
1F 51ME018	-	-	-		-	
1F21ME053	-	-	-		-	
1F51ME012	-	-	-		-	
SIMPLE SIGNS OF CC	-	[redacted]	-	-	-	
6324	-		-	-	-	
Grand Total	[redacted]					

Vendor Invoice Summary Table

4. Low-Income Whole House

Low-Income New Construction

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Low-Income New Construction						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
ICF RESOURCE	-	-	[redacted]	-	-	[redacted]
CAPE U01-15 LI	-	-	[redacted]	-	-	[redacted]
CAPE U01-15 NLI	-	-	[redacted]	-	-	[redacted]
CAPE U05-15 LI	-	-	[redacted]	-	-	[redacted]
CAPE U06-15 LI	-	-	[redacted]	-	-	[redacted]
CAPE U11-15LI	-	-	[redacted]	-	-	[redacted]
CAPE-U08-15 LI	-	-	[redacted]	-	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
7831DEC14	-	-	-	-	[redacted]	[redacted]
7831FEBMAR15	-	-	-	-	[redacted]	[redacted]
7831JAN15	-	-	-	-	[redacted]	[redacted]
7831MAY15	-	-	-	-	[redacted]	[redacted]
7831NOV14	-	-	-	-	[redacted]	[redacted]
7831NOV15	-	-	-	-	[redacted]	[redacted]
7831OCT14	-	-	-	-	[redacted]	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table

4. Low-Income Whole House

Low-Income Single Family Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Low-Income Single Family Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CMC ENERGY SERVICES	-	-	-	[redacted]	-	[redacted]
15-806-07	-	-	-	[redacted]	-	[redacted]
15-806-08	-	-	-	[redacted]	-	[redacted]
15-806-09	-	-	-	[redacted]	-	[redacted]
15-806-10	-	-	-	[redacted]	-	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
15-806-01	-	-	-	[redacted]	-	[redacted]
15-806-03	-	-	-	[redacted]	-	[redacted]
15-806-04	-	-	-	[redacted]	-	[redacted]
15-806-05	-	-	-	[redacted]	-	[redacted]
15-806-06	-	-	-	[redacted]	-	[redacted]
15-806-2	-	-	-	[redacted]	-	[redacted]
EVERSOURCE ENERGY	-	-	-	-	[redacted]	[redacted]
03-05-15	-	-	-	-	[redacted]	[redacted]
GREENLITE LIGHTING	-	-	[redacted]	-	-	[redacted]
CN55160	-	-	[redacted]	-	-	[redacted]
US70947	-	-	[redacted]	-	-	[redacted]
US71054	-	-	[redacted]	-	-	[redacted]
HERITAGE PRESS, INC.	-	[redacted]	-	-	-	[redacted]
97072	-	[redacted]	-	-	-	[redacted]
HOUSING ASSISTANCE C	-	[redacted]	[redacted]	[redacted]	-	[redacted]
BL-2015-01B1	-	-	[redacted]	[redacted]	-	[redacted]
BL-2015-01B2	-	-	[redacted]	[redacted]	-	[redacted]
BL-2015-01BR	-	-	[redacted]	-	-	[redacted]
BL-2015-01BR_B	-	-	[redacted]	-	-	[redacted]
BL-2015-02B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2015-02BCRA	-	-	[redacted]	-	-	[redacted]
BL-2015-02BRB	-	-	[redacted]	-	-	[redacted]
BL-2015-03B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2015-03BR	-	-	[redacted]	-	-	[redacted]
BL-2015-04B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2015-04BR	-	-	[redacted]	[redacted]	-	[redacted]
BL-2015-05B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2015-06B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2015-06BR	-	-	[redacted]	-	-	[redacted]
BL-2015-06BR2	-	-	[redacted]	-	-	[redacted]
BL-2015-07B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2015-07BR	-	-	[redacted]	-	-	[redacted]
bl-2015-08b	-	-	[redacted]	[redacted]	-	[redacted]
BL-2015-08BR	-	-	[redacted]	-	-	[redacted]
BL-2015-08BR2	-	-	[redacted]	-	-	[redacted]
BL-2015-09B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2015-09BR	-	-	[redacted]	-	-	[redacted]
BL-2015-10B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2015-10BRA&B	-	-	[redacted]	-	-	[redacted]
BL-2015-11B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2015-11BR	-	-	[redacted]	-	-	[redacted]
BL-2015-12B	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2015-01A	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2015-01B	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2015-02	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2015-03	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2015-04	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2015-05	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2015-06	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2015-06-RISE	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2015-07	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2015-08	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2015-09	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2015-10	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2015-11	-	-	[redacted]	[redacted]	-	[redacted]
WZ-2015-12	-	-	[redacted]	[redacted]	-	[redacted]
06-09-15	-	[redacted]	-	-	-	[redacted]
05.05.15_MARKETING	-	[redacted]	-	-	-	[redacted]
WZ-2015-12B	-	-	-	[redacted]	-	[redacted]
INTERNATIONAL ENERGY	-	-	-	-	[redacted]	[redacted]
02-16-15	-	-	-	-	[redacted]	[redacted]
JACOBSON ENERGY RESE	-	-	-	-	[redacted]	[redacted]
24	-	-	-	-	[redacted]	[redacted]
17	-	-	-	-	[redacted]	[redacted]
18	-	-	-	-	[redacted]	[redacted]
19	-	-	-	-	[redacted]	[redacted]
20	-	-	-	-	[redacted]	[redacted]
21	-	-	-	-	[redacted]	[redacted]
22	-	-	-	-	[redacted]	[redacted]
23	-	-	-	-	[redacted]	[redacted]

Vendor Invoice Summary Table

4. Low-Income Whole House

Low-Income Single Family Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Low-Income Single Family Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
NEXANT, INC	-	-	-	-		
178966G	-	-	-	-		
181466E	-	-	-	-		
182436E	-	-	-	-		
184644E	-	-	-	-		
191103E	-	-	-	-		
192514E	-	-	-	-		
NORTHEAST ENERGY E	-	-	-	-		
5094	-	-	-	-		
OPINION DYNAMICS	-	-	-	-		
7831DEC14	-	-	-	-		
7831FEBMAR15	-	-	-	-		
7831JAN15	-	-	-	-		
7831MAY15	-	-	-	-		
7831NOV14	-	-	-	-		
7831NOV15	-	-	-	-		
7831OCT14	-	-	-	-		
RIVER ENERGY CONSULT - Ansafone, Answer2, Verizon Business	-		-	-	-	
10444	-		-	-	-	
8872	-		-	-	-	
9047	-		-	-	-	
9164	-		-	-	-	
9355	-		-	-	-	
9630	-		-	-	-	
9764	-		-	-	-	
10310	-		-	-	-	
10563	-		-	-	-	
10144	-		-	-	-	
10032	-		-	-	-	
9512	-		-	-	-	
RIVER ENERGY CONSULT - Jeff Lin	-		-	-	-	
10041	-		-	-	-	
RIVER ENERGY CONSULT - One Planet Corporation	-		-	-	-	
10544	-		-	-	-	
RIVER ENERGY CONSULT - Tabors Caramanis Rudkevich	-	-	-	-		
8792	-	-	-	-		
8905	-	-	-	-		
9427	-	-	-	-		
10623	-	-	-	-		
TETRA TECH MA, INC.	-	-	-	-		
50879239	-	-	-	-		
50889246	-	-	-	-		
50908868	-	-	-	-		
1001B	-	-	-	-		
1002 B	-	-	-	-		
1003 B	-	-	-	-		
1004 B	-	-	-	-		
1005 B	-	-	-	-		
1006 B	-	-	-	-		
Grand Total						

Vendor Invoice Summary Table

4. Low-Income Whole House

Low-Income Multi-Family Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 Low-Income Multi-Family Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
ACTION FOR BOSTON	-	-	[redacted]	[redacted]	-	[redacted]
20151104	-	-	[redacted]	-	-	[redacted]
2015-Q3-Q4	-	-	-	[redacted]	-	[redacted]
Q1-2015-LIMF	-	-	-	[redacted]	-	[redacted]
Q1-Q3 2014	-	-	-	[redacted]	-	[redacted]
Q2-2015-LIMF	-	-	-	[redacted]	-	[redacted]
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CADMUS GROUP	-	-	-	-	[redacted]	[redacted]
INV-206050	-	-	-	-	[redacted]	[redacted]
INV-217413	-	-	-	-	[redacted]	[redacted]
INV-200601	-	-	-	-	[redacted]	[redacted]
INV-210989	-	-	-	-	[redacted]	[redacted]
INV-212646	-	-	-	-	[redacted]	[redacted]
INV-214284	-	-	-	-	[redacted]	[redacted]
CMC ENERGY SERVICES	-	-	-	[redacted]	-	[redacted]
15-806-07	-	-	-	[redacted]	-	[redacted]
15-806-08	-	-	-	[redacted]	-	[redacted]
15-806-10	-	-	-	[redacted]	-	[redacted]
15-806-11	-	-	-	[redacted]	-	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
15-806-01	-	-	-	[redacted]	-	[redacted]
15-806-03	-	-	-	[redacted]	-	[redacted]
15-806-04	-	-	-	[redacted]	-	[redacted]
15-806-05	-	-	-	[redacted]	-	[redacted]
15-806-06	-	-	-	[redacted]	-	[redacted]
15-806-2	-	-	-	[redacted]	-	[redacted]
HOUSING ASSISTANCE C	-	-	[redacted]	[redacted]	-	[redacted]
01.07.2015_LIMF_BR_	-	-	[redacted]	[redacted]	-	[redacted]
01.13.2015_LIMF_01B_	-	-	[redacted]	[redacted]	-	[redacted]
01.22.2015_LIMF_	-	-	[redacted]	[redacted]	-	[redacted]
02.03.2015_LIMF_BR_	-	-	[redacted]	[redacted]	-	[redacted]
02.03.2015-LIMF_BR_	-	-	[redacted]	[redacted]	-	[redacted]
02.17.2015_LIMF_WZ_	-	-	[redacted]	[redacted]	-	[redacted]
03.03.2015_LIMF_03_	-	-	[redacted]	[redacted]	-	[redacted]
03.31.15_LIMF	-	-	[redacted]	[redacted]	-	[redacted]
03.31.15_MASHPEE	-	-	[redacted]	[redacted]	-	[redacted]
05.06.15_LIMF_B	-	-	[redacted]	[redacted]	-	[redacted]
05.11.15_LIMF_INDIVI	-	-	[redacted]	[redacted]	-	[redacted]
05.21.15_LIMF_B	-	-	[redacted]	[redacted]	-	[redacted]
06.17.15_LIMF_INDIVI	-	-	[redacted]	[redacted]	-	[redacted]
06.24.15_LIMF_YHA	-	-	[redacted]	[redacted]	-	[redacted]
07.17.2015_LIMF_WZ	-	-	[redacted]	[redacted]	-	[redacted]
07.21.2015_LIMF_SAND	-	-	[redacted]	[redacted]	-	[redacted]
08.17.15_LIMF_INDIVI	-	-	[redacted]	[redacted]	-	[redacted]
08.18.15_KIMF_B	-	-	[redacted]	[redacted]	-	[redacted]
08.19.15_LIMF_BR	-	-	[redacted]	-	-	[redacted]
08.21.15_LIMF_BR	-	-	[redacted]	-	-	[redacted]
08.21.15_LIMF_YHA	-	-	[redacted]	-	-	[redacted]
09.08.15_LIMF_INDIVI	-	-	[redacted]	[redacted]	-	[redacted]
10.09.15_LIMF_INDIVI	-	-	[redacted]	[redacted]	-	[redacted]
10.19.15_LIMF_BR_OSP	-	-	[redacted]	[redacted]	-	[redacted]
11.07.15_GF_LIMF_B	-	-	[redacted]	[redacted]	-	[redacted]
11.25.15_LIMF_INDIVI	-	-	[redacted]	[redacted]	-	[redacted]
12.15.15_LIMF_INDIVI	-	-	[redacted]	[redacted]	-	[redacted]
12.16.15_LIMF_FC_B	-	-	[redacted]	[redacted]	-	[redacted]
BL-2015-05BR	-	-	[redacted]	-	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
7831DEC14	-	-	-	-	[redacted]	[redacted]
7831FEBMAR15	-	-	-	-	[redacted]	[redacted]
7831JAN15	-	-	-	-	[redacted]	[redacted]
7831MAY15	-	-	-	-	[redacted]	[redacted]
7831NOV14	-	-	-	-	[redacted]	[redacted]
7831NOV15	-	-	-	-	[redacted]	[redacted]
7831OCT14	-	-	-	-	[redacted]	[redacted]
Grand Total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Vendor Invoice Summary Table

6. C&I New Construction

C&I New Construction

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 C&I New Construction						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
AEE	-	-	-	[redacted]	-	[redacted]
RENEWAL-47325-2015	-	-	-	[redacted]	-	[redacted]
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
BLACKHAWK ENGAGEMENT	-	-	[redacted]	-	-	[redacted]
5G 540940	-	-	[redacted]	-	-	[redacted]
5G 541040	-	-	[redacted]	-	-	[redacted]
5G540651	-	-	[redacted]	-	-	[redacted]
CAPE COD MEDIA GROUP	-	[redacted]	-	[redacted]	-	[redacted]
0000076279	-	[redacted]	-	-	-	[redacted]
0000079818	-	-	-	[redacted]	-	[redacted]
CLEARESULT OPERATING	-	-	-	[redacted]	-	[redacted]
5706	-	-	-	[redacted]	-	[redacted]
5840	-	-	-	[redacted]	-	[redacted]
5894	-	-	-	[redacted]	-	[redacted]
6036	-	-	-	[redacted]	-	[redacted]
CMC ENERGY SERVICES	-	-	-	[redacted]	-	[redacted]
15-806CI-07	-	-	-	[redacted]	-	[redacted]
15-806CI-08	-	-	-	[redacted]	-	[redacted]
15-806CI-09	-	-	-	[redacted]	-	[redacted]
15-806CI-10	-	-	-	[redacted]	-	[redacted]
15-806CI-11	-	-	-	[redacted]	-	[redacted]
15-806HV-06	-	-	-	[redacted]	-	[redacted]
15-806HV-07	-	-	-	[redacted]	-	[redacted]
15-806HV-08	-	-	-	[redacted]	-	[redacted]
15-806HV-09	-	-	-	[redacted]	-	[redacted]
15-806HV-10	-	-	-	[redacted]	-	[redacted]
15-806HV-12	-	-	-	[redacted]	-	[redacted]
15-806UP-07	-	-	-	[redacted]	-	[redacted]
15-806UP-08	-	-	-	[redacted]	-	[redacted]
15-806UP-09	-	-	-	[redacted]	-	[redacted]
15-806UP-10	-	-	-	[redacted]	-	[redacted]
15-806UP-11	-	-	-	[redacted]	-	[redacted]
15-806UP-12	-	-	-	[redacted]	-	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
14-806HV-12	-	-	-	[redacted]	-	[redacted]
14-806UP-12	-	-	-	[redacted]	-	[redacted]
15-806CI-01	-	-	-	[redacted]	-	[redacted]
15-806CI-05	-	-	-	[redacted]	-	[redacted]
15-806CI-06	-	-	-	[redacted]	-	[redacted]
15-806HV-01	-	-	-	[redacted]	-	[redacted]
15-806HV-02	-	-	-	[redacted]	-	[redacted]
15-806HV-03	-	-	-	[redacted]	-	[redacted]
15-806HV-04	-	-	-	[redacted]	-	[redacted]
15-806HV-05	-	-	-	[redacted]	-	[redacted]
15-806UP-01	-	-	-	[redacted]	-	[redacted]
15-806UP-02	-	-	-	[redacted]	-	[redacted]
15-806UP-03	-	-	-	[redacted]	-	[redacted]
15-806UP-04	-	-	-	[redacted]	-	[redacted]
15-806UP-05	-	-	-	[redacted]	-	[redacted]
15-806UP-06	-	-	-	[redacted]	-	[redacted]
CONSERVATION SERVICE	-	-	-	[redacted]	-	[redacted]
5174	-	-	-	[redacted]	-	[redacted]
5258	-	-	-	[redacted]	-	[redacted]
5363	-	-	-	[redacted]	-	[redacted]
5409	-	-	-	[redacted]	-	[redacted]
5493	-	-	-	[redacted]	-	[redacted]
5522	-	-	-	[redacted]	-	[redacted]
5659	-	-	-	[redacted]	-	[redacted]

Vendor Invoice Summary Table

6. C&I New Construction

C&I New Construction

Cape Light Compact

2015 C&I New Construction						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
DEMAND MANAGEMENT	-	-	-	[redacted]	-	[redacted]
201412CS	-	-	-	[redacted]	-	[redacted]
201501CS	-	-	-	[redacted]	-	[redacted]
201502CS	-	-	-	[redacted]	-	[redacted]
201503CS	-	-	-	[redacted]	-	[redacted]
201504CS	-	-	-	[redacted]	-	[redacted]
201505CS	-	-	-	[redacted]	-	[redacted]
201506CS	-	-	-	[redacted]	-	[redacted]
201507CS	-	-	-	[redacted]	-	[redacted]
201508CS	-	-	-	[redacted]	-	[redacted]
201509CS	-	-	-	[redacted]	-	[redacted]
201510CS	-	-	-	[redacted]	-	[redacted]
201511CS	-	-	-	[redacted]	-	[redacted]
201512CS	-	-	-	[redacted]	-	[redacted]
201601CS	-	-	-	[redacted]	-	[redacted]
ECOVA, INC	-	-	[redacted]	[redacted]	-	[redacted]
10723CL	-	-	[redacted]	-	-	[redacted]
10726CL	-	-	[redacted]	-	-	[redacted]
10728CL	-	-	[redacted]	-	-	[redacted]
10743CL	-	-	[redacted]	-	-	[redacted]
10746CL	-	-	[redacted]	-	-	[redacted]
10770CL	-	-	[redacted]	-	-	[redacted]
10798CL	-	-	[redacted]	-	-	[redacted]
10812CL	-	-	[redacted]	-	-	[redacted]
10834CL	-	-	[redacted]	-	-	[redacted]
10851CL	-	-	[redacted]	-	-	[redacted]
10863CL	-	-	[redacted]	-	-	[redacted]
10878CL	-	-	[redacted]	-	-	[redacted]
10905CL	-	-	[redacted]	-	-	[redacted]
10926CL	-	-	[redacted]	-	-	[redacted]
LED FIXTURE PILOT	-	-	[redacted]	-	-	[redacted]
LED FIXTURE PILOT-	-	-	[redacted]	-	-	[redacted]
PB-003233	-	-	[redacted]	-	-	[redacted]
PB-003352	-	-	[redacted]	-	-	[redacted]
PB-003445	-	-	[redacted]	-	-	[redacted]
PB-003571	-	-	[redacted]	-	-	[redacted]
107236A	-	-	-	[redacted]	-	[redacted]
107266A	-	-	-	[redacted]	-	[redacted]
107286A	-	-	-	[redacted]	-	[redacted]
107436U	-	-	-	[redacted]	-	[redacted]
107466U	-	-	-	[redacted]	-	[redacted]
107706U	-	-	-	[redacted]	-	[redacted]
107976U	-	-	-	[redacted]	-	[redacted]
108126A	-	-	-	[redacted]	-	[redacted]
108346U	-	-	-	[redacted]	-	[redacted]
108516U	-	-	-	[redacted]	-	[redacted]
108636U	-	-	-	[redacted]	-	[redacted]
108786U	-	-	-	[redacted]	-	[redacted]
109056U	-	-	-	[redacted]	-	[redacted]
109266U	-	-	-	[redacted]	-	[redacted]
323306U	-	-	-	[redacted]	-	[redacted]
335206U	-	-	-	[redacted]	-	[redacted]
344806U	-	-	-	[redacted]	-	[redacted]
356906A	-	-	-	[redacted]	-	[redacted]
ENERGY FEDERATION	-	-	[redacted]	[redacted]	-	[redacted]
0165287-CM	-	-	[redacted]	-	-	[redacted]
0175781-IN	-	-	[redacted]	-	-	[redacted]
0191226-IN	-	-	[redacted]	-	-	[redacted]
0215803-IN	-	-	[redacted]	-	-	[redacted]
0251771-IN	-	-	[redacted]	-	-	[redacted]
0268695-IN	-	-	[redacted]	-	-	[redacted]
0283036-IN	-	-	[redacted]	-	-	[redacted]
0294603-IN	-	-	[redacted]	-	-	[redacted]
0301027-CM	-	-	[redacted]	-	-	[redacted]
0309322-IN	-	-	[redacted]	-	-	[redacted]
0324676-IN	-	-	[redacted]	-	-	[redacted]
0349157-IN	-	-	[redacted]	-	-	[redacted]
0387563-IN	-	-	[redacted]	-	-	[redacted]
0168993-IN	-	-	-	[redacted]	-	[redacted]
0184784-IN	-	-	-	[redacted]	-	[redacted]
0210335-IN	-	-	-	[redacted]	-	[redacted]
0224959-IN	-	-	-	[redacted]	-	[redacted]
0240076-IN	-	-	-	[redacted]	-	[redacted]
0262214-IN	-	-	-	[redacted]	-	[redacted]
0275865-IN	-	-	-	[redacted]	-	[redacted]
0288815-IN	-	-	-	[redacted]	-	[redacted]
0300103-IN	-	-	-	[redacted]	-	[redacted]
0312735-IN	-	-	-	[redacted]	-	[redacted]
0329220-IN	-	-	-	[redacted]	-	[redacted]
0371921-IN	-	-	-	[redacted]	-	[redacted]
0389852-IN	-	-	-	[redacted]	-	[redacted]
0405096-IN	-	-	-	[redacted]	-	[redacted]

Vendor Invoice Summary Table

6. C&I New Construction

C&I New Construction

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 C&I New Construction						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
GALLIGAN ENERGY CONS	-	-	-	[redacted]	-	[redacted]
2015-118	-	-	-	[redacted]	-	[redacted]
2015-124	-	-	-	[redacted]	-	[redacted]
2015-125	-	-	-	[redacted]	-	[redacted]
2015-127	-	-	-	[redacted]	-	[redacted]
KEMA	-	-	-	-	[redacted]	[redacted]
10002521	-	-	-	-	[redacted]	[redacted]
10002902	-	-	-	-	[redacted]	[redacted]
10002927	-	-	-	-	[redacted]	[redacted]
10003333	-	-	-	-	[redacted]	[redacted]
10003386	-	-	-	-	[redacted]	[redacted]
10004723	-	-	-	-	[redacted]	[redacted]
10004828	-	-	-	-	[redacted]	[redacted]
20150070	-	-	-	-	[redacted]	[redacted]
20150286	-	-	-	-	[redacted]	[redacted]
20150372	-	-	-	-	[redacted]	[redacted]
20150634	-	-	-	-	[redacted]	[redacted]
20150843	-	-	-	-	[redacted]	[redacted]
20151127	-	-	-	-	[redacted]	[redacted]
20151301	-	-	-	-	[redacted]	[redacted]
20151498	-	-	-	-	[redacted]	[redacted]
20151574	-	-	-	-	[redacted]	[redacted]
20151954	-	-	-	-	[redacted]	[redacted]
20152054	-	-	-	-	[redacted]	[redacted]
20152383	-	-	-	-	[redacted]	[redacted]
20152411	-	-	-	-	[redacted]	[redacted]
20152589	-	-	-	-	[redacted]	[redacted]
20152682	-	-	-	-	[redacted]	[redacted]
20152827	-	-	-	-	[redacted]	[redacted]
20154012	-	-	-	-	[redacted]	[redacted]
NEW BUILDING INSTITU	-	-	-	[redacted]	-	[redacted]
3215	-	-	-	[redacted]	-	[redacted]
NEXANT, INC	-	-	-	-	[redacted]	[redacted]
181466E	-	-	-	-	[redacted]	[redacted]
182436E	-	-	-	-	[redacted]	[redacted]
191103E	-	-	-	-	[redacted]	[redacted]
192514E	-	-	-	-	[redacted]	[redacted]
NORTHEAST ENERGY E	-	-	-	[redacted]	-	[redacted]
5080	-	-	-	[redacted]	-	[redacted]
5070	-	-	-	[redacted]	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
7831DEC14	-	-	-	-	[redacted]	[redacted]
7831FEBMAR15	-	-	-	-	[redacted]	[redacted]
7831JAN15	-	-	-	-	[redacted]	[redacted]
7831MAY15	-	-	-	-	[redacted]	[redacted]
7831NOV14	-	-	-	-	[redacted]	[redacted]
7831NOV15	-	-	-	-	[redacted]	[redacted]
7831OCT14	-	-	-	-	[redacted]	[redacted]
TETRA TECH MA, INC.	-	-	-	-	[redacted]	[redacted]
1002 B	-	-	-	-	[redacted]	[redacted]
1003 B	-	-	-	-	[redacted]	[redacted]
1004 B	-	-	-	-	[redacted]	[redacted]
1005 B	-	-	-	-	[redacted]	[redacted]
50879220	-	-	-	-	[redacted]	[redacted]
50879258	-	-	-	-	[redacted]	[redacted]
50908888	-	-	-	-	[redacted]	[redacted]
Grand Total	[redacted]					

Vendor Invoice Summary Table

7. C&I Retrofit

C&I Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 C&I Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CAPE COD MEDIA GROUP	-	-	-	[redacted]	-	[redacted]
0000079818	-	-	-	[redacted]	-	[redacted]
CLEARESULT OPERATING	-	-	-	[redacted]	-	[redacted]
APR-15-MAY-15	-	-	-	[redacted]	-	[redacted]
INV-0000020140	-	-	-	[redacted]	-	[redacted]
CMC ENERGY SERVICES	-	-	-	[redacted]	-	[redacted]
15-806CI-07	-	-	-	[redacted]	-	[redacted]
15-806CI-08	-	-	-	[redacted]	-	[redacted]
15-806CI-09	-	-	-	[redacted]	-	[redacted]
15-806CI-10	-	-	-	[redacted]	-	[redacted]
15-806CI-11	-	-	-	[redacted]	-	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
15-806CI-01	-	-	-	[redacted]	-	[redacted]
15-806CI-05	-	-	-	[redacted]	-	[redacted]
15-806CI-06	-	-	-	[redacted]	-	[redacted]
15-8061CI-02	-	-	-	[redacted]	-	[redacted]
15-806CI-03	-	-	-	[redacted]	-	[redacted]
15-806CI-04	-	-	-	[redacted]	-	[redacted]
DEMAND MANAGEMENT	-	-	-	[redacted]	-	[redacted]
201412CS	-	-	-	[redacted]	-	[redacted]
201501CS	-	-	-	[redacted]	-	[redacted]
201502CS	-	-	-	[redacted]	-	[redacted]
201503CS	-	-	-	[redacted]	-	[redacted]
201504CS	-	-	-	[redacted]	-	[redacted]
201505CS	-	-	-	[redacted]	-	[redacted]
201506CS	-	-	-	[redacted]	-	[redacted]
201507CS	-	-	-	[redacted]	-	[redacted]
201508CS	-	-	-	[redacted]	-	[redacted]
201509CS	-	-	-	[redacted]	-	[redacted]
201510CS	-	-	-	[redacted]	-	[redacted]
201511CS	-	-	-	[redacted]	-	[redacted]
201512CS	-	-	-	[redacted]	-	[redacted]
EVERSOURCE ENERGY	-	-	-	[redacted]	-	[redacted]
03-18-15	-	-	-	[redacted]	-	[redacted]
GALLIGAN ENERGY CONS	-	-	-	[redacted]	-	[redacted]
2015-GECI-01CLC	-	-	-	[redacted]	-	[redacted]
2015-GECI-02CLC	-	-	-	[redacted]	-	[redacted]
2015-124	-	-	-	[redacted]	-	[redacted]
2015-125	-	-	-	[redacted]	-	[redacted]
2015-08ACLC	-	-	-	[redacted]	-	[redacted]
2015-09ACLC	-	-	-	[redacted]	-	[redacted]
2015-10ACLC	-	-	-	[redacted]	-	[redacted]
2015-119	-	-	-	[redacted]	-	[redacted]
2015-120	-	-	-	[redacted]	-	[redacted]
2015-126	-	-	-	[redacted]	-	[redacted]
2015-GECI-03ACLC	-	-	-	[redacted]	-	[redacted]
2015-GECI-04ACLC	-	-	-	[redacted]	-	[redacted]
2015-GECI-05ACLC	-	-	-	[redacted]	-	[redacted]
2015-GECI-06ACLC	-	-	-	[redacted]	-	[redacted]
2015-GECI-06BCLC	-	-	-	[redacted]	-	[redacted]
2015-GECI-06CLC	-	-	-	[redacted]	-	[redacted]
2015-GECI-07ACLC	-	-	-	[redacted]	-	[redacted]
KEMA	-	-	-	-	[redacted]	[redacted]
10002521	-	-	-	-	[redacted]	[redacted]
10002902	-	-	-	-	[redacted]	[redacted]
10002927	-	-	-	-	[redacted]	[redacted]
10003333	-	-	-	-	[redacted]	[redacted]
10003386	-	-	-	-	[redacted]	[redacted]
20150070	-	-	-	-	[redacted]	[redacted]
20150286	-	-	-	-	[redacted]	[redacted]
20150372	-	-	-	-	[redacted]	[redacted]
20150634	-	-	-	-	[redacted]	[redacted]
20150843	-	-	-	-	[redacted]	[redacted]
20151127	-	-	-	-	[redacted]	[redacted]
20151301	-	-	-	-	[redacted]	[redacted]
20151498	-	-	-	-	[redacted]	[redacted]
20151574	-	-	-	-	[redacted]	[redacted]
20151954	-	-	-	-	[redacted]	[redacted]
20152054	-	-	-	-	[redacted]	[redacted]
20152383	-	-	-	-	[redacted]	[redacted]
20152411	-	-	-	-	[redacted]	[redacted]
20152589	-	-	-	-	[redacted]	[redacted]
20152682	-	-	-	-	[redacted]	[redacted]
20152827	-	-	-	-	[redacted]	[redacted]
20154012	-	-	-	-	[redacted]	[redacted]
20152841	-	-	-	-	[redacted]	[redacted]

Vendor Invoice Summary Table

7. C&I Retrofit

C&I Retrofit

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 C&I Retrofit						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
NORTHEAST ENERGY E	-	-	-	[redacted]	-	[redacted]
5080	-	-	-		-	
5070	-	-	-		-	
OPINION DYNAMICS	-	-	-	-	[redacted]	
7831DEC14	-	-	-	-		
7831FEBMAR15	-	-	-	-		
7831JAN15	-	-	-	-		
7831MAY15	-	-	-	-		
7831NOV14	-	-	-	-		
7831NOV15	-	-	-	-		
7831OCT14	-	-	-	-		
RISE ENGINEERING	-	-	-	[redacted]	-	[redacted]
123176	-	-	-		-	
123584	-	-	-		-	
124142	-	-	-		-	
125185	-	-	-		-	
128686	-	-	-		-	
129715	-	-	-		-	
132222	-	-	-		-	
136657	-	-	-		-	
RIVER ENERGY CONSULT - Committee Meetings	-	-	-		-	
8899	-	-	-		-	
9127	-	-	-		-	
9232	-	-	-		-	
9410	-	-	-		-	
9566	-	-	-		-	
9656	-	-	-		-	
9750	-	-	-		-	
9968	-	-	-		-	
RIVER ENERGY CONSULT - Naomi Mermin Consulting	-	-	-		-	
8809	-	-	-		-	
RIVER ENERGY CONSULT - Tabors Caramanis Rudkevich	-	-	-	-	[redacted]	
8792	-	-	-	-		
8905	-	-	-	-		
9427	-	-	-	-		
10623	-	-	-	-		
SIEMENS INDUSTRY, IN	-	-	[redacted]	[redacted]	-	[redacted]
5610006054	-	-		-	-	
5610006226	-	-		-	-	
5610008192	-	-		-	-	
5610008536	-	-		-	-	
5610008890	-	-		-	-	
5610002531-1	-	-	-	[redacted]	-	
TETRA TECH MA, INC.	-	-	-	-	[redacted]	
50879276	-	-	-	-		
50889287	-	-	-	-		
50908909	-	-	-	-		
Grand Total	[redacted]					

Vendor Invoice Summary Table

7. C&I Retrofit

C&I Direct Install

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 C&I Direct Install						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
All Legal Allocated Costs	[redacted]	-	-	-	-	[redacted]
All IT Allocated Costs	[redacted]	-	-	-	-	[redacted]
All Marketing Allocated Costs	-	[redacted]	-	-	-	[redacted]
All General Administration Allocated Costs	[redacted]	[redacted]	-	[redacted]	[redacted]	[redacted]
CAPE COD MEDIA GROUP	-	[redacted]	-	-	-	[redacted]
0000079818	-	[redacted]	-	-	-	[redacted]
CLEARESULT OPERATING	-	-	-	[redacted]	-	[redacted]
APR-15-MAY-15	-	-	-	[redacted]	-	[redacted]
INV-0000020140	-	-	-	[redacted]	-	[redacted]
077965	-	-	-	[redacted]	-	[redacted]
079995	-	-	-	[redacted]	-	[redacted]
CMC ENERGY SERVICES	-	-	-	[redacted]	-	[redacted]
15-806CI-07	-	-	-	[redacted]	-	[redacted]
15-806CI-08	-	-	-	[redacted]	-	[redacted]
15-806CI-09	-	-	-	[redacted]	-	[redacted]
15-806CI-10	-	-	-	[redacted]	-	[redacted]
15-806CI-11	-	-	-	[redacted]	-	[redacted]
COMPETITIVE RESOURCE	-	-	-	[redacted]	-	[redacted]
15-806CI-01	-	-	-	[redacted]	-	[redacted]
15-806CI-05	-	-	-	[redacted]	-	[redacted]
15-806CI-06	-	-	-	[redacted]	-	[redacted]
15-8061CI-02	-	-	-	[redacted]	-	[redacted]
15-806CI-03	-	-	-	[redacted]	-	[redacted]
15-806CI-04	-	-	-	[redacted]	-	[redacted]
DEMAND MANAGEMENT	-	-	-	[redacted]	-	[redacted]
201503CS	-	-	-	[redacted]	-	[redacted]
EVERSOURCE ENERGY	-	-	-	-	[redacted]	[redacted]
03-05-15	-	-	-	-	[redacted]	[redacted]
GALLIGAN ENERGY CONS	-	-	-	[redacted]	-	[redacted]
2015-118	-	-	-	[redacted]	-	[redacted]
GUEY-LEE, DOUGLAS	-	-	-	[redacted]	-	[redacted]
CC-5	-	-	-	[redacted]	-	[redacted]
CC-6	-	-	-	[redacted]	-	[redacted]
CC-7	-	-	-	[redacted]	-	[redacted]
HARBOR VIEW HOTEL	-	[redacted]	-	-	-	[redacted]
R19199-1	-	[redacted]	-	-	-	[redacted]
HONEYWELL	-	-	-	[redacted]	-	[redacted]
5231508106	-	-	-	[redacted]	-	[redacted]
INTERNATIONAL ENERGY	-	-	-	-	[redacted]	[redacted]
02-16-15	-	-	-	-	[redacted]	[redacted]
JACOBSON ENERGY RESE	-	-	-	-	[redacted]	[redacted]
24	-	-	-	-	[redacted]	[redacted]
17	-	-	-	-	[redacted]	[redacted]
18	-	-	-	-	[redacted]	[redacted]
19	-	-	-	-	[redacted]	[redacted]
20	-	-	-	-	[redacted]	[redacted]
21	-	-	-	-	[redacted]	[redacted]
22	-	-	-	-	[redacted]	[redacted]
23	-	-	-	-	[redacted]	[redacted]
KEMA	-	-	-	-	[redacted]	[redacted]
10002521	-	-	-	-	[redacted]	[redacted]
10002902	-	-	-	-	[redacted]	[redacted]
10002927	-	-	-	-	[redacted]	[redacted]
10003333	-	-	-	-	[redacted]	[redacted]
10003386	-	-	-	-	[redacted]	[redacted]
20150070	-	-	-	-	[redacted]	[redacted]
20150286	-	-	-	-	[redacted]	[redacted]
20150372	-	-	-	-	[redacted]	[redacted]
20150634	-	-	-	-	[redacted]	[redacted]
20150843	-	-	-	-	[redacted]	[redacted]
20151127	-	-	-	-	[redacted]	[redacted]
20151301	-	-	-	-	[redacted]	[redacted]
20151498	-	-	-	-	[redacted]	[redacted]
20151574	-	-	-	-	[redacted]	[redacted]
20151954	-	-	-	-	[redacted]	[redacted]
20152054	-	-	-	-	[redacted]	[redacted]
20152383	-	-	-	-	[redacted]	[redacted]
20152411	-	-	-	-	[redacted]	[redacted]
20152589	-	-	-	-	[redacted]	[redacted]
20152827	-	-	-	-	[redacted]	[redacted]
20154012	-	-	-	-	[redacted]	[redacted]
20152841	-	-	-	-	[redacted]	[redacted]

Vendor Invoice Summary Table

7. C&I Retrofit

C&I Direct Install

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 C&I Direct Install						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
MATTO, EMILY	-	-	-	[redacted]	-	[redacted]
CC-11	-	-	-	[redacted]	-	[redacted]
CC-12	-	-	-	[redacted]	-	[redacted]
CC-15	-	-	-	[redacted]	-	[redacted]
CC-16	-	-	-	[redacted]	-	[redacted]
NATL RESOURCE MANAG	-	-	[redacted]	-	-	[redacted]
FEBRUARY 2015	-	-	[redacted]	-	-	[redacted]
SEPTEMBER 2015	-	-	[redacted]	-	-	[redacted]
OCTOBER 2015	-	-	[redacted]	-	-	[redacted]
APRIL 2015 SUMMARY	-	-	[redacted]	-	-	[redacted]
AUGUST 2015 SUMMARY	-	-	[redacted]	-	-	[redacted]
DEC 2014 SUMMARY	-	-	[redacted]	-	-	[redacted]
JANUARY2015SUMMARY	-	-	[redacted]	-	-	[redacted]
JULY 2015 SUMMARY	-	-	[redacted]	-	-	[redacted]
JUNE 2015 SUMMARY	-	-	[redacted]	-	-	[redacted]
MARCH 2015 SUMMARY	-	-	[redacted]	-	-	[redacted]
MAY 2015 SUMMARY	-	-	[redacted]	-	-	[redacted]
NAVIGANT CONSULTING,	-	-	-	-	[redacted]	[redacted]
446487	-	-	-	-	[redacted]	[redacted]
449264	-	-	-	-	[redacted]	[redacted]
452009	-	-	-	-	[redacted]	[redacted]
454225	-	-	-	-	[redacted]	[redacted]
455485	-	-	-	-	[redacted]	[redacted]
458920	-	-	-	-	[redacted]	[redacted]
465331	-	-	-	-	[redacted]	[redacted]
467067	-	-	-	-	[redacted]	[redacted]
470545	-	-	-	-	[redacted]	[redacted]
473381	-	-	-	-	[redacted]	[redacted]
475446	-	-	-	-	[redacted]	[redacted]
NEXANT, INC	-	-	-	-	[redacted]	[redacted]
178966G	-	-	-	-	[redacted]	[redacted]
184644E	-	-	-	-	[redacted]	[redacted]
NORTHEAST ENERGY E	-	-	-	[redacted]	[redacted]	[redacted]
5094	-	-	-	-	[redacted]	[redacted]
5080	-	-	-	[redacted]	-	[redacted]
5070	-	-	-	[redacted]	-	[redacted]
OPINION DYNAMICS	-	-	-	-	[redacted]	[redacted]
7831DEC14	-	-	-	-	[redacted]	[redacted]
7831FEBMAR15	-	-	-	-	[redacted]	[redacted]
7831JAN15	-	-	-	-	[redacted]	[redacted]
7831MAY15	-	-	-	-	[redacted]	[redacted]
7831NOV14	-	-	-	-	[redacted]	[redacted]
7831NOV15	-	-	-	-	[redacted]	[redacted]
7831OCT14	-	-	-	-	[redacted]	[redacted]
ORLEANS-EASTHAM ELKS	-	[redacted]	-	-	-	[redacted]
01-08-15	-	[redacted]	-	-	-	[redacted]
PEOPLE POWER COMPANY	-	-	[redacted]	[redacted]	-	[redacted]
CLC013	-	-	[redacted]	[redacted]	-	[redacted]
CLC021	-	-	-	[redacted]	-	[redacted]
CLC026	-	-	[redacted]	[redacted]	-	[redacted]
CLC014	-	-	-	[redacted]	-	[redacted]
CLC015	-	-	-	[redacted]	-	[redacted]
CLC016	-	-	-	[redacted]	-	[redacted]
CLC017	-	-	-	[redacted]	-	[redacted]
CLC019	-	-	-	[redacted]	-	[redacted]
CLC020	-	-	-	[redacted]	-	[redacted]
CLC022	-	-	-	[redacted]	-	[redacted]
CLC023	-	-	-	[redacted]	-	[redacted]

Vendor Invoice Summary Table

7. C&I Retrofit

C&I Direct Install

Cape Light Compact

D.P.U. 16-127

Appendix F, 2015 Costs - CONFIDENTIAL, Redacted

H.O.s Leupold and Hale

August 1, 2016

2015 C&I Direct Install						
Vendor, Invoice Number	**Program Planning and Administration**	**Marketing and Advertising**	**Participant Incentive**	**Sales, Technical Assistance & Training**	**Evaluation and Market Research**	**Total Program Costs**
RIDLEY & ASSOCIATES	-	[redacted]	-	-	-	[redacted]
MAY 2015	-		-	-	-	
RISE ENGINEERING	-	-	[redacted]	-	-	[redacted]
OCTOBER 2015	-	-		-	-	
122320	-	-		-	-	
123177	-	-		-	-	
123220	-	-		-	-	
124144	-	-		-	-	
124145	-	-		-	-	
125187	-	-		-	-	
125188	-	-		-	-	
126389	-	-		-	-	
126392	-	-		-	-	
127466	-	-		-	-	
127470	-	-		-	-	
128687	-	-		-	-	
128688	-	-		-	-	
129712	-	-		-	-	
129716	-	-		-	-	
129718	-	-		-	-	
130903	-	-		-	-	
130904	-	-		-	-	
132221	-	-		-	-	
132223	-	-		-	-	
133489	-	-		-	-	
133505	-	-		-	-	
134893	-	-		-	-	
134924	-	-		-	-	
136659	-	-		-	-	
136715	-	-		-	-	
136804	-	-		-	-	
RIVER ENERGY CONSULT - Committee Meetings	-	-	-	[redacted]	-	[redacted]
10207	-	-	-		-	
10293	-	-	-		-	
10391	-	-	-		-	
10527	-	-	-		-	
TETRA TECH MA, INC.	-	-	-	-	[redacted]	[redacted]
50879239	-	-	-	-		
50879294	-	-	-	-		
50889246	-	-	-	-		
50889267	-	-	-	-		
50889307	-	-	-	-		
50908868	-	-	-	-		
50908927	-	-	-	-		
1001B	-	-	-	-		
1002 B	-	-	-	-		
1003 B	-	-	-	-		
1004 B	-	-	-	-		
1005 B	-	-	-	-		
1006 B	-	-	-	-		
1007 B	-	-	-	-		
Grand Total	[redacted]					

APPENDIX G
SPONSORSHIPS AND SUBSCRIPTIONS

1. Introduction

In the process of preparing this Term Report, the PAs performed a detailed review of the energy efficiency expenses incurred during the period 2013 through 2015 that were categorized as Sponsorships & Subscriptions in the hard-to-measure line items, and similar costs that were included as program expenses. PAs acknowledge that there were some inconsistencies across PAs in the categorization of costs related to sponsorships and subscriptions in the past and have worked together to create a consistent, statewide policy for the review of sponsorship costs and budget categorization in accordance with the Order and Department precedent.

As a result of this detailed review, the PAs determined that the methodology for including costs in the Sponsorships & Subscriptions hard-to-measure line items should be clarified for 2016–2018. For 2013–2015, PAs are reporting costs in the manner in which they were categorized during that term. Going forward, the PAs will categorize costs in the manner described in the Policy on Sponsorships & Subscriptions provided below.

In the past, costs were allocated to the Sponsorships & Subscriptions hard-to-measure line items based on the name of the cost (i.e., any sponsorships and any subscriptions that were made for any purpose). Going forward, the PAs will categorize costs based on the purpose for which they were incurred. While reviewing sponsorship information, PAs determined that the majority of these costs were incurred to promote or affect an in-the-field energy efficiency program directly, including marketing specific programs or sectors, or acquiring data for planning or evaluation. In fact, reaching customers, contractors, and other program influencers through sponsorships and participation in conferences and events is a key element of the PAs' go-to-market strategy. These sponsorships were intended for the purpose of promoting energy efficiency and Mass Save through banners, brochures, presentations, tables, submission of papers, and other marketing strategies. PAs consider this approach to be a fundamental element of their marketing strategy because they are often able to reach a large number of participants for a very low cost of acquisition. Starting in 2016, all costs that are incurred for the direct purpose of supporting in-the-field programs will be included as program costs in the appropriate program lines. Conversely, sponsorships and subscriptions that do not directly impact a program, but do provide a benefit to customers, will be included in the Sponsorships & Subscriptions hard-to-measure line item in the appropriate sectors.

2. Description of 2013–2015 Three-Year Sponsorships and Subscriptions

Below is a list of all organizations or items the Compact sponsored or subscribed to during the term. Section A provides a summary table that includes (a) name of the sponsored organization or item, (b) annual funding, (c) cost category, and (d) whether the organization is a lobbyist. Section B includes, for each sponsored organization, (a) description of organization or item, (b)

purpose of the item, and (c) an analysis describing why the expense was reasonable, prudently incurred, and how it provided a direct benefit to Massachusetts' ratepayers.

A. Summary of 2013–2015 Three-Year Sponsorships and Subscriptions

Sponsored Organization Name	Annual Funding				Cost Category	Registered
	2013	2014	2015	2013-2015		MA Lobbyist
Association of Energy Engineers	$ 695	$ 840	$ 190	$ 1,725	PP&A/STAT	No
Building Efficiency Resources	$ 125	$ 396	$ -	$ 521	STAT	No
Chambers of Commerce	$ 659	$ 337	$ 2,557	$ 3,553	PP&A	Yes
Consortium for Energy Efficiency, Membership	$ 4,656	$ 6,500	$ 6,620	$ 17,776	PP&A/STAT/EMV	No
Consortium for Energy Efficiency, Lighting for Tomorrow	$ 1,375	$ 1,375	$ 1,375	$ 4,125	PP&A/STAT	No
National Association for Interpretation	$ 138	$ 69	$ -	$ 207	Marketing	No
National Science Teachers Association	$ 110	$ 130	$ -	$ 240	Marketing	No
North American Association for Environmental Education	$ 80	$ 80	$ -	$ 160	Marketing	No
Northeast Energy Efficiency Partnerships, Sponsorship	$22,300	$22,300	$19,143	$ 63,743	PP&A/STAT	No
Northeast Energy Efficiency Partnerships, Design Lights Consortium	$ -	$ 6,500	$ 3,900	$ 10,400	STAT	No
Northeast Energy Efficiency Partnerships, Commercial Building Lighting Controls	$ -	$ 4,300	$ -	$ 4,300	PP&A	No
Northeast Energy Efficiency Partnerships, EM&V Forum	$ 9,952	$11,896	$12,049	$ 33,897	EM&V	No
New Buildings Institute	$10,000	$10,000	$20,000	$ 40,000	PP&A/STAT	No
TopTen USA	$ 3,350	$ 2,634	$ -	$ 5,984	PP&A/STAT	No
WOMR	$ -	$ 1,560	$ 1,560	$ 3,120	Marketing	No
TOTAL	**$53,440**	**$68,917**	**$67,394**	**$ 189,750**		

This table is based on IR DPU-Comm-3-1 in D.P.U. 15-166. It includes all costs initially included in DPU-Comm-3-1, and was revised to account for (1) additional costs in 2015, (2) errors in the initial discovery response for the 2013 and 2014 values, and (3) all costs included in the Hard-to-Measure Sponsorship and Subscription lines of the budget data tables (see Part One for more information).

These are the costs that the Compact considered sponsorships and subscriptions during 2013 through 2015. For 2016 through 2018, the PAs have developed a policy for addressing sponsorships and subscriptions based on further review and discussion among the Program Administrators and in light of the Department's 2016–2018 Three-Year Plan Order. As a result, some costs included in the above table were classified as sponsorships in 2013–2015 but are no longer considered sponsorships for 2016–2018. Please see the Policy on Sponsorships and Subscriptions below for more information.

B. Purpose and Benefit of 2013-2015 Three-Year Sponsorships and Subscriptions

Section B includes, for each sponsored organization, (a) description of organization or item, (b) purpose of the item, and (c) an analysis describing why the expense was reasonable, prudently incurred, and how it provided a direct benefit to Massachusetts' ratepayers.

Association of Energy Engineers

Description of Activities: Association of Energy Engineers – New England Chapter ("AEE-NE") annual chapter sponsor dues. The AEE–NE Chapter enjoys support of approximately 40 sponsors. Proceeds help AEE NE host monthly meetings, maintain its website, publish a monthly newsletter, archive technical presentations, and host the Annual Spotlight breakfast.

Energy Efficiency Benefits: Through AEE-NE, the Program Administrator's staff is able to take advantage of professional trainings offered at technical round-tables, monthly meetings and certification programs. For example, the popular CEM certification is offered to local AEE-NE sponsors at a discounted rate. The monthly meetings provide PA staff with updates on technology

and code changes. In addition, the PAs are able to provide up-to-date information about the PA energy efficiency programs to energy efficiency business partners and industry experts. Past presentations are maintained on AEE-NE's website. PA staff is also able to learn and market programs with business leaders and industry experts through networking sessions during each monthly meeting. AEE-NE is well-known for business incubation, information clearinghouse, and informal job fair in a comfortable setting.

Direct Benefit to Ratepayers: Support of AEE-NE allows for a venue where the PAs can interact with energy efficiency business partners and industry experts to exchange information on new technologies, potential energy efficiency measure implementation impacts and/or approaches, and access to workforce training and educational programs. The knowledge gain and information exchange allow for a better informed and trained workforce that can more effectively promote energy efficiency measures for commercial and industrial customers. The cost of supporting AEE-NE is reasonable and prudent because the Program Administrator will gain benefits that they could not gain elsewhere at a similar cost.

Building Efficiency Resources

Description of Activities: Payments made to this organization were for training fees related to home energy rating systems ("HERS").

Energy Efficiency Benefits: These costs were for staff professional development in the residential sector.

Direct Benefit to Ratepayers: Attending this training enabled staff to develop and enhance their professional skills in the delivery of the Compact's residential programs and to improve their interactions with contractors and vendors delivering residential energy efficiency services directly to Cape and Vineyard customers. This training resulted in improved services to residential customers.

Cape Cod and Martha's Vineyard Chambers of Commerce

Description of Activities: Payments made to various Cape Cod and Martha's Vineyard Chambers of Commerce were for annual membership dues. Annual membership dues range from $100 to $500. For the chambers that are registered Massachusetts lobbyists, the Compact has requested the additional information required by the Department, including the percent of resources devoted to lobbying and legislative activities. The Compact will supplement this filing with that information upon receipt from the chambers.

Energy Efficiency Benefits: The Compact joined chambers of commerce on Cape Cod and Martha's Vineyard in order to have increased access to commercial and industrial customers.

Direct Benefit to Ratepayers: Membership in the chambers of commerce allows the Compact to promote energy efficiency programs at chamber events and in chamber newsletters, and provides access to member lists that the Compact contacted regarding energy efficiency programs. The benefit of membership in chambers of commerce is to increase participation in the Compact's energy efficiency programs.

Consortium for Energy Efficiency – Membership

Description of Activities: The Consortium for Energy Efficiency ("CEE") helps Massachusetts Program Administrators achieve maximum cost-effective savings by giving PAs the opportunity to act together with peers to impact the entire American and Canadian market. By leveraging CEE initiatives, Massachusetts PAs accelerate market uptake of efficient products and services in ways that meet program needs and ensure manufacturer and trade ally engagement. To reach national markets, 114 members, each delivering efficiency under different business conditions, hone CEE initiatives from multiple angles. This process, which includes stakeholder input, gives CEE initiatives their credibility, results in regulatory acceptance, and, as members voluntarily adopt initiatives as a basis for their programs, produces market success and public benefit. Membership in CEE gives Massachusetts PAs a seat at the table to help shape these initiatives and ensure that they meet the needs of Massachusetts home owners and businesses.

In addition to market initiatives, CEE is entrusted by members to communicate important consensus positions to relevant parties. CEE members invested early in ENERGY STAR®, the marketing platform for efficiency, building it into the powerhouse brand it is today. Members continue to consult closely with the federal agencies with a goal of keeping the brand strong. CEE also brings the efficiency needs of ratepayers to Air-conditioning, Heating, & Refrigeration Institute, National Electric Manufacturers Association, American Lighting Association, UL, and other industry organizations.

An important aspect of energy efficiency is the development of conservation behaviors and habits. CEE members developed the first behavior framework specifically tied to energy use and based on social science research. This work, complete with case studies and now including two-way communicating devices, moves ratepayers out of the realm of good intention and into changed habits.

CEE members advance consensus work through facilitated topical committees. Topics concern advancing the efficiency of a particular technology, in a particular segment, or using a particular program approach. Working groups support efforts in evaluation, portfolio management, and identified research efforts. PA staff members participate in these committees via telephone and at quarterly in-person meetings. The summer meeting has traditionally been held in Boston in June. At these in-person meetings, the PA staff members have the opportunity to engage with their peers in a trusted, noncommercial environment.

Energy Efficiency Benefits: Membership at CEE means having a seat at the table in discussions with manufacturers and government agencies such as EPA and DOE. Participation at CEE means that we can have a voice in the setting of ENERGY STAR® specifications for a wide variety of products.

CEE also provides development opportunities for PA staff that increases their abilities to increase their effectiveness in delivering energy efficiency in MA. By building connections with efficiency practitioners, sharing ideas, and learning about new developments in the industry, PA employees can make sure that ratepayers receive the most up to date and relevant programs and services. CEE membership is open only to PAs, so all meetings are free from commercial interests, and PA staff have an opportunity to share ideas in an environment free from commercial activity, making the meetings more open, focused and productive.

Direct Benefit to Ratepayers: Membership in CEE leads to direct benefits for ratepayers in MA. These benefits are discussed below.

CEE committees seek to influence markets via initiatives. These initiatives focus on major end uses in the residential, commercial and industrial sectors. CEE specifications provide national reinforcement for the efficiency levels set by the Massachusetts PAs, and CEE qualified product lists provide publicly available references for consumers about products that qualify for incentives. MA ratepayers benefit by having access to this resource.

Another example of the direct benefit that CEE has for Massachusetts ratepayers is in the development of "Connected Devices." Commonly called "smart," these are the new categories of devices that leverage the internet to gather information and provide energy savings and other amenities to consumers. The best known currently available products are communicating thermostats that allow consumers to optimize energy use by remotely controlling heating and cooling and possibly even lighting. There is also much excitement about how these capabilities could be applied to home appliances in a "smart home" context. In addition to consumer benefit, there are potential utility benefits such as grid balancing and load management, data for program EM&V, and improved customer engagement. Developing an understanding about how customers can use this information and about how evaluation efforts may benefit from access to this data all lead to benefits for MA ratepayers. In addition, conversations related to proprietary consumer data, equipment and software standards can be influenced when working through a binational organization like CEE with more impact as compared to attempting to influence the actions of these key market players when communicating as a PA or a single state.

CEE greatly magnifies the influence that Massachusetts PAs have on critical and emerging market opportunities such as connected devices.

The cost to Massachusetts ratepayers for a PA to independently undertake this work would be prohibitive. By sharing costs across the CEE membership, ratepayers reap the multiple benefits of efficiency binational focus in support of energy efficiency. Membership at CEE provides PA

staff with access to peers across the country, the institutional knowledge and experience of an organization actively engaged in the energy efficiency program industry for 25 years, and influence in meetings with important stakeholders including the U.S. Environmental Protection Agency, the U.S. Department of Energy, Air-conditioning, Heating, & Refrigeration Institute, National Electric Manufacturers Association, American Lighting Association, UL, and other industry organizations.

Consortium for Energy Efficiency – Lighting for Tomorrow Sponsorship

Description of Activities: *Lighting for Tomorrow* is a competition organized by the Consortium for Energy Efficiency ("CEE"), the American Lighting Association ("ALA"), and UL. The annual *Lighting for Tomorrow* competition was created in 2002 and provides manufacturers the opportunity to push the industry forward by introducing high quality, innovative designs that contribute to the greater energy efficiency. *Lighting for Tomorrow* has a specific goal of increasing the availability and market adoption of ENERGY STAR® certified residential lighting products.

Energy Efficiency Benefits: The Program Administrator has historically sponsored the competition, alongside dozens of other utility partners, to encourage manufacturers to develop high quality energy efficient lighting products, including fixtures, lamps, retrofit kits, and lighting controls, that can ultimately be rolled out to our customers as part of our retail lighting programs. The *Lighting for Tomorrow* competition aims to continue to increase the number of high quality solid-state lighting product offerings in the market eligible to participate in efficiency programs. After winners are selected and available in retail stores for purchase, the PAs are able to encourage customers to purchase these highly efficient products at a discounted price through our Residential Lighting program, saving them energy and money.

Direct Benefit to Ratepayers: Sponsoring the competition helps the Program Administrators learn about new, innovative energy efficiency lighting options that can be used to directly benefit customers by meeting their needs and helping customers save money, while also furthering the Commonwealth's energy efficiency goals. Also, sponsoring the competition offers an opportunity to shape the direction of the manufacturers' products in order to encourage the development of cost-effective, efficient, specialized lighting that customers want to adopt. Supporting competitions, such as *Lighting for Tomorrow*, with other nation leading utilities is an efficient way to encourage manufacturers to innovate and address specific customers' needs.

National Association for Interpretation

Description of Activities: Small expenditures, $207 in total, were for annual membership dues.

Energy Efficiency Benefits: Membership to this organization enabled access to literature, materials and coaching for the effective interpretation of science in energy efficiency curriculum, in both informal (community) and formal (schools K-12+) educational settings.

Direct Benefit to Ratepayers: Membership enabled staff to incorporate principles of effective interpretation into the Compact's energy efficiency curriculum, and to promulgate such interpretation skills and principles among regional education partners (teachers). Working in Cape and Vineyard schools on energy efficiency related topics increases awareness and participation in the Compact's residential energy efficiency programs.

National Science Teachers Association

Description of Activities: Small expenditures, $240 in total, were for annual membership dues.

Energy Efficiency Benefits: Membership enabled Compact staff to access educational materials on energy efficiency and other energy related topics.

Direct Benefit to Ratepayers: Membership enabled staff to stay abreast of energy efficiency curriculum for incorporation into the Compact's successful energy education programs. Utilizing existing curriculum from the NSA was a less expensive means to develop energy efficiency materials for distribution in our schools. Working in Cape and Vineyard schools on energy efficiency related topics increases awareness and participation in the Compact's residential energy efficiency programs.

North American Association for Environmental Education

Description of Activities: Small expenditures, $160 in total, were for annual membership dues.

Energy Efficiency Benefits: Membership enabled Compact staff to access educational materials on energy efficiency and other energy-related topics.

Direct Benefit to Ratepayers: Membership enabled staff to stay abreast of energy efficiency curriculum for incorporation into the Compact's successful energy education programs. Working in Cape and Vineyard schools on energy efficiency related topics increases awareness and participation in the Compact's residential energy efficiency programs.

Northeast Energy Efficiency Partnerships – Sponsorship

Description of Activities: Northeast Energy Efficiency Partnerships ("NEEP") is a non-profit organization whose mission is to accelerate energy efficiency in buildings through innovative program strategies and industry partnerships. NEEP's strategy to accomplish this mission focuses on four areas: *Reduce Building Energy Use, Speed Adoption of High Efficiency Products, Make Energy Efficiency Visible, and Advance Knowledge & Best Practices*. The support of program administrators and business partners allows NEEP to bring together regional and national industry experts to share experiences, discuss public policy, conduct research into technologies and pertinent issues, and identify best practices.

Energy Efficiency Benefits: Sponsorship of NEEP gives PAs access to energy efficiency-related events (conferences, workshops, webinars, training, and briefings), publications (case studies, fact sheets, newsletters, reports, web resources, and whitepapers), and EM&V protocols and guidelines. These programs and materials provide the Program Administrators with valuable insights for energy efficiency program implementation, and help the PAs identify strategies to optimize energy savings opportunities. Sponsorship also affords PAs an opportunity to provide input into NEEP's future research and trainings, so that NEEP's work will provide valuable information for the PAs in developing and improving energy efficiency programs in Massachusetts and the Northeast.

By participating in NEEP conferences, workshops, and webinars, the PAs are able to learn from industry experts and energy efficiency program administrators in other jurisdictions about the latest trends, innovations, and issues in energy efficiency. PA staff is also able to take advantage of training opportunities offered by NEEP. Through their publications, NEEP provides the latest research and regional developments to help advance energy efficiency. The PAs are able to access NEEP's online tools, including REED, a database of ten northeastern states' energy efficiency programs, which allows the PAs to compare program efforts to identify best practices and potential proven savings opportunities.

Direct Benefit to Ratepayers: Massachusetts Program Administrator participation in NEEP allows the PAs to access expertise and new ideas to improve energy efficiency programs and offerings for customers. Through participation, PAs share in the expertise of NEEP's staff and energy efficiency evaluation experts that work with them regarding energy efficiency best practices, and discover opportunities to improve program delivery and drive the programs of the future. With these valuable insights, the PAs are able to improve program implementation, thus providing direct benefits to customers. Additionally, customers directly benefit from NEEP's efforts to accelerate energy efficiency in buildings and influence markets. These efforts help to improve implementation strategies and encourage the development and adoption of efficient technologies, which ultimately increase customer access to the most efficient measures and strategies.

The cost of this sponsorship is reasonable and prudent because the Program Administrator benefits from working with regional industry experts that they would not otherwise be able to access as cost-effectively. By funding these efforts collectively across multiple jurisdictions with other regional interested parties, the Program Administrator is able to share costs, so ratepayers bear a significantly lower share of the cost than they would if the PAs undertook these studies and trainings independently. Further, due to the cost sharing benefit achieved through sponsorship of NEEP, the Program Administrator is able to take advantage of a larger number of projects than it would be able to if the Program Administrators were fully funding each effort.

Northeast Energy Efficiency Partnerships – Design Lights Consortium

Description of Activities: The Design Lights Consortium ("DLC") promotes high quality, high efficiency commercial lighting solutions through collaboration among its federal, regional, state, utility, and energy efficiency program members, luminaire manufacturers, lighting designers, and other industry stakeholders. The DLC Qualified Products List provides the PAs, customers, business partners, and market actors with critical information on verified lighting systems and technologies that meet pre-determined standards regarding testing criteria, quality, specification documentation, and efficiency ratings.

Energy Efficiency Benefits: The Mass Save® Program Administrators support the advancement of lighting system technologies, an energy efficiency measure that is prominent in the energy efficiency programs for our customers, particularly LED technologies. In an effort to advance quality lighting products to the market and expedite the review of this technology through the various customer participation pathways, such as upstream point of purchase and downstream prescriptive/customer programs, the PAs support multiple DLC initiatives, including the Qualified Products List. Collaboration with the DLC helps accelerate adoption of more quality LED fixtures and/or lighting technologies in the market and advance new lighting technologies while providing consistency on how these technologies are measured for standards, testing, efficiency, and other critical technology specific criteria in the market. It is also a critical input for consistency in energy efficiency lighting system analysis and technical review as it pertains to energy savings estimates resulting from the installation of lighting systems and technologies that are accepted on the DLC Qualified Product List. The PA partnership with the DLC has been a necessary resource to cost-effectively and efficiently implement lighting systems as a viable energy efficiency measure within the various program delivery models and customer participation pathways.

Direct Benefit to Ratepayers: DLC Qualified Products Lists provides customers and business partners with a consistent and industry recognized resource on lighting system technologies that can be leveraged for designing systems and purchasing equipment. Collaboration with the DLC accelerates the adoption of more quality LED fixtures and/lighting technologies in the market thus providing accessible energy savings for customers. The DLC informs the Program Administrators' efficiency programs and the lighting industry by maintaining the leading public list of high quality, high efficiency LED products for the commercial sector. This ensures that Massachusetts' ratepayers are receiving the best quality and efficient products on the market. Finally, the cost of this partnership with the DLC was reasonable and prudent because the Program Administrator gained benefits that they could not gain elsewhere at a similar cost.

Northeast Energy Efficiency Partnerships – Commercial Building Lighting Controls

Description of Activities: The NEEP Commercial Advanced Lighting Controls ("CALC") project is run under the NEEP DLC, which produces the lighting Qualified Products List that serves as the backbone for lighting program measure selection in the region. The CALC effort is geared toward developing tools and information to enable widespread adoption of Advanced Lighting Controls in commercial buildings. The activities under development include:

- Networked Lighting Control Specification and Qualified Products List. Like the DLC successful DLC Qualified Products List for fixture and lamps these performance specification and qualified products list will equip efficiency program administrators with up to date information to evaluate options for advanced lighting control products and define minimum eligibility criteria for incentives.

- ALCS Energy Estimator – a tool that will estimate energy savings for layered lighting controls and automatically compare to existing conditions and/or multiple energy code variations.

- Training Programs - Resources and programs to educate the workforce on how to design, install, and commission Advanced Lighting Control Systems

- Demonstration Projects - In partnership with the US DOE, conduct 10 demonstration projects of various Advanced Lighting Control technologies for case studies to be incorporated into training, outreach, and marketing efforts.

- Unified Incentive Strategy – Develop a unified, market-friendly, and high-volume approach to incenting Advanced Lighting Control technology developed in partnership with member utilities and the lighting industry.

- Events – Provide more information on ALCS at the DLC annual meeting and conduct a dedicated DLC Advanced Lighting Controls Summit.

Energy Efficiency Benefits: The CALC effort seeks to greatly expand the deployment of more advanced lighting controls in the region's commercial building stock. Increased adoption of advanced lighting controls is seen as essential to sustaining future commercial lighting savings as baseline fixtures and lamps become much more efficient.

Direct Benefit to Ratepayers: The CALC effort provides opportunities for program administrators to work together in a more cost effective manner in developing an approach for successful promotion of advanced lighting controls. As the PAs currently do with lighting fixtures and lamps, tasks like developing qualified products lists for advanced lighting controls, as well as undertaking expensive demonstration projects, can be more cost effectively accomplished with regional cost sharing, than by individual PAs, and yield lower costs for lighting products to our customers.

Northeast Energy Efficiency Partnerships – EM&V Forum

Description of Activities: The NEEP Evaluation, Measurement and Verification Forum ("EM&V Forum" or "Forum") works with energy efficiency evaluation professionals across the Northeast and mid-Atlantic regions to develop, share and support the use of consistent information critical to successful EM&V activity, including: measure savings assumptions, EM&V standards and

guidelines, specific impact evaluation tools, as well as and primary data sources. The Forum also collects cost and savings data on new technologies for inclusion in future programs and planning. Through regular webinars and annual meetings, the Forum provides opportunities for evaluation and planning staff to share best practices and data, as well as to get updates on national standards, in a consolidated form not provided by other efforts. The Forum also represents the region in developing National EM&V standards for DOE's Uniform Methods project, which seeks to standardize EM&V methods and is increasingly looked to by evaluation contractors when proposing evaluation methods.

The Forum is overseen by a steering committee consisting of New England state PUC commissioners and staff, state energy office and air regulatory staff.

Energy Efficiency Benefits: EM&V Forum participation enables program administrators to better and more cost-effectively evaluate and plan energy efficiency programs through multi-state shared data collection, exchange of best practices information, and development of uniform standards and methods.

Direct Benefit to Ratepayers: The Forum provides opportunities for the program administrators to work together in a more cost effective manner in the evaluation of specific measures and in monitoring developments in EM&V methods and standards. Some of the measures evaluated through the Forum may have been otherwise overlooked because they do not represent a large enough portion of savings for any one state to be able to invest in conducting such studies on their own; but collectively, through the Forum, they become cost effective to undertake. An example of this includes the recent evaluation of commercial refrigeration measures in which NEEP, working in conjunction with evaluation contractors Cadmus and the Demand Management Group, assessed the annual, peak and hourly demand impacts of three common commercial refrigeration measures

In addition to such studies, the Forum collects data on measure costs for both existing and emerging technologies, which are essential for program administrator measure screening and program planning, and which individual program administrators often are not able to cost-effectively collect on their own, resulting in more cost-effective delivery of measures to customers.

New Buildings Institute

Description and Purpose: New Buildings Institute ("NBI") Membership allows PAs to design and enhance the C&I portfolio of programs and practices in the retrofit and new construction markets through the combination of webinars, training and consulting on advancing commercial building codes and standards.

Reasonableness and Benefits: NBI delivers on building deep technical content in the commercial building space and advances Massachusetts' goals by connecting the PAs to national best design

and construction methods to support high efficiency in commercial building spaces. In addition, it provides PAs staff the opportunity to improve on their skills as both technical and program management experts and to learn innovative ideas and best practices to improve program delivery, achieve energy savings, and meet customers' expectations from their PA provider.

During the 2013-2105 term, working with NBI directly benefitted C&I ratepayers by providing a cost effective option to calculate savings for smaller new construction buildings.

Reasonable Costs: Traditional methods of calculating savings for smaller C&I new construction buildings required heavy reliance on unique building modeling and engineering and therefore came at a high cost. NBI provided a new method for modeling savings prior to the development of a competitive marketplace for such modeling methods.

TopTen USA

Description of Activities: Top Ten USA was a national website providing a consumer friendly web-based tool that identified the most energy efficient consumer products available on the market. The tool provided customers with a "one-stop" resource that listed all the various manufacturers, makes, and models of the most super-efficient consumer products available.

Through sponsorship, the Massachusetts PAs were able to work with Top Ten USA to develop a customized Massachusetts landing page for consumers to browse for the most efficient products available to them – as well as to direct customers to associated rebates available through the Mass Save® programs.

Energy Efficiency Benefits: The PAs sponsored Top Ten USA in 2013 and 2014 after PA evaluators recognized the Top Ten USA efficient products lists as having additional energy savings for certain products over ENERGY STAR® rated products. Through the Consumer Products program, the PAs were able to offer customers enhanced rebates for products on the Top Ten USA lists that were deemed more efficient than products on the ENERGY STAR® list. Further, the additional savings from these super-efficient products improved the cost-effectiveness of the Consumer Products program as well as encouraged manufactures to develop higher tiered energy saving products.

Direct Benefit to Ratepayers: Sponsoring Top Ten USA helped to provide two-fold benefits to Massachusetts customers. First, Top Ten USA was the only "one-stop" resource available to consumers that identified and compared the most efficient appliances/consumer goods in the entire marketplace. The website also included a direct database link of local retailers stocking these super-efficient products along with available PA consumer rebates. Secondly, by assisting customers in locating and purchasing these products, these customers were able to maximize their energy savings for the entire measure life of the product.

The cost of this sponsorship is reasonable and prudent because the PAs were able to gain benefits that they could not gain elsewhere at a similar cost. By funding Top Ten USA and splitting the costs statewide, the PAs were able share the costs to support the only "one-stop" tool to identify and compare the most efficient products and specific Massachusetts rebates through the energy efficiency programs.

WOMR

Description of Activities: Expenditures were for annual sponsorship.

Energy Efficiency Benefits: Sponsorship allows the Compact to host a monthly radio show on energy.

Direct Benefit to Ratepayers: The Compact's radio show, *Focus on Energy*, enables the Compact to reach residential and business customers on Cape Cod and Martha's Vineyard to communicate information on energy efficiency programs. A local radio show featuring energy efficiency topics increases customer awareness of and participation in the Compact's programs. Because the radio programs are archived on the Compact's web site, this is a cost-effective way to inform Compact customers about energy efficiency programs.

C. Lobbying Information

The only registered lobbyist that the Compact supported in the 2013-2015 period was the Cape Cod Chamber of Commerce. The cost was specifically for annual membership dues of up to $500. The Compact has requested the additional information required by the Department, including the percent of resources devoted to lobbying and legislative activities. The Compact will supplement this filing with that information upon receipt from the chambers.

3. Policy on Sponsorships and Subscriptions

Introduction

Starting in 2016-2018, all PAs will be following a statewide policy for Sponsorships & Subscriptions, which is provided below. This policy includes the process a Program Administrator will use to determine whether it will enter into a specific sponsorship, including (with all appropriate documentation): (1) a detailed description of the direct energy efficiency-related benefit that the expenditures will provide to Massachusetts ratepayers; (2) an identification of the cost category where the expense will be classified; (3) how the expenditure will be allocated between a Program Administrator's gas and electric operations, when applicable; (4) how the Program Administrator will determine if any marketing or advertising sponsorship costs are recoverable from ratepayers in a manner that is consistent with Department precedent; (5) how the Program Administrator will determine if the sponsorship expenses for an organization that is a registered lobbyist are recoverable from ratepayers in a manner that is consistent with Department precedent; and (6) a description of an annual review process that each Program Administrator will

undertake to determine whether the events or organizations sponsored the prior year realized the expected benefits.

A. Hard-to Measure "Sponsorships and Subscriptions"

Sponsorships and subscriptions are undertaken by the PAs in order to support the goals of the Green Communities Act and acquire all available cost-effective energy efficiency. Costs included on the Sponsorships and Subscriptions hard-to-measure line items provide direct benefits to customers, but are not directly linked to specific in-the-field energy efficiency measures or services. Sponsorships and subscriptions support the energy efficiency market, encourage workforce education, attract skilled employees to Massachusetts, and promote innovation in both service delivery and the development and testing of energy efficient technologies. In accordance with the Order of the Department of Public Utilities regarding the 2016-2018 Three-Year Energy Efficiency Plan and general accepted practice, each sponsorship and subscription expense must be reasonable, prudently incurred, and provide a direct benefit to Massachusetts customers. Detailed definitions are as follows:

- **Sponsorship**: Payment by or on behalf of a PA to financially support an organization, event, or project directed by a non-PA person or group, in order to gain participation or access to a benefit of sponsorship. The purpose of these costs may include, without limitation, sharing of regional and national best practices, transformation of energy efficiency markets, influencing manufacturers, furthering energy efficiency evaluation techniques and standards, and the ability to network (with customers, contractors, evaluators, or other experts) to learn about additional energy efficiency opportunities and ways in which to improve offered energy efficiency services. These activities all provide benefits to customers and programs generally, but do not focus on a specific initiative. Specific categories of sponsorships enumerated by the Department include:

    1. Energy efficiency forums
    2. Trade associations
    3. National industry associations
    4. Groups that target specific industry sectors
    5. Universities and organizations that develop new technologies
    6. Residential focused groups to educate and engage with the community

    Costs reported in the hard-to-measure line items will be limited to sponsorships that are anticipated to provide benefits to customers but are not associated with a specific program or initiative. Conversely, expenses related to the above categories that directly impact programs will be included in the appropriate program budget (see Section B, below).

- **Subscription**: Payment by or on behalf of a PA to receive or use something related to energy efficiency over a fixed period of time, such as a periodical, a book series, or an informational service.

Costs will be categorized in the appropriate cost category.

Examples and Cost Categorization

1. Membership Dues for Consortium for Energy Efficiency ("CEE") - allows the PAs to provide guidance to manufacturers who make equipment that can be used to increase efficiency or options in the programs, and gives the PAs early insight into new technologies coming to market.
   - *Line item*: Sponsorships & Subscriptions hard-to-measure for each sector
   - *Cost Category*: PP&A

   (Note that other charges from CEE specifically related to programs may be included as program costs; see Section B, below)

2. Membership in Ally Program of American Council for an Energy-Efficient Economy ("ACEEE") - allows PAs to bring awareness to the programs generally and advance Massachusetts' goals throughout the national energy efficiency community. Allies gain access to a national center of expertise as well as unique opportunities to help contribute to and shape the nation's energy efficiency research and program agenda. Allies also learn from networks of peers and other experts about the latest trends and issues in energy efficiency. Additionally, Allies receive industry-leading information on energy efficiency markets, technology, and policy. Participation in ACEEE's Ally program allows the PAs to share in the expertise of ACEEE and other Ally members on energy efficiency technologies and opportunities that can influence the programs of the future and help PAs improve program delivery.
   - *Line item:* Sponsorships & Subscriptions hard-to-measure for each sector
   - *Cost Category:* PP&A

3. Sponsorship of International Energy Program Evaluation Conference ("IEPEC") – allows the PAs to participate in the annual professional conference, which is held for energy program implementers, evaluators of those programs, local, state, national and international representatives, and academic researchers involved in evaluation. The conference provides a forum for the presentation, critique and discussion of objective evaluations of energy programs, and promotes the documentation of unbiased, peer-reviewed evaluations that establish the basis for accurate information and provide credible evidence of program success or failure. In addition, the PAs gain access to information on current issues, market assessments, emerging technologies, and alternatives to traditional centralized supply-side options, as well as educational workshops on relevant topics, including information on evaluation methodologies, vendors, and strategies to continuously improve evaluation of the PAs' programs. In addition, support of IEPEC provides the PAs with the opportunity to learn about new program efforts and how those innovative approaches are working in other areas. This helps the PAs to effectively deliver energy efficiency solutions to customers.

- *Line item:* Sponsorships & Subscriptions hard-to-measure for each sector
- *Cost Category:* Evaluation and Market Research

B. Program Expenses (NOT Hard-to-Measure "Sponsorships and Subscriptions")

Expenses paid to directly support a program are program expenses and will be included in and allocated to the appropriate programs/core initiatives where benefits are expected to be realized. *A cost may be included in program line items even if called a sponsorship or subscription because the expense is directly related to the program.* These expenses include:

- **Data Purchase**: Payments made to receive data on a one-time or recurring basis will be included in the programs to which the data relates.

- **Memberships / Employee Training**: Membership fees (group or individual) where the fee is not used to sponsor a conference or event, but rather as a cost-efficient way to obtain multiple individual employee memberships, receive tickets to conferences for learning opportunities for employees, advertise energy efficiency programs to customers/contractors, provide direct access to member lists, and advertise energy efficiency job positions. Employee conference and training attendance enhances employee skills and teaches the employee about new technologies and strategies, helping the employee in his or her job/role and improving the programs. The conference/training must provide an energy efficiency related benefit and the PA should determine if the value of the employee's attendance justifies the costs.

- **Goods or Services**: Expenditures made to pay for a good or service, such as a product table at an event (without otherwise sponsoring the event or organization).

Costs will be categorized in the appropriate cost category.

Examples and Cost Categorization

1. Sponsorship of an HVAC conference where a PA presents on Heating & Cooling energy efficiency in order to market the Mass Save program.
   - *Line item:* Residential Heating & Cooling program core initiatives
   - *Cost Category:* Marketing and Advertising

2. Subscription to or sponsorship of an organization that shares or disseminates data that the PAs use for planning or evaluation.
   - *Line item:* Each affected program/core initiative
   - *Cost Category:* PP&A for planning data or Evaluation and Market Research for evaluation data

3. Sponsorship of a community event at which a PA promotes Mass Save through brochures, banners, and tabling to potential customers.
   - *Line item:* All relevant programs/core initiatives
   - *Cost Category:* Marketing and Advertising

4. Sponsorship of the Design Lights Consortium, which directly impacts the lighting products the PAs offer in C&I programs as well as lighting design practices for C&I customers and program design and implementation.
   - *Line item:* C&I Upstream Lighting and C&I Retrofit core initiatives
   - *Cost Category:* Sales, Technical Assistance & Training

5. Group Membership in Association of Energy Services Professionals, with which the PA gains "points," and uses these points to assign individual memberships to staff members, allowing staff to improve their skills and learn innovate ideas and best practices to improve program delivery and achieve energy savings.
   - *Line item:* All relevant programs/core initiatives
   - *Cost Category:* PP&A

Documentation of Expenditures Included in Program Costs

In 2016-2018, the PAs will contemporaneously document the benefits to customers of expenditures that are or were previously included in the Sponsorships & Subscriptions hard-to-measure line item in 2013-2015, including any sponsorship or membership payment that is made to directly affect programs and is included in program line items. PAs do not intend to provide a detailed explanation of benefits (or contemporaneously document the benefits) associated with costs that were never included in the Sponsorships & Subscriptions line items, including (1) payments solely for goods and services (e.g., tabling), (2) the purchasing of data, (3) conference fees paid for directly by employees, and (4) costs included in other line items (e.g., Residential Education (in-school programs), Workforce Development (third-party trainings)). The PAs will provide detailed information about all costs in the Term Report in accordance with the Term Report template.

C. Lobbying or Engagement in Legislative Activity

For each sponsorship and subscription expenditure, the PA will determine whether the sponsored organization is a registered lobbyist or engages in legislative activity. For all sponsored organizations, whether registered as a lobbyist or not, PAs will seek to obtain a written statement prior to providing monetary support covenanting in substance as follows:

[The Organization] understands that the Massachusetts energy efficiency Program Administrators cannot and do not support lobbying activities by organizations sponsored by the Program Administrators. [The Organization] covenants and agrees that funds provided by [Company] as an energy efficiency or demand savings sponsorship or subscription will not be used for lobbying or other legislative activities.

In the event a PA determines that sponsorship of an organization that is involved in lobbying activities has a direct benefit to Massachusetts customers, the PA will document the benefits and provide evidence of how the funds at issue are used by the sponsored organization. Consistent with the Department's directives in the 2016-2018 Three-Year Plan Order, the organization must also provide documentation that (1) details the structure and function of the sponsored organization; (2) identifies the percentage of resources devoted to lobbying and legislative activities; and (3) provides the method used to derive the percentage.

PAs expect to sponsor organizations that lobby or advocate for more stringent codes and standards. The PAs will document all spending as noted above, but will work under the presumption that more stringent codes and standards provide a direct benefit to customers.

D. Annual Review Process

Prior to filing the Plan-Year Report or Term Report, each PA will review all sponsorship and subscription spending incurred during the prior program year (including, in 2016-2018, those expenses directly affecting programs and categorized in program line items that were previously included as Sponsorships & Subscriptions hard-to-measure costs in 2013-2015) to determine whether the events or organizations sponsored in the prior year realized the expected benefits (noting that some benefits may take more than a year to accrue, and that many benefits are not quantifiable). Each PA will document actual benefits realized, and verify that each expense was reasonable, prudently incurred, and was intended to provide a direct benefit to customers

E. Process to Determine Whether to Enter into a Sponsorship or Subscription; Contemporaneous Documentation

Step 1. **Identify** sponsorship or subscription opportunity – may come from staff or vendor.

Step 2. Identify and document the **purpose** of the organization or event to assess whether it is **directly related to energy efficiency**.

Step 3. Identify and document in detail the expected **direct energy efficiency-related benefit to Massachusetts customers** of the expense, which may include: enhanced energy efficiency program delivery, marketing and education opportunities, reaching key industry sectors, sharing of best practices, access to manufacturers, contractors, and/or data and evaluation materials, assisting the PA in achieving savings or satisfying an

energy efficiency related statutory mandate, or other benefits. For sponsorships that are being renewed, identify the benefits that were achieved in prior years and their impact on the decision to renew the sponsorship.

Step 4. Assess whether the associated sponsorship costs are **reasonable and prudent** in relation to the expected benefits; determine if the opportunity is the best and most cost-efficient means by which the PA can achieve the expected benefits.

Step 5. Determine whether or not the organization is a registered lobbyist or otherwise **engages in lobbying** (note that an organization can be engaged in lobbying even if it is not required to be a formally registered lobbyist). For organizations that do engage in lobbying, additional scrutiny should be used to determine that the sponsorship funds will not be spent for lobbying purposes. If it is determined that the sponsorship is prudent, ensure that the organization seeking sponsorship signs a statement that organization will not use PA funds for lobbying purposes and gather evidence that: (1) details the structure and function of the sponsored organization (e.g., organization chart, mission statement); (2) identifies the percentage of resources devoted to lobbying and legislative activities; and (3) provides the method used to derive the percentage.

Step 6. Determine and document how the expenditure will be allocated between a PA's **gas and electric operations** (when applicable), based on the benefits to be realized by each fuel type's customers.

Step 7. Determine and document the **appropriate line item and cost category**, including: whether the expense (1) is a hard-to-measure Sponsorship or Subscription; or (2) directly affects a program, and if so, determine which programs and how the expense will be allocated among the impacted core initiatives. Determine and document the appropriate budget category (PP&A, Marketing, STAT, or Evaluation and Market Research). When appropriate, coordinate with other PAs for consistency.

Step 8. Obtain **sign-off** from the designated PA staff approving the sponsorship or subscription.

Step 9. Obtain documentation from a manager (or equivalent) of the organization stating that it **will not use PA funds for lobbying purposes**. For organizations that engage in lobbying, ensure that the PA has received all information listed in Step 5.

Step 10. Confirm that all **logos and marketing** materials used in relation to the sponsorship for which the PA will seek cost recovery from energy efficiency are designed to support and promote energy efficiency programs.

Step 11. **Pay invoice** per standard PA procedure.

Step 12. **Review** all costs following completion of sponsored event or program and determine whether and how the expected benefits were realized. Determine whether the PA would sponsor or participate in the organization or event again in the future.

4. Cost Categories

Consistent with the Department's Order in the 2016-2018 Three-Year Plan and the Consistent Cost Categories Report, the PAs have extensively reviewed the Sponsorships & Subscriptions from past and current years and have assigned cost categories for each sponsorship and subscription (including costs that are appropriately categorized as program costs) for use starting in 2016. The PAs will continue to review new costs going forward and assign a consistent category. Please see the table below for examples of statewide potential sponsorships and subscriptions cost categories.

Organization Name	Purpose of Funding	Line Items (HTM or programs)	Cost Category	Registered MA Lobbyist
ACCA Contractors Event	Sponsorship	All programs	Marketing	No
Affordable Comfort (Home Performance Coalition)	Exhibit booth at Home Performance Conference	Residential & Low-Income programs	Marketing	No
American Council for an Energy-Efficient Economy (ACEEE)	Membership in the Allies Program	Hard-to-Measure S&S	PP&A	No
American Council for an Energy-Efficient Economy (ACEEE)	Conference Sponsorships	Hard-to-Measure S&S	Marketing	No
American Council for an Energy-Efficient Economy (ACEEE)	Research	All relevant programs	Eval & Market Research	No
Association of Energy Engineers National (AEE)	Membership (corporate/group)	All relevant programs	PP&A	No
Association of Energy Services Professionals (AESP)	Membership (corporate)	All relevant programs	PP&A	No
Association of Energy Services Professionals (AESP) / Northeast Energy Efficiency Council	AESP/NEEC Annual Conference	All relevant programs	PP&A	No
CEE - Consortium for Energy Efficiency	Membership Dues	Hard-to-Measure S&S	PP&A	No
CEE - Consortium for Energy Efficiency	Lighting for Tomorrow Sponsorship	Residential Lighting core initiative	STAT	No
CEE - Consortium for Energy Efficiency	Benchmarking Project	Hard-to-Measure S&S	Eval & Market Research	No
CEE - Consortium for Energy Efficiency	Summer Meeting Sponsorship	All programs	PP&A	No
Compressed Air Challenge	Sponsorship	C&I programs (electric)	STAT	No
Design Lights Consortium (project of NEEP)	Membership	Relevant C&I programs (electric)	STAT	No
Facility Managers Association (IFMA)	Membership	C&I programs	Marketing	No
Harwich Chamber of Commerce	Sponsorship - Lower Cape Home & Garden Expo	Relevant programs	Marketing	No
International Energy Program Evaluation Conference (IEPEC) Conference	Sponsorship	Hard-to-Measure S&S	Eval & Market Research	No
Massachusetts Food Association	Annual Dues	C&I New Construction	Marketing	Yes
Massachusetts Restaurant Association	Annual Sponsorship of Organization	C&I New Construction	Marketing	Yes
Northeast Energy Efficiency Council (NEEC)	Membership/Sponsorship	All programs	PP&A	Yes
Northeast Sustainable Energy Association (NESEA)	Sponsorship of Building Energy Conference	Hard-to-Measure S&S	Marketing	No
PHCC of MA (Plumbing-Heating-Cooling Contractors Association)	Membership dues (trade show)	All programs	Marketing	No
Town of Amherst Sustainability Fair	Local Event Sponsorship	All relevant programs	Marketing	No
US Green Building Council (USGBC)	Membership	All C&I New Construction	Marketing	Yes
Wolters Kluwer Law and Business	Energy Magazine Subscription	All relevant programs	STAT	No

APPENDIX H
PERFORMANCE INCENTIVE MODELS

The purpose of this appendix is to provide detailed supporting documentation on performance incentives that each Program Administrator proposes to collect. This section is not applicable to the Compact; as a municipal aggregator and public entity, the Compact does not collect any performance incentives.

APPENDIX CLC-1
CAPE LIGHT COMPACT TOWN ACTIVITY REPORTS

The following are the 2015 Town Activity Reports for the Compact. The 2013 and 2014 Town Activity Reports are provided in the Compact's 2013 Plan-Year Report and 2014 Plan-Year Report, respectively.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Cape Light Compact
D.P.U. 16-127
2013-2015 Energy Efficiency Term Report
August 1, 2016
Appendix CLC-1, Page 1 of 24

Town Name: All
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	44,876	13,860.00	10	93,667	99,445.51	45	0.00	0.0%
Low-Income Single-Family	68,180	115,499.13	52	1,439,413	2,632,133.69	799	2,944,961.98	89.4%
Low-Income Multi-Family	24,036	9,166.73	31	369,247	338,856.81	237	0.00	0.0%
LI Subtotal	137,092	138,525.86	93	1,902,327	3,070,436.01	1,081	2,944,961.98	
LI % of Total	2.3%	4.7%	2.9%	3.2%	9.6%	6.5%	12.3%	
Residential New Construction	148,287	48,938.40	25	968,626	366,238.24	188	0.00	0.0%
Residential Multi-Family Retrofit	190,651	179,441.71	59	1,978,286	1,001,609.10	784	0.00	0.0%
Res Home Energy	2,260,475	1,810,622.54	2,203	11,509,353	14,612,465.49	8,749	9,711,952.54	150.5%
Energy Star HVAC	14,588	12,925.00	82	1,390,162	1,003,706.00	2,016	0.00	0.0%
Energy Star Lighting	475,768	51,990.19	27	14,810,206	1,897,655.79	296	0.00	0.0%
Energy Star Appliance	146,769	45,581.46	626	1,219,648	336,273.15	2,781	0.00	0.0%
Res Subtotal	3,236,538	2,149,499.30	3,022	31,876,280	19,217,947.77	14,814	9,711,952.54	
Res % of Total	53.5%	72.5%	94.0%	53.5%	60.4%	89.1%	40.6%	
C&I New Construction	807,461	201,847.00	16	3,186,062	684,000.36	53	685,643.31	99.8%
C&I Govt New Construction	286,494	118,658.15	9	1,145,484	853,013.15	22	974,714.96	87.5%
C&I Large Retrofit	310,018	49,111.25	8	3,258,978	712,057.79	59	1,183,975.62	60.1%
C&I Govt Large	0	3,846.30	4	3,339,777	2,776,480.52	61	1,931,475.59	143.7%
C&I Small Retrofit	195,100	162,546.44	43	4,562,604	2,923,160.36	434	2,640,688.00	110.7%
C&I Govt Small	0	0.00	0	846,050	538,675.02	49	1,954,408.69	27.6%
C&I Products & Services	1,077,123	142,018.00	19	9,479,551	1,057,784.40	53	1,890,460.37	56.0%
C&I Subtotal	2,676,196	678,027.14	99	25,818,506	9,545,171.60	731	11,261,366.54	
C&I % of Total	44.2%	22.9%	3.1%	43.3%	30.0%	4.4%	47.1%	
Report Total	6,049,826	2,966,052.30	3,214	59,597,113	31,833,555.38	16,626	23,918,281.06	
Budget Comparison					26,789,770.78		23,918,281.06	112.0%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: Aquinnah
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	0	0.00	0	2,589	14,609.88	2	1,577.38	926.2%
Low-Income Multi-Family	0	0.00	0	0	0.00	0	0.00	0.0%
LI Subtotal	0	0.00	0	2,589	14,609.88	2	1,577.38	
LI % of Total	0.0%	0.0%	0.0%	4.8%	31.0%	4.5%	12.3%	
Residential New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Residential Multi-Family Retrofit	0	0.00	0	10,173	2,788.15	3	0.00	0.0%
Res Home Energy	0	0.00	0	32,700	24,064.37	22	5,201.91	462.6%
Energy Star HVAC	0	0.00	0	5,377	3,200.00	8	0.00	0.0%
Energy Star Lighting	0	0.00	0	467	119.76	1	0.00	0.0%
Energy Star Appliance	0	0.00	0	2,645	959.92	7	0.00	0.0%
Res Subtotal	0	0.00	0	51,362	31,132.20	41	5,201.91	
Res % of Total	0.0%	0.0%	0.0%	95.2%	66.0%	93.2%	40.6%	
C&I New Construction	0	0.00	0	0	0.00	0	367.24	0.0%
C&I Govt New Construction	0	0.00	0	0	0.00	0	522.08	0.0%
C&I Large Retrofit	0	0.00	0	0	0.00	0	634.16	0.0%
C&I Govt Large	0	0.00	0	0	0.00	0	1,034.53	0.0%
C&I Small Retrofit	0	0.00	0	0	0.00	0	1,414.40	0.0%
C&I Govt Small	0	0.00	0	0	1,425.00	1	1,046.82	136.1%
C&I Products & Services	0	0.00	0	0	0.00	0	1,012.57	0.0%
C&I Subtotal	0	0.00	0	0	1,425.00	1	6,031.80	
C&I % of Total	0.0%	0.0%	0.0%	0.0%	3.0%	2.3%	47.1%	
Report Total	0	0.00	0	53,951	47,167.08	44	12,811.09	
Budget Comparison					40,099.25		12,811.09	313.0%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: Bourne
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	4,576	1,065.44	1	0.00	0.0%
Low-Income Single-Family	2,549	2,244.00	2	60,682	142,174.58	51	237,213.90	59.9%
Low-Income Multi-Family	0	0.00	0	2,984	2,019.87	2	0.00	0.0%
LI Subtotal	2,549	2,244.00	2	68,241	145,259.89	54	237,213.90	
LI % of Total	0.5%	1.1%	0.9%	1.5%	5.8%	5.5%	12.3%	
Residential New Construction	3,975	708.26	2	20,197	5,555.74	7	0.00	0.0%
Residential Multi-Family Retrofit	936	532.06	2	90,388	55,822.28	37	0.00	0.0%
Res Home Energy	153,838	77,818.62	142	574,778	640,892.62	494	782,288.57	81.9%
Energy Star HVAC	619	1,000.00	5	69,949	49,135.00	98	0.00	0.0%
Energy Star Lighting	768	84.44	1	721,116	87,739.86	13	0.00	0.0%
Energy Star Appliance	11,363	3,078.56	53	77,298	19,523.20	215	0.00	0.0%
Res Subtotal	171,498	83,221.94	205	1,553,726	858,668.70	864	782,288.57	
Res % of Total	34.4%	41.6%	93.2%	33.3%	34.1%	88.3%	40.6%	
C&I New Construction	0	206.25	1	71,885	21,645.35	4	55,227.92	39.2%
C&I Govt New Construction	209,247	60,776.75	2	243,411	96,057.50	2	78,512.37	122.3%
C&I Large Retrofit	0	0.00	0	49,997	14,355.00	4	95,368.11	15.1%
C&I Govt Large	0	3,516.30	2	1,795,288	1,053,307.36	10	155,578.53	677.0%
C&I Small Retrofit	47,612	42,240.13	7	333,047	227,096.65	32	212,704.91	106.8%
C&I Govt Small	0	0.00	0	10,306	19,175.71	2	157,425.77	12.2%
C&I Products & Services	67,813	7,645.00	1	533,541	85,915.05	7	152,274.79	56.4%
C&I Subtotal	324,672	114,384.43	13	3,037,475	1,517,552.62	61	907,092.40	
C&I % of Total	65.1%	57.2%	5.9%	65.2%	60.2%	6.2%	47.1%	
Report Total	498,719	199,850.37	220	4,659,442	2,521,481.21	979	1,926,594.87	
Budget Comparison					2,300,619.82		1,926,594.87	119.4%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: **Brewster**
Program Period: **2015**
Current Dates: **12/01/15 - 12/31/15**
Cumulative Dates: **01/01/15 - 12/31/15**

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	1,378	5,882.57	2	60,094	110,023.36	32	75,886.86	145.0%
Low-Income Multi-Family	0	0.00	0	7,967	8,638.24	3	0.00	0.0%
LI Subtotal	1,378	5,882.57	2	68,061	118,661.60	35	75,886.86	
LI % of Total	0.4%	3.4%	1.6%	2.9%	7.6%	3.9%	12.3%	
Residential New Construction	7,007	3,997.42	1	20,387	9,292.04	4	0.00	0.0%
Residential Multi-Family Retrofit	2,981	1,921.89	2	386,899	239,327.83	116	0.00	0.0%
Res Home Energy	100,769	90,642.16	90	677,436	780,984.30	425	250,261.16	312.1%
Energy Star HVAC	336	200.00	2	97,110	62,550.00	131	0.00	0.0%
Energy Star Lighting	359	57.48	1	215,307	36,897.21	9	0.00	0.0%
Energy Star Appliance	7,288	2,320.00	26	49,032	13,399.92	128	0.00	0.0%
Res Subtotal	118,740	99,138.95	122	1,446,170	1,142,451.30	813	250,261.16	
Res % of Total	31.7%	57.3%	95.3%	61.8%	73.1%	91.1%	40.6%	
C&I New Construction	175,163	60,522.25	3	175,163	103,648.50	3	17,667.91	586.6%
C&I Govt New Construction	0	0.00	0	3,092	7,475.00	2	25,116.81	29.8%
C&I Large Retrofit	0	0.00	0	0	99.75	1	30,509.12	0.3%
C&I Govt Large	0	0.00	0	24,648	11,422.50	3	49,770.97	23.0%
C&I Small Retrofit	0	0.00	0	169,180	137,239.24	34	68,046.22	201.7%
C&I Govt Small	0	0.00	0	0	0.00	0	50,361.92	0.0%
C&I Products & Services	79,844	7,610.00	1	454,378	41,915.00	1	48,714.08	86.0%
C&I Subtotal	255,007	68,132.25	4	826,461	301,799.99	44	290,187.03	
C&I % of Total	68.0%	39.3%	3.1%	35.3%	19.3%	4.9%	47.1%	
Report Total	375,124	173,153.77	128	2,340,692	1,562,912.89	892	616,335.05	
Budget Comparison					1,192,807.65		616,335.05	193.5%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: Cape Cod
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	44,876	13,860.00	10	93,667	99,445.51	45	0.00	0.0%
Low-Income Single-Family	55,496	69,864.38	39	1,364,023	2,442,237.60	758	2,704,158.61	90.3%
Low-Income Multi-Family	24,036	9,166.73	31	355,807	326,264.01	224	0.00	0.0%
LI Subtotal	124,407	92,891.11	80	1,813,498	2,867,947.12	1,027	2,704,158.61	
LI % of Total	2.2%	3.5%	2.6%	3.3%	9.6%	6.5%	12.3%	
Residential New Construction	113,507	35,263.96	21	828,727	310,496.48	170	0.00	0.0%
Residential Multi-Family Retrofit	183,929	173,990.38	58	1,963,416	989,420.01	779	0.00	0.0%
Res Home Energy	2,177,172	1,643,124.79	2,128	10,669,997	13,516,667.26	8,254	8,917,826.52	151.6%
Energy Star HVAC	14,588	12,925.00	82	1,292,922	961,406.00	1,942	0.00	0.0%
Energy Star Lighting	432,905	40,992.98	24	14,216,727	1,801,069.40	261	0.00	0.0%
Energy Star Appliance	133,519	37,806.46	609	1,130,039	280,166.07	2,701	0.00	0.0%
Res Subtotal	3,055,619	1,944,103.57	2,922	30,101,829	17,859,225.22	14,107	8,917,826.52	
Res % of Total	54.1%	73.0%	94.5%	54.0%	60.0%	89.3%	40.6%	
C&I New Construction	807,461	201,847.00	16	3,186,062	684,000.36	53	629,579.70	108.6%
C&I Govt New Construction	286,494	118,343.15	7	1,145,484	851,020.65	20	895,014.55	95.1%
C&I Large Retrofit	310,018	49,111.25	8	3,258,978	711,282.79	58	1,087,164.42	65.4%
C&I Govt Large	0	3,681.30	3	3,225,025	2,692,838.63	55	1,773,542.89	151.8%
C&I Small Retrofit	164,223	132,104.74	40	4,328,680	2,774,169.26	411	2,424,764.48	114.4%
C&I Govt Small	0	0.00	0	778,245	453,263.52	38	1,794,600.78	25.3%
C&I Products & Services	899,628	120,564.00	15	7,905,321	889,011.65	37	1,735,881.39	51.2%
C&I Subtotal	2,467,824	625,651.44	89	23,827,795	9,055,586.86	672	10,340,548.21	
C&I % of Total	43.7%	23.5%	2.9%	42.7%	30.4%	4.3%	47.1%	
Report Total	5,647,850	2,662,646.12	3,091	55,743,121	29,782,759.20	15,806	21,962,533.34	
Budget Comparison					25,014,491.72		21,962,533.34	113.9%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: Chatham
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	0	0.00	0	13,226	31,425.58	10	111,334.14	28.2%
Low-Income Multi-Family	0	0.00	0	43,553	29,221.12	50	0.00	0.0%
LI Subtotal	0	0.00	0	56,779	60,646.70	60	111,334.14	
LI % of Total	0.0%	0.0%	0.0%	3.3%	6.3%	9.2%	12.3%	
Residential New Construction	0	0.00	0	59,230	12,298.16	3	0.00	0.0%
Residential Multi-Family Retrofit	0	0.00	0	42,233	25,089.96	12	0.00	0.0%
Res Home Energy	106,876	70,088.00	90	450,087	509,613.49	307	367,159.87	138.8%
Energy Star HVAC	318	1,675.00	3	52,920	38,795.00	88	0.00	0.0%
Energy Star Lighting	467	103.92	1	121,237	17,099.52	9	0.00	0.0%
Energy Star Appliance	4,886	1,370.00	24	42,190	11,529.84	115	0.00	0.0%
Res Subtotal	112,547	73,236.92	118	767,896	614,425.97	534	367,159.87	
Res % of Total	85.9%	97.3%	98.3%	45.2%	63.3%	81.5%	40.6%	
C&I New Construction	0	0.00	0	3,249	1,755.00	2	25,920.71	6.8%
C&I Govt New Construction	0	0.00	0	0	41.25	1	36,849.05	0.1%
C&I Large Retrofit	0	0.00	0	0	0.00	0	44,760.14	0.0%
C&I Govt Large	0	0.00	0	0	0.00	0	73,019.34	0.0%
C&I Small Retrofit	0	131.58	1	340,870	232,352.93	55	99,831.08	232.7%
C&I Govt Small	0	0.00	0	392,545	44,325.98	1	73,886.32	60.0%
C&I Products & Services	18,424	1,915.00	1	138,644	16,395.00	2	71,468.76	22.9%
C&I Subtotal	18,424	2,046.58	2	875,308	294,870.16	61	425,735.40	
C&I % of Total	14.1%	2.7%	1.7%	51.5%	30.4%	9.3%	47.1%	
Report Total	130,971	75,283.50	120	1,699,983	969,942.83	655	904,229.41	
Budget Comparison					835,909.23		904,229.41	92.4%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: Chilmark
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	0	0.00	0	2,568	8,500.07	1	9,175.44	92.6%
Low-Income Multi-Family	0	0.00	0	0	0.00	0	0.00	0.0%
LI Subtotal	0	0.00	0	2,568	8,500.07	1	9,175.44	
LI % of Total	0.0%	0.0%	0.0%	2.9%	9.9%	1.7%	12.3%	
Residential New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Residential Multi-Family Retrofit	0	0.00	0	10,173	2,788.15	3	0.00	0.0%
Res Home Energy	8,597	10,673.98	7	48,156	60,798.35	31	30,258.95	200.9%
Energy Star HVAC	0	0.00	0	14,351	6,550.00	12	0.00	0.0%
Energy Star Lighting	0	0.00	0	467	119.76	1	0.00	0.0%
Energy Star Appliance	151	30.00	1	10,478	6,535.82	11	0.00	0.0%
Res Subtotal	8,748	10,703.98	8	83,624	76,792.08	58	30,258.95	
Res % of Total	100.0%	100.0%	100.0%	93.9%	89.7%	96.7%	40.6%	
C&I New Construction	0	0.00	0	0	0.00	0	2,136.22	0.0%
C&I Govt New Construction	0	0.00	0	0	0.00	0	3,036.86	0.0%
C&I Large Retrofit	0	0.00	0	0	0.00	0	3,688.84	0.0%
C&I Govt Large	0	0.00	0	0	0.00	0	6,017.78	0.0%
C&I Small Retrofit	0	0.00	0	0	0.00	0	8,227.43	0.0%
C&I Govt Small	0	0.00	0	0	0.00	0	6,089.23	0.0%
C&I Products & Services	0	0.00	0	2,894	325.00	1	5,889.99	5.5%
C&I Subtotal	0	0.00	0	2,894	325.00	1	35,086.35	
C&I % of Total	0.0%	0.0%	0.0%	3.2%	0.4%	1.7%	47.1%	
Report Total	8,748	10,703.98	8	89,086	85,617.15	60	74,520.74	
Budget Comparison					69,623.42		74,520.74	93.4%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: Dennis
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	44,876	13,860.00	10	44,876	13,860.00	10	0.00	0.0%
Low-Income Single-Family	2,518	4,144.58	2	102,908	145,078.72	57	176,108.59	82.4%
Low-Income Multi-Family	0	0.00	0	13,395	11,159.87	6	0.00	0.0%
LI Subtotal	47,394	18,004.58	12	161,179	170,098.59	73	176,108.59	
LI % of Total	9.3%	6.9%	3.7%	3.8%	7.7%	5.4%	12.3%	
Residential New Construction	0	0.00	0	34,060	13,075.34	3	0.00	0.0%
Residential Multi-Family Retrofit	111,484	75,426.85	35	160,918	101,423.33	70	0.00	0.0%
Res Home Energy	199,987	135,402.29	207	945,328	1,206,422.57	722	580,774.30	207.7%
Energy Star HVAC	2,865	2,750.00	16	103,909	80,965.00	181	0.00	0.0%
Energy Star Lighting	45,894	3,438.85	1	1,698,457	241,790.86	26	0.00	0.0%
Energy Star Appliance	7,562	1,580.00	50	87,625	19,061.21	252	0.00	0.0%
Res Subtotal	367,791	218,597.99	309	3,030,297	1,662,738.31	1,254	580,774.30	
Res % of Total	72.2%	83.8%	94.5%	71.7%	75.7%	92.1%	40.6%	
C&I New Construction	18,385	3,847.50	2	72,325	23,774.10	6	41,001.44	58.0%
C&I Govt New Construction	17,144	13,069.40	1	17,144	15,514.65	1	58,287.91	26.6%
C&I Large Retrofit	0	0.00	0	94,132	22,378.50	5	70,801.69	31.6%
C&I Govt Large	0	0.00	0	2,116	4,542.00	1	115,502.15	3.9%
C&I Small Retrofit	0	1,433.31	2	137,895	83,859.15	15	157,913.02	53.1%
C&I Govt Small	0	0.00	0	127,000	147,343.40	4	116,873.55	126.1%
C&I Products & Services	58,348	5,870.00	1	583,763	66,270.00	2	113,049.44	58.6%
C&I Subtotal	93,877	24,220.21	6	1,034,375	363,681.80	34	673,429.20	
C&I % of Total	18.4%	9.3%	1.8%	24.5%	16.6%	2.5%	47.1%	
Report Total	509,063	260,822.78	327	4,225,851	2,196,518.70	1,361	1,430,312.09	
Budget Comparison					1,715,183.09		1,430,312.09	119.9%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: Eastham
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	6,384	7,744.16	3	71,055	110,640.69	32	36,430.94	303.7%
Low-Income Multi-Family	0	0.00	0	0	0.00	0	0.00	0.0%
LI Subtotal	6,384	7,744.16	3	71,055	110,640.69	32	36,430.94	
LI % of Total	6.4%	9.8%	3.1%	6.5%	12.8%	5.9%	12.3%	
Residential New Construction	0	0.00	0	15,629	8,739.11	3	0.00	0.0%
Residential Multi-Family Retrofit	0	0.00	0	10,173	2,788.15	3	0.00	0.0%
Res Home Energy	60,314	66,128.29	64	429,923	548,637.49	295	120,142.67	456.7%
Energy Star HVAC	168	100.00	1	66,207	45,970.00	83	0.00	0.0%
Energy Star Lighting	467	93.16	2	283,856	55,791.00	11	0.00	0.0%
Energy Star Appliance	4,766	839.90	27	28,977	5,809.27	104	0.00	0.0%
Res Subtotal	65,715	67,161.35	94	834,765	667,735.02	499	120,142.67	
Res % of Total	66.1%	85.2%	95.9%	76.9%	77.5%	92.6%	40.6%	
C&I New Construction	0	0.00	0	0	0.00	0	8,481.82	0.0%
C&I Govt New Construction	0	0.00	0	80,219	50,716.25	2	12,057.81	420.6%
C&I Large Retrofit	0	0.00	0	0	0.00	0	14,646.49	0.0%
C&I Govt Large	0	0.00	0	0	0.00	0	23,893.51	0.0%
C&I Small Retrofit	0	0.00	0	16,450	13,790.87	4	32,666.89	42.2%
C&I Govt Small	0	0.00	0	6,221	10,140.50	1	24,177.21	41.9%
C&I Products & Services	27,342	3,895.00	1	76,766	8,535.00	1	23,386.13	36.5%
C&I Subtotal	27,342	3,895.00	1	179,656	83,182.62	8	139,309.86	
C&I % of Total	27.5%	4.9%	1.0%	16.6%	9.7%	1.5%	47.1%	
Report Total	99,441	78,800.51	98	1,085,476	861,558.33	539	295,883.47	
Budget Comparison					742,460.80		295,883.47	250.9%

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Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: Edgartown
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	4,602	19,482.95	5	27,424	37,140.00	11	81,731.45	45.4%
Low-Income Multi-Family	0	0.00	0	5,160	8,560.80	8	0.00	0.0%
LI Subtotal	4,602	19,482.95	5	32,584	45,700.80	19	81,731.45	
LI % of Total	3.5%	27.3%	14.7%	2.3%	8.5%	7.7%	12.3%	
Residential New Construction	25,200	5,427.98	1	47,551	12,427.98	2	0.00	0.0%
Residential Multi-Family Retrofit	0	0.00	0	10,173	2,788.15	3	0.00	0.0%
Res Home Energy	29,530	32,630.78	19	255,867	273,122.75	131	269,535.56	101.3%
Energy Star HVAC	0	0.00	0	37,645	17,450.00	35	0.00	0.0%
Energy Star Lighting	934	131.76	1	124,790	14,346.56	11	0.00	0.0%
Energy Star Appliance	8,697	5,510.00	5	37,001	23,179.84	32	0.00	0.0%
Res Subtotal	64,361	43,700.52	26	513,027	343,315.28	214	269,535.56	
Res % of Total	48.9%	61.2%	76.5%	35.8%	63.8%	86.3%	40.6%	
C&I New Construction	0	0.00	0	0	0.00	0	19,028.64	0.0%
C&I Govt New Construction	0	41.25	1	0	1,718.75	1	27,051.24	6.4%
C&I Large Retrofit	0	0.00	0	0	0.00	0	32,858.84	0.0%
C&I Govt Large	0	0.00	0	0	0.00	0	53,604.19	0.0%
C&I Small Retrofit	737	804.00	1	71,901	34,170.69	9	73,286.94	46.6%
C&I Govt Small	0	0.00	0	46,209	39,767.40	1	54,240.65	73.3%
C&I Products & Services	61,880	7,356.00	1	767,634	73,546.00	4	52,465.90	140.2%
C&I Subtotal	62,617	8,201.25	3	885,744	149,202.84	15	312,536.40	
C&I % of Total	47.6%	11.5%	8.8%	61.9%	27.7%	6.0%	47.1%	
Report Total	131,579	71,384.72	34	1,431,355	538,218.92	248	663,803.41	
Budget Comparison					459,465.59		663,803.41	69.2%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: Falmouth
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	2,015	924.84	3	0.00	0.0%
Low-Income Single-Family	8,968	3,976.61	5	247,524	524,506.73	133	357,236.80	146.8%
Low-Income Multi-Family	0	0.00	0	71,209	72,795.89	37	0.00	0.0%
LI Subtotal	8,968	3,976.61	5	320,747	598,227.46	173	357,236.80	
LI % of Total	0.8%	1.1%	1.3%	3.7%	13.2%	8.0%	12.3%	
Residential New Construction	6,163	1,464.01	2	80,681	26,234.80	21	0.00	0.0%
Residential Multi-Family Retrofit	0	2,303.24	1	38,941	22,302.48	26	0.00	0.0%
Res Home Energy	306,607	217,509.63	264	1,507,431	1,883,531.39	1,146	1,178,102.43	159.9%
Energy Star HVAC	2,352	1,400.00	11	207,382	146,931.00	276	0.00	0.0%
Energy Star Lighting	112,758	7,538.46	4	2,360,468	276,901.03	43	0.00	0.0%
Energy Star Appliance	13,065	3,520.00	69	137,679	33,776.64	359	0.00	0.0%
Res Subtotal	440,944	233,735.34	351	4,332,582	2,389,677.34	1,871	1,178,102.43	
Res % of Total	38.9%	67.0%	94.6%	50.6%	52.6%	86.3%	40.6%	
C&I New Construction	425,739	57,772.75	2	528,679	105,952.50	13	83,171.54	127.4%
C&I Govt New Construction	0	0.00	0	150,759	37,299.50	3	118,237.20	31.5%
C&I Large Retrofit	140,218	22,600.00	2	223,554	50,141.34	10	143,621.43	34.9%
C&I Govt Large	0	165.00	1	596,093	604,999.29	16	234,296.46	258.2%
C&I Small Retrofit	27,243	19,402.90	9	905,665	579,333.32	76	320,327.03	180.9%
C&I Govt Small	0	0.00	0	27,740	18,517.00	3	237,078.34	7.8%
C&I Products & Services	91,382	11,305.00	1	1,474,423	158,627.30	2	229,321.13	69.2%
C&I Subtotal	684,582	111,245.65	15	3,906,914	1,554,870.25	123	1,366,053.13	
C&I % of Total	60.3%	31.9%	4.0%	45.6%	34.2%	5.7%	47.1%	
Report Total	1,134,494	348,957.60	371	8,560,243	4,542,775.05	2,167	2,901,392.36	
Budget Comparison					3,962,908.37		2,901,392.36	136.6%

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Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: Harwich
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	2,388	4,489.99	2	79,317	141,644.60	41	108,583.31	130.4%
Low-Income Multi-Family	0	0.00	0	5,353	2,900.26	3	0.00	0.0%
LI Subtotal	2,388	4,489.99	2	84,671	144,544.86	44	108,583.31	
LI % of Total	1.1%	2.5%	0.9%	2.8%	6.3%	4.0%	12.3%	
Residential New Construction	0	0.00	0	50,362	18,929.74	9	0.00	0.0%
Residential Multi-Family Retrofit	3,012	1,555.04	3	275,281	67,022.57	108	0.00	0.0%
Res Home Energy	145,288	140,030.32	158	704,129	963,632.67	575	358,088.15	269.1%
Energy Star HVAC	840	500.00	5	69,247	51,470.00	120	0.00	0.0%
Energy Star Lighting	1,213	91.51	1	416,249	59,291.34	17	0.00	0.0%
Energy Star Appliance	9,590	2,638.00	40	91,151	17,907.87	185	0.00	0.0%
Res Subtotal	159,943	144,814.87	207	1,606,419	1,178,254.19	1,014	358,088.15	
Res % of Total	72.8%	79.5%	96.3%	52.2%	51.3%	93.1%	40.6%	
C&I New Construction	0	330.00	1	0	330.00	1	25,280.27	1.3%
C&I Govt New Construction	17,098	24,224.50	1	571,771	591,391.25	2	35,938.59	1645.6%
C&I Large Retrofit	0	440.00	1	186,152	41,986.78	3	43,654.21	96.2%
C&I Govt Large	0	0.00	0	194,565	217,168.24	2	71,215.19	304.9%
C&I Small Retrofit	0	1,772.36	2	139,497	71,502.35	18	97,364.47	73.4%
C&I Govt Small	0	0.00	0	25,603	24,831.50	4	72,060.75	34.5%
C&I Products & Services	40,307	6,115.00	1	269,655	28,194.00	1	69,702.92	40.4%
C&I Subtotal	57,405	32,881.86	6	1,387,243	975,404.12	31	415,216.40	
C&I % of Total	26.1%	18.0%	2.8%	45.1%	42.4%	2.8%	47.1%	
Report Total	219,737	182,186.72	215	3,078,333	2,298,203.17	1,089	881,887.86	
Budget Comparison					2,080,681.39		881,887.86	235.9%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Cape Light Compact
D.P.U. 16-127
2013-2015 Energy Efficiency Term Report
August 1, 2016
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Town Name: Martha's Vineyard
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	12,685	45,634.75	13	75,390	189,896.09	41	240,803.37	78.9%
Low-Income Multi-Family	0	0.00	0	13,440	12,592.80	13	0.00	0.0%
LI Subtotal	12,685	45,634.75	13	88,830	202,488.89	54	240,803.37	
LI % of Total	3.2%	15.0%	10.6%	2.3%	9.8%	6.4%	12.3%	
Residential New Construction	34,780	13,674.44	4	139,899	55,741.76	18	0.00	0.0%
Residential Multi-Family Retrofit	6,722	5,451.33	1	25,043	14,977.24	8	0.00	0.0%
Res Home Energy	83,303	167,497.75	75	846,724	1,098,672.87	502	794,126.02	138.3%
Energy Star HVAC	0	0.00	0	100,504	44,550.00	80	0.00	0.0%
Energy Star Lighting	42,863	10,997.21	3	593,945	96,706.15	36	0.00	0.0%
Energy Star Appliance	13,251	7,775.00	17	91,260	56,307.00	86	0.00	0.0%
Res Subtotal	180,919	205,395.73	100	1,797,375	1,366,955.02	730	794,126.02	
Res % of Total	45.0%	67.7%	81.3%	46.4%	66.4%	86.6%	40.6%	
C&I New Construction	0	0.00	0	0	0.00	0	56,063.61	0.0%
C&I Govt New Construction	0	315.00	2	0	1,992.50	2	79,700.41	2.5%
C&I Large Retrofit	0	0.00	0	0	775.00	1	96,811.20	0.8%
C&I Govt Large	0	165.00	1	114,752	83,641.89	6	157,932.70	53.0%
C&I Small Retrofit	30,877	30,441.70	3	233,924	148,991.10	23	215,923.52	69.0%
C&I Govt Small	0	0.00	0	67,805	85,411.50	11	159,807.91	53.4%
C&I Products & Services	177,495	21,454.00	4	1,574,230	168,772.75	16	154,578.98	109.2%
C&I Subtotal	208,372	52,375.70	10	1,990,711	489,584.74	59	920,818.33	
C&I % of Total	51.8%	17.3%	8.1%	51.3%	23.8%	7.0%	47.1%	
Report Total	401,976	303,406.18	123	3,876,915	2,059,028.65	843	1,955,747.72	
Budget Comparison					1,778,153.70		1,955,747.72	90.9%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: Mashpee
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	3,500	13,999.05	6	51,386	103,264.84	37	134,466.20	76.8%
Low-Income Multi-Family	0	0.00	0	4,515	7,267.70	7	0.00	0.0%
LI Subtotal	3,500	13,999.05	6	55,901	110,532.54	44	134,466.20	
LI % of Total	1.3%	9.3%	3.1%	2.2%	9.0%	4.3%	12.3%	
Residential New Construction	45,947	13,602.94	7	247,768	71,684.64	48	0.00	0.0%
Residential Multi-Family Retrofit	8,350	6,320.47	8	242,301	128,280.43	169	0.00	0.0%
Res Home Energy	135,972	72,225.56	111	635,752	581,731.37	426	443,445.23	131.2%
Energy Star HVAC	2,249	1,475.00	11	78,724	56,325.00	141	0.00	0.0%
Energy Star Lighting	428	49.98	1	146,608	10,173.13	12	0.00	0.0%
Energy Star Appliance	11,826	4,080.00	45	81,376	19,007.18	164	0.00	0.0%
Res Subtotal	204,772	97,753.95	183	1,432,529	867,201.75	960	443,445.23	
Res % of Total	78.7%	65.3%	93.4%	56.1%	70.5%	93.0%	40.6%	
C&I New Construction	0	0.00	0	53,078	24,325.75	2	31,306.30	77.7%
C&I Govt New Construction	0	0.00	0	0	0.00	0	44,505.23	0.0%
C&I Large Retrofit	0	510.00	1	0	635.00	2	54,060.02	1.2%
C&I Govt Large	0	0.00	0	10,541	13,466.25	3	88,190.67	15.3%
C&I Small Retrofit	51,437	37,450.45	5	198,541	129,511.07	17	120,573.13	107.4%
C&I Govt Small	0	0.00	0	0	0.00	0	89,237.79	0.0%
C&I Products & Services	630	80.00	1	802,375	83,782.70	4	86,317.93	97.1%
C&I Subtotal	52,067	38,040.45	7	1,064,535	251,720.77	28	514,191.07	
C&I % of Total	20.0%	25.4%	3.6%	41.7%	20.5%	2.7%	47.1%	
Report Total	260,339	149,793.45	196	2,552,965	1,229,455.06	1,032	1,092,102.50	
Budget Comparison					936,716.98		1,092,102.50	85.8%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: **Oak Bluffs**
Program Period: **2015**
Current Dates: **12/01/15 - 12/31/15**
Cumulative Dates: **01/01/15 - 12/31/15**

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	1,297	624.63	1	13,764	55,228.97	11	53,901.00	102.5%
Low-Income Multi-Family	0	0.00	0	0	0.00	0	0.00	0.0%
LI Subtotal	1,297	624.63	1	13,764	55,228.97	11	53,901.00	
LI % of Total	4.5%	2.0%	4.5%	1.5%	10.5%	5.1%	12.3%	
Residential New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Residential Multi-Family Retrofit	0	0.00	0	17,501	8,880.95	7	0.00	0.0%
Res Home Energy	13,446	28,538.81	16	256,251	308,839.25	136	177,755.75	173.7%
Energy Star HVAC	0	0.00	0	25,731	11,950.00	23	0.00	0.0%
Energy Star Lighting	0	0.00	0	44,808	2,596.43	3	0.00	0.0%
Energy Star Appliance	1,302	710.00	3	15,594	8,344.92	22	0.00	0.0%
Res Subtotal	14,748	29,248.81	19	359,884	340,611.55	191	177,755.75	
Res % of Total	50.8%	93.6%	86.4%	39.2%	64.5%	88.0%	40.6%	
C&I New Construction	0	0.00	0	0	0.00	0	12,549.18	0.0%
C&I Govt New Construction	0	273.75	1	0	273.75	1	17,840.00	1.5%
C&I Large Retrofit	0	0.00	0	0	775.00	1	21,670.05	3.6%
C&I Govt Large	0	0.00	0	23,798	26,354.25	3	35,351.38	74.5%
C&I Small Retrofit	0	0.00	0	90,978	53,151.13	5	48,331.94	110.0%
C&I Govt Small	0	0.00	0	0	0.00	0	35,771.12	0.0%
C&I Products & Services	13,009	1,098.00	1	428,643	51,876.75	5	34,600.68	149.9%
C&I Subtotal	13,009	1,371.75	2	543,419	132,430.88	15	206,114.35	
C&I % of Total	44.8%	4.4%	9.1%	59.3%	25.1%	6.9%	47.1%	
Report Total	29,053	31,245.19	22	917,067	528,271.40	217	437,771.10	
Budget Comparison					496,499.10		437,771.10	113.4%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: Orleans
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	0	0.00	0	24,468	46,426.48	11	140,110.25	33.1%
Low-Income Multi-Family	0	0.00	0	87,891	122,358.54	7	0.00	0.0%
LI Subtotal	0	0.00	0	112,359	168,785.02	18	140,110.25	
LI % of Total	0.0%	0.0%	0.0%	4.1%	11.9%	3.0%	12.3%	
Residential New Construction	6,085	3,303.19	1	39,397	22,679.61	7	0.00	0.0%
Residential Multi-Family Retrofit	3,821	2,321.06	2	332,983	86,196.25	69	0.00	0.0%
Res Home Energy	69,794	69,882.56	59	480,906	541,565.73	295	462,058.30	117.2%
Energy Star HVAC	168	100.00	1	59,347	40,025.00	77	0.00	0.0%
Energy Star Lighting	1,694	157.85	2	509,986	74,718.64	21	0.00	0.0%
Energy Star Appliance	2,724	580.00	18	30,120	6,865.94	87	0.00	0.0%
Res Subtotal	84,286	76,344.66	83	1,452,740	772,051.17	556	462,058.30	
Res % of Total	49.6%	83.4%	95.4%	53.0%	54.6%	92.1%	40.6%	
C&I New Construction	0	0.00	0	6,851	2,308.75	1	32,620.34	7.1%
C&I Govt New Construction	0	3,986.25	1	0	3,986.25	1	46,373.28	8.6%
C&I Large Retrofit	0	0.00	0	731,612	194,882.87	4	56,329.12	346.0%
C&I Govt Large	0	0.00	0	24,267	41,954.11	2	91,892.37	45.7%
C&I Small Retrofit	4,093	1,910.94	2	184,203	148,650.58	18	125,634.04	118.3%
C&I Govt Small	0	0.00	0	52,979	58,501.50	2	92,983.44	62.9%
C&I Products & Services	81,714	9,329.00	1	178,278	23,457.00	2	89,941.02	26.1%
C&I Subtotal	85,807	15,226.19	4	1,178,190	473,741.06	30	535,773.61	
C&I % of Total	50.4%	16.6%	4.6%	42.9%	33.5%	5.0%	47.1%	
Report Total	170,093	91,570.85	87	2,743,288	1,414,577.25	604	1,137,942.16	
Budget Comparison					1,061,733.27		1,137,942.16	93.3%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Cape Light Compact
D.P.U. 16-127
2013-2015 Energy Efficiency Term Report
August 1, 2016
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Town Name: Provincetown
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	0	0.00	0	40,799	62,663.58	17	111,866.06	56.0%
Low-Income Multi-Family	0	0.00	0	3,396	2,037.96	3	0.00	0.0%
LI Subtotal	0	0.00	0	44,195	64,701.54	20	111,866.06	
LI % of Total	0.0%	0.0%	0.0%	5.0%	12.9%	6.3%	12.3%	
Residential New Construction	7,825	3,314.38	1	38,113	26,117.61	12	0.00	0.0%
Residential Multi-Family Retrofit	3,832	3,482.56	1	23,657	16,967.55	23	0.00	0.0%
Res Home Energy	15,044	33,164.93	26	173,059	236,601.50	162	368,914.05	64.1%
Energy Star HVAC	0	0.00	0	25,200	13,250.00	33	0.00	0.0%
Energy Star Lighting	0	0.00	0	274,848	56,341.94	7	0.00	0.0%
Energy Star Appliance	847	150.00	4	8,004	1,807.14	35	0.00	0.0%
Res Subtotal	27,547	40,111.87	32	542,880	351,085.74	272	368,914.05	
Res % of Total	49.7%	89.0%	94.1%	61.5%	70.0%	86.1%	40.6%	
C&I New Construction	0	0.00	0	0	0.00	0	26,044.55	0.0%
C&I Govt New Construction	0	0.00	0	0	0.00	0	37,025.10	0.0%
C&I Large Retrofit	0	0.00	0	0	0.00	0	44,973.99	0.0%
C&I Govt Large	0	0.00	0	2,023	3,137.00	1	73,368.20	4.3%
C&I Small Retrofit	0	816.06	1	92,126	47,357.01	17	100,308.04	47.2%
C&I Govt Small	0	0.00	0	7,225	14,106.50	5	74,239.33	19.0%
C&I Products & Services	27,867	4,160.00	1	194,760	20,905.00	1	71,810.21	29.1%
C&I Subtotal	27,867	4,976.06	2	296,134	85,505.51	24	427,769.42	
C&I % of Total	50.3%	11.0%	5.9%	33.5%	17.1%	7.6%	47.1%	
Report Total	55,414	45,087.93	34	883,209	501,292.79	316	908,549.53	
Budget Comparison					384,770.59		908,549.53	42.3%

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Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: Sandwich
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	7,913	6,540.91	5	134,449	245,654.65	65	143,356.66	171.4%
Low-Income Multi-Family	0	0.00	0	61,684	27,938.27	48	0.00	0.0%
LI Subtotal	7,913	6,540.91	5	196,132	273,592.92	113	143,356.66	
LI % of Total	3.8%	4.2%	2.6%	8.4%	14.6%	9.1%	12.3%	
Residential New Construction	0	0.00	0	28,353	16,096.93	7	0.00	0.0%
Residential Multi-Family Retrofit	0	0.00	0	19,714	10,909.75	12	0.00	0.0%
Res Home Energy	126,788	132,069.44	133	848,387	1,157,520.50	686	472,764.38	244.8%
Energy Star HVAC	541	275.00	2	108,220	81,990.00	145	0.00	0.0%
Energy Star Lighting	835	98.35	2	439,848	68,555.97	22	0.00	0.0%
Energy Star Appliance	11,045	4,110.00	42	85,905	21,440.50	221	0.00	0.0%
Res Subtotal	139,208	136,552.79	179	1,530,427	1,356,513.65	1,093	472,764.38	
Res % of Total	66.1%	87.5%	94.2%	65.6%	72.5%	88.4%	40.6%	
C&I New Construction	0	82.50	1	2,713	2,970.00	2	33,376.17	8.9%
C&I Govt New Construction	0	851.25	1	34,492	26,559.00	2	47,447.77	56.0%
C&I Large Retrofit	5,557	1,785.00	1	126,988	32,215.25	3	57,634.29	55.9%
C&I Govt Large	0	0.00	0	13,354	16,122.72	4	94,021.55	17.1%
C&I Small Retrofit	8,077	4,085.20	2	149,040	85,655.46	12	128,545.03	66.6%
C&I Govt Small	0	0.00	0	43,267	40,253.04	6	95,137.90	42.3%
C&I Products & Services	49,738	6,130.00	1	236,809	36,233.00	1	92,024.99	39.4%
C&I Subtotal	63,372	12,933.95	6	606,663	240,008.47	30	548,187.70	
C&I % of Total	30.1%	8.3%	3.2%	26.0%	12.8%	2.4%	47.1%	
Report Total	210,493	156,027.65	190	2,333,222	1,870,115.04	1,236	1,164,308.74	
Budget Comparison					1,643,183.62		1,164,308.74	141.1%

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Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: **Tisbury**
Program Period: **2015**
Current Dates: **12/01/15 - 12/31/15**
Cumulative Dates: **01/01/15 - 12/31/15**

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	6,356	19,261.72	6	19,658	48,520.92	12	76,718.22	63.2%
Low-Income Multi-Family	0	0.00	0	8,280	4,032.00	5	0.00	0.0%
LI Subtotal	6,356	19,261.72	6	27,938	52,552.92	17	76,718.22	
LI % of Total	4.5%	14.8%	14.6%	2.5%	8.7%	7.6%	12.3%	
Residential New Construction	8,401	6,462.02	2	50,321	22,968.13	9	0.00	0.0%
Residential Multi-Family Retrofit	6,722	5,451.33	1	17,715	8,884.44	4	0.00	0.0%
Res Home Energy	19,388	54,077.88	21	150,874	271,511.17	122	253,002.83	107.3%
Energy Star HVAC	0	0.00	0	19,737	9,500.00	19	0.00	0.0%
Energy Star Lighting	41,930	10,865.45	2	421,784	79,512.00	16	0.00	0.0%
Energy Star Appliance	2,799	1,465.00	6	16,008	10,334.78	20	0.00	0.0%
Res Subtotal	79,239	78,321.68	32	676,439	402,710.52	190	253,002.83	
Res % of Total	55.7%	60.1%	78.0%	60.3%	66.7%	84.8%	40.6%	
C&I New Construction	0	0.00	0	0	0.00	0	17,861.46	0.0%
C&I Govt New Construction	0	0.00	0	0	0.00	0	25,391.97	0.0%
C&I Large Retrofit	0	0.00	0	0	0.00	0	30,843.35	0.0%
C&I Govt Large	0	0.00	0	68,010	47,765.26	1	50,316.22	94.9%
C&I Small Retrofit	30,140	29,637.70	2	71,045	59,890.75	8	68,791.68	87.1%
C&I Govt Small	0	0.00	0	13,987	13,593.10	5	50,913.65	26.7%
C&I Products & Services	26,407	3,070.00	1	264,151	27,285.00	3	49,247.75	55.4%
C&I Subtotal	56,547	32,707.70	3	417,193	148,534.11	17	293,366.08	
C&I % of Total	39.8%	25.1%	7.3%	37.2%	24.6%	7.6%	47.1%	
Report Total	142,142	130,291.10	41	1,121,569	603,797.55	224	623,087.13	
Budget Comparison					468,566.20		623,087.13	75.2%

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Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: Truro
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	3,027	1,048.42	1	36,111	65,881.68	15	23,263.83	283.2%
Low-Income Multi-Family	0	0.00	0	0	0.00	0	0.00	0.0%
LI Subtotal	3,027	1,048.42	1	36,111	65,881.68	15	23,263.83	
LI % of Total	4.4%	2.7%	3.4%	6.6%	15.3%	5.7%	12.3%	
Residential New Construction	10,918	2,599.86	1	61,356	31,437.46	11	0.00	0.0%
Residential Multi-Family Retrofit	0	0.00	0	10,173	2,788.15	3	0.00	0.0%
Res Home Energy	18,123	27,609.91	18	176,837	225,082.26	116	76,719.91	293.4%
Energy Star HVAC	0	0.00	0	66,676	38,750.00	67	0.00	0.0%
Energy Star Lighting	0	0.00	0	2,453	414.40	8	0.00	0.0%
Energy Star Appliance	1,297	220.00	7	14,024	2,964.27	35	0.00	0.0%
Res Subtotal	30,338	30,429.77	26	331,520	301,436.54	240	76,719.91	
Res % of Total	44.6%	78.4%	89.7%	60.8%	70.0%	91.6%	40.6%	
C&I New Construction	10,336	4,328.25	1	31,020	16,523.50	1	5,416.26	305.1%
C&I Govt New Construction	0	0.00	0	0	0.00	0	7,699.79	0.0%
C&I Large Retrofit	0	0.00	0	0	0.00	0	9,352.86	0.0%
C&I Govt Large	0	0.00	0	1,562	946.00	1	15,257.76	6.2%
C&I Small Retrofit	0	0.00	0	15,394	6,084.60	2	20,860.21	29.2%
C&I Govt Small	0	0.00	0	23,806	18,825.75	1	15,438.92	121.9%
C&I Products & Services	24,345	3,030.00	1	105,473	21,115.00	2	14,933.76	141.4%
C&I Subtotal	34,681	7,358.25	2	177,255	63,494.85	7	88,959.56	
C&I % of Total	51.0%	18.9%	6.9%	32.5%	14.7%	2.7%	47.1%	
Report Total	68,046	38,836.44	29	544,885	430,813.07	262	188,943.30	
Budget Comparison					354,458.79		188,943.30	187.6%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: **Wellfleet**
Program Period: **2015**
Current Dates: **12/01/15 - 12/31/15**
Cumulative Dates: **01/01/15 - 12/31/15**

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	6,278	5,107.14	3	38,156	60,429.82	20	35,699.06	169.3%
Low-Income Multi-Family	0	0.00	0	1,019	503.76	1	0.00	0.0%
LI Subtotal	6,278	5,107.14	3	39,176	60,933.58	21	35,699.06	
LI % of Total	11.5%	10.9%	7.0%	5.9%	12.2%	6.2%	12.3%	
Residential New Construction	0	0.00	0	17,293	10,265.52	3	0.00	0.0%
Residential Multi-Family Retrofit	0	0.00	0	10,173	2,788.15	3	0.00	0.0%
Res Home Energy	18,919	38,607.00	36	254,203	317,993.03	211	117,729.06	270.1%
Energy Star HVAC	0	0.00	0	38,724	25,600.00	46	0.00	0.0%
Energy Star Lighting	0	0.00	0	153,620	27,584.88	9	0.00	0.0%
Energy Star Appliance	965	110.00	3	11,038	1,899.76	33	0.00	0.0%
Res Subtotal	19,884	38,717.00	39	485,050	386,131.34	305	117,729.06	
Res % of Total	36.4%	82.8%	90.7%	73.7%	77.5%	90.0%	40.6%	
C&I New Construction	0	0.00	0	0	0.00	0	8,311.42	0.0%
C&I Govt New Construction	0	0.00	0	0	0.00	0	11,815.57	0.0%
C&I Large Retrofit	0	0.00	0	10,808	5,404.00	1	14,352.25	37.7%
C&I Govt Large	0	0.00	0	4,045	7,676.50	2	23,413.50	32.8%
C&I Small Retrofit	0	0.00	0	41,245	29,133.43	9	32,010.63	91.0%
C&I Govt Small	0	0.00	0	0	0.00	0	23,691.50	0.0%
C&I Products & Services	28,486	2,934.00	1	78,176	8,729.00	1	22,916.31	38.1%
C&I Subtotal	28,486	2,934.00	1	134,274	50,942.93	13	136,511.18	
C&I % of Total	52.1%	6.3%	2.3%	20.4%	10.2%	3.8%	47.1%	
Report Total	54,648	46,758.14	43	658,501	498,007.85	339	289,939.30	
Budget Comparison					429,365.78		289,939.30	148.1%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: West Tisbury
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Low-Income Single-Family	430	6,265.45	1	9,388	25,896.25	4	17,699.88	146.3%
Low-Income Multi-Family	0	0.00	0	0	0.00	0	0.00	0.0%
LI Subtotal	430	6,265.45	1	9,388	25,896.25	4	17,699.88	
LI % of Total	0.5%	10.5%	5.6%	2.5%	8.7%	2.4%	12.3%	
Residential New Construction	1,179	1,784.44	1	42,028	20,345.65	7	0.00	0.0%
Residential Multi-Family Retrofit	0	0.00	0	10,173	2,788.15	3	0.00	0.0%
Res Home Energy	12,342	41,576.30	12	139,719	174,710.18	95	58,371.02	299.3%
Energy Star HVAC	0	0.00	0	13,983	7,150.00	13	0.00	0.0%
Energy Star Lighting	0	0.00	0	3,963	610.44	9	0.00	0.0%
Energy Star Appliance	302	60.00	2	17,789	7,951.32	24	0.00	0.0%
Res Subtotal	13,823	43,420.74	15	227,654	213,555.74	151	58,371.02	
Res % of Total	15.3%	72.6%	83.3%	60.1%	71.9%	91.5%	40.6%	
C&I New Construction	0	0.00	0	0	0.00	0	4,120.87	0.0%
C&I Govt New Construction	0	0.00	0	0	0.00	0	5,858.26	0.0%
C&I Large Retrofit	0	0.00	0	0	0.00	0	7,115.96	0.0%
C&I Govt Large	0	165.00	1	22,944	9,522.38	2	11,608.60	82.0%
C&I Small Retrofit	0	0.00	0	0	1,778.53	1	15,871.13	11.2%
C&I Govt Small	0	0.00	0	7,609	30,626.00	4	11,746.44	260.7%
C&I Products & Services	76,200	9,930.00	1	110,908	15,740.00	3	11,362.09	138.5%
C&I Subtotal	76,200	10,095.00	2	141,461	57,666.91	10	67,683.35	
C&I % of Total	84.2%	16.9%	11.1%	37.4%	19.4%	6.1%	47.1%	
Report Total	90,453	59,781.19	18	378,503	297,118.90	165	143,754.25	
Budget Comparison					258,273.34		143,754.25	179.7%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

Energy Efficiency Program Activity by Town

http://www.capelightcompact.org/TownReports.htm

Town Name: Yarmouth
Program Period: 2015
Current Dates: 12/01/15 - 12/31/15
Cumulative Dates: 01/01/15 - 12/31/15

	Current Period			Cumulative for Reporting Period				
Program	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Annual kWh Savings	Actual Expenditures	Unique Customer Accounts	Budget	Actual % of Budget
Low-Income New Construction	0	0.00	0	94	10.51	1	0.00	0.0%
Low-Income Single-Family	737	428.52	1	187,527	234,014.43	99	332,060.28	70.5%
Low-Income Multi-Family	0	0.00	0	7,794	7,197.21	7	0.00	0.0%
LI Subtotal	737	428.52	1	195,415	241,222.15	107	332,060.28	
LI % of Total	0.1%	0.2%	0.3%	3.2%	7.7%	6.0%	12.3%	
Residential New Construction	0	0.00	0	0	0.00	0	0.00	0.0%
Residential Multi-Family Retrofit	0	1,601.81	1	332,938	134,255.45	104	0.00	0.0%
Res Home Energy	244,165	186,017.42	286	1,055,183	1,576,804.76	961	1,095,074.80	144.0%
Energy Star HVAC	2,016	1,200.00	12	109,735	97,650.00	204	0.00	0.0%
Energy Star Lighting	74,560	19,436.73	3	1,124,633	199,698.00	29	0.00	0.0%
Energy Star Appliance	15,321	3,790.00	78	95,316	24,947.42	327	0.00	0.0%
Res Subtotal	336,062	212,045.96	380	2,717,804	2,033,355.63	1,625	1,095,074.80	
Res % of Total	59.3%	84.1%	98.2%	44.6%	64.8%	91.5%	40.6%	
C&I New Construction	0	0.00	0	7,073	1,630.00	2	77,309.96	2.1%
C&I Govt New Construction	0	0.00	0	0	0.00	0	109,904.35	0.0%
C&I Large Retrofit	28,783	5,630.00	1	1,017,151	231,170.59	7	133,499.61	173.2%
C&I Govt Large	0	0.00	0	19,088	58,779.50	4	217,784.25	27.0%
C&I Small Retrofit	15,879	10,708.82	4	589,275	409,879.38	26	297,751.75	137.7%
C&I Govt Small	0	0.00	0	23,125	19,732.23	2	220,370.07	9.0%
C&I Products & Services	185,340	23,408.00	1	1,524,685	141,672.30	3	213,159.56	66.5%
C&I Subtotal	230,002	39,746.82	6	3,180,397	862,864.00	44	1,269,779.55	
C&I % of Total	40.6%	15.8%	1.6%	52.2%	27.5%	2.5%	47.1%	
Report Total	566,801	252,221.30	387	6,093,616	3,137,441.78	1,776	2,696,914.63	
Budget Comparison					2,673,683.19		2,696,914.63	99.1%

*Costs only include Customer Incentives, Sales, Technical Assistance and Training. **All information presented is preliminary and subject to change. ***Not all program budgets are allocated by town.

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APPENDIX CLC-2
CAPE LIGHT COMPACT ENERGY EDUCATION OUTREACH ACTIVITIES

The Compact continues its solid commitment to energy education outreach to its community, and continues to be a regionally and nationally recognized leader in the design and implementation of energy education programs. As a unique energy efficiency administrator and municipal aggregator, the Compact strives to support the community in efforts to encourage the development of deeper and broader knowledge of energy efficiency technology and practices, moving toward an energy-literate society.

Toward this goal, the Compact's Energy Education Program continues its outreach through its innovative program. Highlights of 2015 include:

- Energy education-based presentations, field trips, and all-school Energy Carnivals; students learn the basic lessons of energy efficiency, energy forms and energy sources in a first-hand, fun and engaging way. This outreach impacted well over 6,000 students and teachers.
- NEED Teacher Workshops in partnership with the statewide Energy Education Working Group and in-service training for school systems reaching teachers in the Compact's service territory.
- Attendance by students and their teacher of the 2015 NEED Youth Awards Program in Washington D.C.
- The launch of the Compact's new energy efficiency education initiative "Be Energy Efficient Smart" (BEES) which includes both a classroom lesson and take-home student kit and survey.

For the 12th year in a row, the Compact was proud to have its participating schools recognized by the National Energy Education Development Project and the Massachusetts State Department of Energy Resources for their outstanding work in energy education outreach to their communities:

- Elementary Level: State School of the Year and National Elementary Level Finalist: Eastham Elementary, Eastham. *Selected Activities: Hosted and led energy carnivals for students at the 4th and 5th grade level in other communities.*

- Junior Level: State Junior Level School of the Year and National Junior Level Finalist: Harwich Middle School, Harwich. *Selected Activities: Students met weekly to discuss how to raise awareness and teach valuable lessons about energy, including ways to reduce energy consumption. Students also took charge of a recycling program and presented day-long Energy Carnivals for the students in local middle and elementary schools.*

- State Senior Level School of the Year: Martha's Vineyard High School. *Selected Activities: Martha's Vineyard Regional High School students from the MVironment Club commuted over to the Island's elementary schools to help teach third graders about energy science engineering. These students took time out of their busy schedules to plan each activity every week.*

Cape and Vineyard schools have been well represented among honorees at the state and national level. Compact schools have received these great honors every year since 2004.

Our greatest successes continue with the "kids as teachers" model, where students are trained and conduct studies to present information on energy efficiency, renewable energy, and related topics to younger students and community members. As evidenced in requested programs from year to year, schools have moved toward adopting energy education into their yearly schedule of classroom activities, and thus continue to reach more individuals.

The Compact continues to use updated and innovative materials from local and national energy education-based resources such as the NEED Project, a 501(c)3 non-profit organization. Using a model for science-based facts and local science, technology, engineering and math ("STEM") initiatives, the Compact designs and uses curriculum materials to align with the Massachusetts state standards for science and technology, allowing teachers to introduce lesson plans discussing energy efficiency, innovation, and conservation.

2015 CLC Energy Education Program

Dates	Program	Town	Adults	Children	Notes
10/1/2014 - 11/5/2014	Presentation	Falmouth	2	60	Science of Energy Classes
12/8/2014 - 12/22/2014	Presentation	Yarmouth	8	100	Primary Science of Energy Class
1/5/2015 - 1/21/2015	Presentation	Yarmouth	6	60	Primary Science of Energy Class
2/4/2015 - 2/11/2015	Presentation	Yarmouth	4	40	Primary Science of Energy Class
1/23/2015	Presentation	Yarmouth	6	100	Science of Energy Classes
10/1/2014 - 12/22/2014	Energy Club	Chatham/Harwich		25	Monomoy Middle and High School
3/12/2015 - 3/26/2015	Energy Club	Chatham/Harwich		25	Monomoy Middle and High School
12/15/2014	Field Trip	Chatham/Harwich		25	Monomoy Middle and High School
3/28/2015	Outreach table	Regional	100+	200+	Cape Cod Reg STEM Network event at 4Cs
4/2/2015	Presentation	Bourne	6	100	Science of Energy Classes
4/7/2015	Presentation	Eastham	2	45	Science of Energy Classes
4/15/2015	Carnival	Barnstable		125	Primary Science of Energy
4/14/2015	Presentation	MV	2	54	Building Science
4/29/2015	Carnival	Sandwich	12	125	presented by Eddy School
4/29/2015	Carnival	Ptown	8	54	
5/4/2015	Carnival	Sandwich	15	125	presented by Eddy School
5/6/2015 - 5/7/2015	Carnival	D/Y Reg	22	200	presented by Eastham School
5/28/2015	Carnival	Chatham/Harwich		200+	Monomoy Middle and High School
6/6/2015	Event	MV Reg	100+	200+	MV Solar Car Race
6/10/2015	Carnival	MV Reg	25	300+	Presented by MVR Charter School
6/12/2015	Carnival	Falmouth	12	200+	Morse Pond School
6/20/2015	Carnival	Wellfleet	6	58	presented by Eastham School
6/29/2015 - 7/2/2015	Presentation	Regional	12	200	ASLP at Mass Maritime Academy
9/23/2015	Energy Club	MV	2	24	set up energy club for school year
10/2/2015	Community Event	MV	300+	300+	Energy Ed activities @ MV regional community event - Living Local
10/27/2015	Teacher Workshop	Regional	12		for BEES project
12/1/2015	Teacher Workshop	Regional	10		for BEES project
12/2/2015	Teacher Workshop	Regional	12		for BEES project
12/4/2015	Teacher Workshop	MV	22		for BEES project