2012 Annual Report

of the

Efficiency Maine Trust

November 30, 2012

(Revised February 12, 2013)

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Executive Summary

This is the Annual Report of the Efficiency Maine Trust for Fiscal Year 2012 (FY12). The period covered is July 1, 2011 to June 30, 2012.

As described in this report, the Trust managed funds to administer programs promoting energy efficiency and customer-owned alternative energy. As in previous years, a significant portion of the Trust's funds derived from Maine's electricity customers, through the System Benefit Charge (SBC) and the Regional Greenhouse Gas Initiative (RGGI), and was deployed to help lower electricity costs. In the aggregate, these electric programs will help customers to avoid the consumption of 1.8 billion kWh of electric consumption and lower present and future electric costs in Maine by more than $128 million. Table ES-1 summarizes the results of the Trust's electric efficiency programs:

Table ES-1 – FY12 Benefits and Costs of Efficiency Maine Electric Programs

Program	Lifetime Energy Savings (kWh)	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Ratio
Business Incentive Program	592,752,866	$ 9,355,717	$ 25,874,806	$ 44,208,732	1.25
Large Customer Program	467,859,118	$ 4,578,526	$ 8,632,639	$ 32,001,587	2.42
High Performance Schools	3,349,500	$ 221,937	$ 167,668	$ 261,777	0.67
Direct Install Pilot	-	$ 127,888	$ -	$ -	-
Residential Lighting	682,426,718	$ 4,172,340	$ 249,568	$ 43,701,746	9.88
Residential Appliances	60,675,000	$ 1,733,867	$ 1,248,740	$ 4,410,942	1.48
Refrigerator Recycling	22,264,416	$ 575,259	$ -	$ 1,581,067	2.75
Low Income Programs	16,298,995	$ 930,311	$ -	$ 1,849,337	1.99
Cross-Cutting Strategies	-	$ 1,333,220	$ -	$ -	-
Administration	-	$ 908,001	$ -	$ -	-
Total	**1,845,626,614**	**$ 23,937,065**	**$ 36,173,421**	**$ 128,015,188**	**2.13**

Another portion of the funds that the Trust used in FY12 came from grants from the federal American Recovery and Reinvestment Act (ARRA). These funds were primarily used to achieve energy savings regardless of fuel type, for "all fuels." All-fuels programs leveraged $11.5 million in private investments in Maine's energy infrastructure and are projected to lower Mainers' present and future energy costs by more than $14.6 million. Table ES-2 summarizes the results of the Trust's "all fuels" energy efficiency and alternative energy programs.

Table ES-2 – FY12 Benefits and Costs of Efficiency Maine All-Fuels Programs Funded by the American Recovery and Reinvestment Act (ARRA)

Program	Annual Energy Savings (MMBTU)	Lifetime Energy Savings (MMBTU)	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-To-Cost Ratio
Maine Advanced Building	3,509	70,173	$ 199,754	$ 1,425,720	$ 1,473,794	0.91
Retro-Commissioning	10,965	54,826	$ 354,052	$ 593,691	$ 996,641	1.05
Home Energy Savings Program (PACE)	16,016	320,313	$ 787,812	$ 2,542,421	$ 6,199,253	1.86
Residential Direct Install	412	8,243	$ 90,816	$ -	$ 160,263	1.76
Solar and Wind	9,864	197,272	$ 657,901	$ 6,953,917	$ 5,824,103	0.84
Cross-Cutting Strategies	-	-	$ 234,322	$ -	$ -	-
Administration	-	-	$ 306,603	$ -	$ -	-
Total	**40,765**	**650,827**	**$ 2,631,260**	**$ 11,515,749**	**$ 14,654,054**	**1.04**

As discussed in the Financial section of this report, the Trust paid out $38 million in FY12 to fund the programs described above. Table ES-3 provides a summary of the Trust's payments during the year.

Table ES-3 – FY12 Payments Made

Use of Funds	Amount ($)	
Administration		3,428,155
Residential Programs		10,822,940
· Low Income	915,772	
· Non-Low Income	9,907,168	
Business Programs		20,048,061
Cross-Cutting Strategies		2,903,776
· Financing and Training	4,261	
· Codes and Standards	81,484	
· Education and Awareness	822,415	
· Evaluation	1,128,922	
· Alternative Energy Program	729,858	
· Innovation	136,836	
Interagency Grants		830,491
Total Expenditures		38,033,423[1]

A recommendation for legislative review and amendment is provided at the end of the report.

[1] Expenditures in this table reflect all payments made by the Trust during FY12. This includes payments made for projects that were awarded in FY11 but not completed and paid until FY12, as commonly occurs on the larger projects funded through the Large Customer Program and the Commercial Grant Program. The Trust reports the energy savings, costs, and cost-effectiveness of its programs in the fiscal year in which the projects were awarded, which explains the discrepancy between the Total Expenditures in this table and the Efficiency Maine Costs reported in Tables ES-1 and ES-2 and in Appendices A and B.

Introduction

This is the Annual Report of the Efficiency Maine Trust (the "Trust" or "Efficiency Maine") for activities during fiscal year 2012 (FY12), which covered the period from July 1, 2011 to June 30, 2012. It describes the budgets, activities and results for all programs and related activities administered by the Trust during FY12.

The Trust

The Efficiency Maine Trust was created by state statute in 2009. The purposes of the Trust include:

- consolidating under one roof the funds for Maine's consumer efficiency programs for all fuel types – electric, natural gas, and heating oil – together with consumer alternative energy programs;
- integrating delivery of electric and thermal efficiency measures so the customer can have a one-stop shopping experience;
- acquiring energy resources (efficiency and alternative energy) that cost less than traditional energy supply to help individuals and businesses meet their energy needs at the lowest cost; and,
- helping to transform the energy market in Maine so that energy efficient products, alternative energy equipment, and related energy services are more accessible and affordable to end-use customers.

The statute that established the Trust gave the Board specific duties. Chief among these is a fiduciary duty to hold the funds in trust for the benefit of the electric and natural gas utility customers where funds are derived from those customers.[2]

During FY12, Trustees Tom Tietenberg and Michelle Atherton completed their terms and new Trustees Doug Smith, retired, and Al Hodsdon of A.E. Hodsdon Engineers were appointed to the Board. Other Trustees during FY12 were: James Atwell of Sevee and Mahar Engineers, Kenneth Fletcher of the Governor's Energy Office, Adam Lee of Lee Auto Malls, Dale McCormick of MaineHousing, Naomi Mermin of Naomi Mermin Consulting, Glenn Poole of Verso Paper, and John Rohman of WBRC Architects and Engineers.

The Board is responsible for developing a three-year strategic plan, called the "Triennial Plan."

[2] 35-A MRSA §10110(10). *See also,* § 10111(2)(Natural Gas) and § 10109(2)(A)(Regional Greenhouse Gas Initiative) of the same statute.

The Triennial Plan

The function of the Triennial Plan is to identify program initiatives, allocate budgets, and establish metrics by which to judge program effectiveness and efficiency. The Plan guides the use of various revenue streams that come into the Trust such as:

- Electric Efficiency and Conservation Fund;
- Regional Greenhouse Gas Initiative (RGGI) Trust Fund;
- Natural Gas Conservation Fund;
- Heating Fuels Efficiency and Weatherization Fund; and,
- "Any state or federal funds or publicly directed funds accepted by or allocated to the trust …"[3]

At the end of a public process to gather stakeholder input, the Trust's Board developed the First Triennial Plan as an actionable plan to put Maine on the path to achieving a broad range of energy saving targets and "best practices" of efficiency program administration. The Triennial Plan covers Fiscal Years 2011, 2012, and 2013, which spans the period from July 1, 2010 through June 30, 2013. As such, the FY12 program activities reported in this Annual Report were guided by the First Triennial Plan.

Annually, the Trust has an opportunity to inform the Public Utilities Commission of any significant mid-course changes that should be made to the Triennial Plan. The Trust has filed two Annual Update Plans that impacted activities in FY12, the first filed in January of 2011 that affected the first half of FY12, and the second filed in January 2012 impacting the second half of FY12. In both cases, the updates reflected adjustments to revenues (including the receipt of three federal grants, the discontinuation of the Solar and Wind Rebate System Benefit Charge, the decision by policymakers not to authorize incremental new funding for electric, natural gas or oil saving programs, and projections of reduced proceeds from the auction of RGGI allowances) and the resulting alterations to program budgets, activities and performance metrics. Of particular note, during FY12 the Commission was asked for and gave its approval for a shift in the strategy for the program that serves low income electricity customers whereby the Trust focused on weatherizing electrically heated low-income homes. This shift was made in part in response to policymakers' concerns about the increasing heating burden on low income Mainers.

In sum, in its second full year of operation the Trust began to settle in to its role with improved efficiency of administration and increasingly robust procedures and practices. The Trust developed and incorporated a significantly enhanced database to track the energy projects funded through its programs; improved its grant oversight procedures; and, established a new management system to safeguard confidential customer information.

[3] 35-A MRSA §10104(4).

The overall expenditures and program strategies of the Trust were similar in FY12 to what was spent in FY11, and the resulting energy and cost savings are similarly strong. One manifestation of this is that ISO-New England has determined that Efficiency Maine Trust has the lowest costs of production to save a unit of electricity compared to all other programs in New England.

Through the course of FY12, the Trust exhausted most of the grant funds allocated to it through the federal Recovery Act (ARRA). It sharpened its focus on higher performing programs while scaling back those that underperformed.

In addition to managing its core energy efficiency and renewable energy programs, the Trust also participated in or initiated energy policy discussions at the Legislature and the Public Utilities Commission. Topics of these discussions included: development of the Non-Transmission Alternative pilot project; development of a pilot project for mini-split heat pump supplemental heating systems; procuring energy efficiency as a resource, competitive with other electricity resources, through a power purchase agreement; and, developing the next three-year, strategic plan to guide the Trust's programs.

The Triennial Plan, as updated to reflect significant changes, proposed to implement programs organized in three basic categories: (1) programs for business customers; (2) programs for residential customers; (3) cross-cutting programs. As presented in the sections and appendices that follow, this Annual Report provides detail on the budgets, strategies and results for each of those three categories of activity during fiscal year 2012 (FY12).

Programs

In FY 2012, the Efficiency Maine Trust delivered a second straight year of effective programs to reduce Mainer's energy costs and increase their energy independence. The economic impact of the FY12 programs included:

- lowering present and future energy costs in Maine by an estimated $142.5 million, making businesses more profitable and competitive and families more economically secure;
- reducing demand for electricity across the state enough to suppress the price paid by all Mainers on the grid for energy, capacity, carbon allowances, and renewable energy credits;[4]
- generating more than $73.25 million in total investments in energy infrastructure upgrades during a sluggish economy; and,
- helping to create or retain jobs (a recent macroeconomic study estimated that every $1 million in electric efficiency program funding tends to generate 51 full-time equivalent jobs for a year and that every $1 million in oil efficiency program funding tends to generate 75 full-time equivalent jobs for a year).

The summary tables below illustrate the total energy savings and lifetime avoided energy costs from each of the programs administered by Efficiency Maine in FY12. Each table also shows the costs of Efficiency Maine to provide education, training, technical support, financial incentives, quality control, measurement and verification, and evaluation of each program, as well as the customer ("participant") cost-share to install energy upgrades. The Benefit-to-Cost Ratio indicates the ratio of the benefits (from the lifetime avoided energy costs) to the combined costs of Efficiency Maine and the participant.

[4] See, Synapse Energy Economics, Inc., "Avoided Energy Supply Costs in New England – 2011 Report," (2011), Appendix B, p. B-21.

Table 1 – FY12 Costs and Savings for Programs Funded by the Electric and Natural Gas System Benefit Charges (SBC) and by the Regional Greenhouse Gas Initiative (RGGI)

Program	Lifetime Energy Savings (kWh)	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Ratio
Business Incentive Program	592,752,866	$ 9,355,717	$ 25,874,806	$ 44,208,732	1.25
Large Customer Program	467,859,118	$ 4,578,526	$ 8,632,639	$ 32,001,587	2.42
High Performance Schools	3,349,500	$ 221,937	$ 167,668	$ 261,777	0.67
Direct Install Pilot	-	$ 127,888	$ -	$ -	-
Residential Lighting	682,426,718	$ 4,172,340	$ 249,568	$ 43,701,746	9.88
Residential Appliances	60,675,000	$ 1,733,867	$ 1,248,740	$ 4,410,942	1.48
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Low Income Programs	16,298,995	$ 930,311	$ -	$ 1,849,337	1.99
Cross-Cutting Strategies	-	$ 1,333,220	$ -	$ -	-
Administration	-	$ 908,001	$ -	$ -	-
Total	**1,845,626,614**	**23,937,065**	**36,173,421**	**128,015,188**	**2.13**

Table 2 – FY12 Costs and Savings for Programs Funded by American Recovery and Reinvestment Act (ARRA) Funds

Program	Annual Energy Savings (MMBTU)	Lifetime Energy Savings (MMBTU)	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-To-Cost Ratio
Maine Advanced Building	3,509	70,173	$ 199,754	$ 1,425,720	$ 1,473,794	0.91
Retro-Commissioning	10,965	54,826	$ 354,052	$ 593,691	$ 996,641	1.05
Home Energy Savings Program (PACE)	16,016	320,313	$ 787,812	$ 2,542,421	$ 6,199,253	1.86
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Solar and Wind	9,864	197,272	$ 657,901	$ 6,953,917	$ 5,824,103	0.84
Cross-Cutting Strategies	-	-	$ 234,322	$ -	$ -	-
Administration	-	-	$ 306,603	$ -	$ -	-
Total	**40,765**	**580,655**	**$ 2,431,507**	**$ 11,515,749**	**$ 14,654,054**	**1.05**

This section of the Annual Report provides a short description of each of the programs referenced in these two tables. The descriptions are divided into four categories:

- Business Programs;
- Residential Programs;
- Alternative Energy Programs; and
- Cross-cutting Strategies.

Each description generally includes a statement of the main purpose of the program, an indication of activities undertaken to implement the program, and a summary of any quantifiable results.

BUSINESS PROGRAMS

Through its Business Programs, Efficiency Maine administers a wide variety of offerings for business and institutional customers of all sizes. This class of customers includes "mom and pop" small businesses, municipal and state governments, non-profits such as hospitals or YMCAs, schools and universities, commercial offices and warehouses, and large industrial manufacturers.

This section of the Annual Report describes the Business Programs delivered in FY12, organized by the source of the funds used to pay for the programs. The first group of Business Programs described below was paid out of funds generated by the electric and natural gas system benefit charges (SBC) or Regional Greenhouse Gas Initiative (RGGI). These are programs that Efficiency Maine has offered for much of the past decade and will continue to offer into the future. The second group of Business Programs was paid out of funds received from the federal government, primarily through the American Recovery and Reinvestment Act (ARRA). Because the ARRA funds were a one-time source of revenue, continuation of the ARRA-funded programs is not assured unless new revenues are authorized or resources are shifted from other programs.

BUSINESS INCENTIVE PROGRAM

Overview: The Business Incentive Program provides education, technical assistance, quality control and financial incentives for energy upgrades to businesses of all sizes. The financial incentives are delivered to these business customers through either the Prescriptive path or the Custom path. The purpose of Efficiency Maine's Prescriptive path is to provide financial incentives for a portion of the incremental cost of efficient electric equipment relative to standard equipment. (In the natural gas utility territory served by Unitil, this program also offers financial incentives for a portion of the incremental cost of efficient natural gas equipment. The activities and results of the natural gas program for commercial customers is reported in a separate section.)

FY12 Activities: Prescriptive incentives are offered at fixed amounts for a prescribed list of the most common efficient electric equipment that can be used in nearly every business: lighting, lighting controls, refrigeration, HVAC units, variable speed drives, and equipment related to agricultural industry. Efficiency Maine's Custom path also provides incentives as well as technical assistance for the purchase and installation of premium-efficiency electrical equipment that is not on the prescribed list of the Prescriptive Program. The Custom path supports higher efficiency equipment installations used on new construction projects, renovation projects, or for the early replacement of functioning, but less efficient, existing equipment.

Activities undertaken for the Business Incentive Program this year include:

- Conducted 3 Qualified Partner training sessions, recruiting and training 128 new Qualified Partners;
- Answered approximately 1800 incoming calls for customer support;
- Participated in 8 targeted business trade shows;
- Presented Business Program overview and Energy Management practices at 25 business and trade association meetings throughout the State.

To build up the capacity of the supply chain to help deliver program offerings to business customers, the Trust continued to expand and enhance the Qualified Partners network in FY12. Qualified Partners are experienced vendors, contractors, suppliers and other professionals who supply, install or advise customers about energy-efficient equipment. These Qualified Partners are familiar with the Business Programs and assist customers with the selection of qualifying equipment and to apply for cash incentives for their energy-efficiency project. There are more than 410 Qualified Partners who have successfully completed all requirements and are participating in the Business Program.

For projects conducted in FY12, the Trust recognized the following Qualified Partners for their excellence in supporting the delivery of Efficiency Maine's programs for business customers:

- QP of the Year: Energy Management Consultants (EMC)
- Supplier of the Year: CED Gilman Electrical Supply
- Contractor of the Year: Mechanical Services, Inc.
- Largest Lighting Project of the Year: Ameresco
- Largest Mechanical Project of the Year: Woodard and Curran

FY12 Results: The Business Incentive Program had an initial energy savings goal of saving 35,500 megawatt-hours(MWh) per year. However, FY12 program results exceed the initial goal and are projected to save 44,632 MWh per year. Summary information about the program participation, costs and benefits appear in Table 3.

Table 3 – Business Incentive Program Results

Total Participants	Total Projects	Lifetime kWh Savings	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Ratio
1608	2510	592,752,866	$9,355,717	$25,874,806	$44,208,732	1.25

Table 4 indicates the breakdown of the measures installed through the Business Incentive Program and the share of each that were funded through the Prescriptive or the Custom incentive structure.

Table 4 – Business Incentive Program Measures Installed

Project Type	# of Projects	# of Participants
Prescriptive Lighting	2,158	1,332
Prescriptive HVAC	88	75
Prescriptive VFD	44	37
Prescriptive Agriculture	18	17
Prescriptive Refrigeration	52	34
Prescriptive TPM	3	2
Custom Lighting	64	43
Custom HVAC	14	11
Custom Compressed Air	24	21
Custom VFD	24	19
Custom Miscellaneous	21	17
Total	**2,510**	**1,608**

Program Evaluation

Efficiency Maine contracted with Opinion Dynamics Corporation to conduct an impact and process evaluation of the Business Incentive Program. The study, completed in November 2011, evaluated electric energy and demand savings, analyzed program cost-effectiveness, and examined program design and delivery. Research methods included: on-site measurement and verification of project installations, telephone surveys of participants and non-participants, in-depth interviews with program staff and qualified partners, analysis of program database and savings calculations, and engineering reviews of projects. The key finds of the evaluation were:

- Participants and Qualified Partners report being generally satisfied with the program.
- In FY2011, the manufacturing sector was a key driver of savings, the share of savings from prescriptive lighting decreased from previous years, while the share of custom projects increased. The average size of projects has fallen sharply since FY 2007.
- The program made continuous adjustments and improvements between 2007 and 2011, including improved electronic application and program tracking system, and the introduction of the Qualified Partner network. The introduction of the Qualified Partner status for trade allies was successful in focusing the list of program partners and increasing the quality of submitted applications.
- Realization rates were estimated to be 1.01 (101%) for energy savings and 1.03 (103%) for demand savings, meaning that verified savings from the evaluation are almost identical to program reported savings. This was true for the program overall and for both prescriptive and custom components.

- The net-to-gross ratio (NTGR),[5] which represents the estimated fraction of gross program savings[6] that can be directly attributed to the program, was estimated to be 0.66 for the program overall, 0.70 for the prescriptive component and 0.62 for the custom component.
- Applying the realization rates and NTGR for FY2011 program results, the evaluation estimated:
    - Verified gross energy savings of 44 MWh and verified net energy savings 29 MWh; and,
    - Verified gross demand savings of 8.4 MW and verified net demand savings of 5.6 MW.
- The Total Resource Cost (TRC) benefit-cost ratio for FY2011 was estimated to be 1.93 based on net savings and costs. This compares to a program reported value of 2.21. The difference mainly stems from the application of the net-to-gross ratio.

FY13 Plans:

- Roll out the new Prescriptive path's Compressed Air incentives for compressors and ancillary air system equipment;
- Move to a paperless application process;
- Continue to enhance the field support to the Qualified Partner network; and
- Update the Commercial Technical Reference Manual.

LARGE CUSTOMER PROGRAM (ELECTRICAL SAVINGS)

Overview: In FY12, Efficiency Maine's Large Customer Program provided grants for large-scale kilowatt-hours (kWh) saving projects. The focus of the program is to leverage private investment to achieve significant electrical savings and to stimulate economic growth in Maine. (In the prior two years, this program also funded projects large customer projects aimed at reducing greenhouse gas emissions, which projects were principally focused on energy upgrades that reduced the use of #2 distillate fuel or

[5] NTGR is the ratio of net savings to gross savings. The NTGR may be determined from the free-ridership (FR) and spillover (SO) rates (NTGR=1-FR+SO), if available, or it may be a distinct value relating gross savings to the net effect of the program with no separate specification of FR and SO values. A program's FR rate is the percentage of program participants deemed to be free riders. A free rider refers to a customer who received an incentive through an energy efficiency program who would have installed the same or a smaller quantity of the same high efficiency measure on their own within one year if the program had not been offered. Spillover refers to energy-efficient equipment installed in any facility in the program service area due to program influences, but without any financial or technical assistance from the Program. It is expressed as a percent or fraction of the gross savings attributable to program participation.

[6] Gross Savings is the change in energy consumption and/or demand that results directly from program-related actions taken by participants in an efficiency program, regardless of why they participated and unadjusted by any factors. Adjusted Gross Savings is the change in energy consumption and/or demand that results directly from program-related actions taken by participants in an efficiency program, regardless of why they participated. It adjusts for such factors as data errors, installation and persistence rates, and hours of use, but does not adjust for free ridership or spillover.

residual fuel. These greenhouse gas projects were funded by federal Recovery Act (ARRA) funds that did not carry the same restrictions as the Trust's funds derived from the electric SBC or from RGGI.)

These grants were targeted at many of the biggest energy consumers in the state. They were selected based on the quantity of electric energy, measured in kWh, saved per program dollar invested by Efficiency Maine. By and large these companies and institutions have limited capital budgets with many competing needs. As a result, the payback requirements for capital projects are short. This reality creates a significant market barrier to approval and installation of large energy efficiency projects. The grants from this program helped buy-down the up-front capital cost of large energy upgrade projects, helping the projects meet corporate Return on Investment requirements and gain approval. This made the projects possible, freed up operating budgets and returned cash to the businesses during a difficult economy.

FY12 Activities:

The main activities undertaken during FY12 were:

- Marketing and explaining the competitive bid opportunities to large customers;
- Screening bids and presenting the recommendations of a technical team to the independent review committee to select winning bidders;
- Negotiating contracts with winning bidders;
- Monitoring project progress for this round and the previous round (from FY11) of competitively bid large projects.

The Large Customer Program used funding from the RGGI auction proceeds and from the settlement of the Maine Power Reliability Project. These grants were awarded primarily on the basis of annual kilowatt-hour per dollar of grant funds, while project readiness, and comprehensiveness. The grants awarded in FY12 ranged from $100,000 to $500,000 per project.

The Trust released two rounds of funding. The first round was conducted in September of 2011 through which eight grants were awarded totaling $2.8 million and $5.01 million in private matching funds was leveraged. The second round was released in February and awarded six grants in May though which $1.4 million leveraged $3.6 million in private investment. The types of projects funded through the Large Customer Program include cost-effective renewable generation, innovative process enhancements, and efficient drives and pumps. Projects funded during this fiscal year to date are collectively projected to reduce electricity consumption by 46.8 million kWh over the full life of the installed measures.

FY12 Results: Highlights of the results from the Large Customer Program activity include:

Table 5 – Large Customer Program (kWh) Results

Total Participants	Total Projects	Lifetime kWh Savings	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Ratio
13	13	467,859,118	$4,578,526	$8,632,639	$32,001,587	2.42

Program Evaluation

Efficiency Maine contracted with Navigant Consulting, Inc. and subcontractor Turner Building Science to conduct an impact evaluation of the Large Project Grants Program (now known as the Large Customer Program). The study, completed in April 2012, evaluated the energy savings achieved by the Large Project Grants for projects that saved electricity and/or greenhouse gases. The evaluation covers the 26 grant projects completed through January 31, 2012. Research methods included on-site measurement and verification, engineering review, and telephone surveys.

The key findings and recommendations of the evaluation were:

- Realization rates (evaluation verified savings / program reported savings) were estimated to be:
  - 1.20 for Greenhouse Gas Reductions
  - 1.19 for Annual Electricity Savings
  - 0.89 for ISO-NE Summer Peak Demand Savings.
- The net-to-gross (NTG) ratio, or estimated fraction of savings that can be directly attributed to the program, was:
  - 0.67 for Site Energy Savings (all fuels in MMBTu units)
  - 0.78 for Electricity Savings
  - 0.65 for Fossil Fuel Savings
- The Total Resource Cost (TRC) benefit-cost ratio was:
  - 8.0 based on *gross* savings and costs
  - 7.8 based on *net* savings and costs.

The evaluation recommended that the Trust:

- Continue funding for this program, incorporating both electricity and GHG focused projects because it generated a very strong TRC result in addition to having high energy saving impacts, and participants were anecdotally pleased with the program.

- Continue performing significant technical review, similar to the Business Incentive Program review of custom projects. The Trust should perform a technical review, specifically focused on the project definition, assumed baseline, and fuel savings type. This should include a follow-up call to discuss technical aspects of the project with the applicant. The existing review system is working well and is preventing major errors in projections of savings from occurring.

- Continue marketing this program to private industrial sites, especially paper mills. These sites have significant capital constraints, which have prevented many investments in energy efficiency from occurring. This means that there are more likely to be cost-effective projects available that generate large benefits relative to costs.

FY13 Plans: The Trust will offer additional rounds of funding in 2013 using much the same standards as in 2013. The Trust may also use a portion of the Better Buildings revolving loan fund to make additional funding available should it be successful in securing additional payments for the output of the projects through a long-term contract.

MAINE HIGH PERFORMANCE SCHOOLS

Purpose: The Maine High Performance Schools (HPS) program was designed to incent energy efficiency design improvements in the lighting and mechanical systems in the construction of Maine schools. HPS was launched in 2005 as a result of a partnership of the Maine Department of Education, Bureau of General Services, the Maine School Management Association, United States Department of Energy, and Efficiency Maine.

FY12 Activities: The HPS program is now managed under Efficiency Maine's Commercial New Construction Program. The HPS program is not an active program in the sense that all available funding was committed prior to FY12, Efficiency Maine has added no new funds to it and has discontinued promotion of new entrants. However, several schools are still completing pre-existing agreements from the original program, and for this reason funds are still reserved in the budget and payments continue to be made to meet those prior commitments.

Nine schools remain in the HPS queue as they complete the design, construction and commissioning process.

FY12 Results: Two schools completed the design/construction/inspection process in FY 2012. The schools completing their agreements in FY12 were: Norridgewock Elementary and Brunswick Elementary.

Table 6 – High Performance Schools Results

Total Participants	Total Projects	Lifetime kWh Savings	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Ratio
2	2	3,349,500	$221,937	$167,668	$261,777	0.67

FY13 Plans: The program activities planned for FY13 are the same as in FY12. It should be noted that this program is not accepting new project proposals and is only overseeing and paying for the completion of prior commitments. The budget for the program in FY13 appears in Appendix C.

BUSINESS NATURAL GAS INCENTIVE PROGRAM

Overview: Launched in November 2011, the Business Natural Gas Incentive Program provides commercial and industrial (C&I) customers access to technical assistance and financial incentives for the installation of "top tier" energy efficient equipment. The program provides prescriptive incentives for customers of Unitil,[7] and focuses on premium efficiency boilers, furnaces and heaters, and their associated controls, as well as efficient gas-fired commercial kitchen equipment.

The target market includes all non-residential customers including commercial, industrial, municipal, non-profit, and institutional customers located in the Unitil Natural Gas service territory. There are approximately 8,000 non-residential natural gas accounts in Unitil's service territory.

This program experienced a brief delay in implementation in FY12 as the Staff and its technical advisors reviewed recent results in other states. Independent evaluations of certain natural gas efficiency programs in nearby states showed that the approach that Efficiency Maine was intending to follow was returning disappointing results in those states. Rather than risk that same result, Efficiency Maine made adjustments that included piggybacking the marketing, training and incentive processing onto the existing Business Incentive Program (that had been targeting exclusively electric savings opportunities). Also, the list of eligible efficient natural equipment was reviewed and tightened.

FY12 Results: As a small, new program, the Business Natural Gas Incentive Program experienced a modest uptake in participation. Summary information about the program participation, costs and benefits appear in Table 7.

[7] Current state law establishes a minimum threshold of customers that triggers whether a natural gas utility must contribute funds to the Trust's Natural Gas Conservation Fund and whether that utility's customers are eligible to receive assistance from Efficiency Maine programs. Only Unitil has reached this threshold.

Table 7 – Business Natural Gas Incentive Program Results

Total Participants	Total Projects	Lifetime MMBTU Savings	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Ratio
14	14	36,890	$ 110,952	$ (7,641)	$ 252,693	2.45

Other program activities performed in FY12 include:

- Enhanced the website to provide additional information for program participants and equipment vendors ;
- Attended trade shows to highlight the program and highlight qualifying natural gas equipment;
- Developed a focused Qualified Partner training module to include specifics on natural gas equipment and program application guidelines.

FY13 Plans: The program budget in FY13 appears in Appendix C. Unspent funds from the slow start in FY12 will be rolled over into the FY13 budget for this program. Given the relatively small size of this program, it is projected that the program will be fully subscribed by the end of the fiscal year.

SMALL BUSINESS LOAN PROGRAM

Overview: For several years, Efficiency Maine has provided loans of up to $35,000, at 1% interest for up to 5 years, to help small businesses finance approved energy conservation measures such as: electrical equipment including lighting, machinery, HVAC and refrigeration; heating equipment, regardless of fuel type; and insulation. An energy audit identifying recommended energy efficiency measures has been required.

FY12 Activities: As in prior years, in FY12, Efficiency Maine continued its arrangement with the Finance Authority of Maine (FAME) to perform underwriting of loan applications. The program is described on the Efficiency Maine website on the pages frequented by small business customers; it is explained in Qualified Partner trainings so that they can convey the opportunity to suitable customers; and it is referenced during presentations to business audiences such as regional chambers of commerce.

FY12 Results: In recent years there has been very low demand for this program. The summary results of the Small Business Loan Program are provided in Table 8.

Table 8 – Small Business Loan Program Results

Total Participants	Loan Value	Annual Energy Savings (MMBTUs)	Efficiency Maine Costs	Participant Costs	Benefit-to-Cost Ratio
12	$355,076	796	$11,608	$355,076	N/A

FY13 Plans: The Small Business Loan Program has fully expended its budget. As of FY13, Efficiency Maine is not offering new loans through this program, but instead is shifting focus to the Small Business Direct Install Program and its on-bill financing option. As loan payments build up to a level that is sufficient to support new loans, the loan pool will again be available.

COMMERCIAL NEW CONSTRUCTION PROGRAM – MAINE ADVANCED BUILDINGS

Overview: Efficiency Maine's program for new construction of commercial buildings, usually referred to as "Maine Advanced Buildings," (MAB) provides easy-to-follow guidelines and incentives to design buildings that are 15-20% more energy-efficient than the Maine Uniform Building and Energy Code requires.

The guidelines help achieve savings on both electric and fossil fuel usage, without the expense and complexity of sophisticated computer-based modeling. The guidelines promote the use of cost-effective, off-the-shelf building technologies, which have been proven to reduce energy usage and improve building performance.

To be eligible for program participation the project must involve a new building or the substantial renovation of a commercial, institutional, or industrial building, or the expansion of an existing building. Major renovations usually consist of significant rework to the interior layout and finishes, changes to the exterior envelope, and/or the replacement of mechanical and electrical systems.

FY12 Activities:

Key activities included:

- Two presentations conducted for architects and engineers promoting the program, each presentation eligible for continuing education credit;
- Supporting the participation of five new design firms in the program;

- Providing on-site monitoring and technical support for all projects in the program.

FY12 Results: Program activity included:

- The completion of five projects representing over 113,000 sq.ft. of new construction meeting MAB standards;

- Eleven projects began construction, of which nine projects are scheduled for completion in FY13 and two projects are scheduled for completion in FY14.

- As summarized in table below, the Benefit-to-Cost ratio is slightly below 1, indicating that the combined costs of Efficiency Maine and the Participant were not greater than the total energy benefit of the project. This result warrants some discussion. First, it is arrived at using the Total Resource Cost test. Having a score of less than 1 will typically result in either discontinuing the program or revising and watching it closely to see if it can be improved. When looked at from Efficiency Maine's perspective alone, it appears that this program is not a bad investment of resources. With Efficiency Maine costs below $200,000, the program leveraged more than $1.4 million in customer investment toward efficient upgrades. Second, this is a new program. As such, it may have experienced higher than normal start-up costs. Third, new construction projects tend to have a much longer lead time than most other projects, and FY12 occurred during a period of extremely slow economic growth. This might explain why Efficiency Maine's efforts led to only five projects that came to fruition during the program year. It is likely that some of the upfront investment during this year will lead to projects that transpire in subsequent years.

Table 9 – Commercial New Construction Program Results

Total Participants	Total Projects	Lifetime Energy Savings (MMBTU)	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Ratio
5	5	3,470	$199,754	$1,425,720	$1,473,794	0.91

FY13 Plans: In FY13, ARRA funds committed to this program will be totally allocated to projects completing in calendar year 2012. A limited amount of other funding was allocated to finish the remaining projects. Because other revenue funding sources for this program in FY13 are limited, no new applications for the MAB financial incentive will be accepted. The program will transition to promotion of best practices and offering technical advice or training. The budget for the remaining program participants for FY13 appears in Appendix C.

RETRO-COMMISSIONING PILOT PROGRAM

Overview: This ARRA funded pilot program was launched in April 2010 to determine whether measurable energy savings could be achieved by offering building owners the opportunity to improve the efficiency of their building operations through a "tune-up" of their existing building energy systems.

Through this program, Efficiency Maine offered participants a cost share of up to 50% for engineering studies to determine if systems were working properly. When savings opportunities were identified, the participant and Efficiency Maine shared the cost of adjusting the energy management system and resulting energy savings were measured.

The overall objectives of the pilot program include the following

- Demonstrate the validity of retro-commissioning as a viable energy saving measure by implementing re-commissioning at 35 buildings;
- Improve the ability of building operations staff to identify wasteful energy use;
- Ensure savings created persist over the expected lifetime;
- Ensure quality control to the building owner from a well-delivered retro-commissioning process;
- Provide insight to aid in developing a full-scale retro-commissioning program.

FY12 Activities: The main activities of the program were:

- Served as liaison between the building owner and the RCx agent to ensure project met expectations;
- Provided technical support to the RCx agents;
- Conducted outreach efforts to recruit program participation.

FY12 Results: This ARRA Funded program has continued throughout FY12 with new projects underway as the year ended. Progress at the end of FY12 is reflected in Table 10.

Table 10 – Retro-Commissioning Program Results

Total Participants	Total Projects	Lifetime Energy Savings MMBTU	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Ratio
31	35	54,826	$354,052	$593,691	$996,641	1.05

FY13 Plans: Budgeted ARRA funds for this program in FY13 will be fully exhausted half way through the fiscal year. There are no new funds for this program and no new project proposals will be accepted beyond the second quarter of FY13. Once the last proposals are accepted, Efficiency Maine's activities will be limited to monitoring and oversight and reporting on the projects.

Program Evaluation

Efficiency Maine has contracted with The Cadmus Group to conduct an impact and process evaluation of the Retro-Commissioning Pilot Program. The evaluation, to be completed by December 31, 2012, includes stakeholders interviews (with Trust staff, retro-commissioning providers, and program implementers), participant surveys, project file reviews, and on-site project audits. The evaluation will: estimate energy and demand savings achieved; identify additional opportunities to save energy; assess measure lifetime and persistence; develop an understanding of the program's operation and how it could be improved; and, develop recommendations for continuation of the program should funding become available.

SMALL BUSINESS ENERGY AUDIT PROGRAM

Overview: Efficiency Maine's Small Business Energy Audit program offers Maine's small businesses the chance to evaluate their energy-efficiency opportunities. High up-front costs, limitations on time and knowledge, and limited access to capital are particularly difficult barriers for small business customers. The objectives of an energy audit are to identify and develop modifications that will reduce the energy use and/or cost of operating a building. Energy audits should provide the owner/operator with sufficient information to determine the best opportunities to reduce the building's energy use and/or cost and a general sense of how the savings will compare to the cost.

In FY12, the Efficiency Maine Small Business Energy Audit Program, funded with federal Recovery Act dollars, was open to commercial, non-profit and manufacturing facilities located in Maine that met energy use and facility type criteria and met the following requirements:

- Less than 50 employees

- Annual revenue less than $5 million
- Building size larger than 1000 sq. ft.

In FY12, the Audit Program offered participants a no cost basic walk-thru energy analysis. These written report contained recommendations for potential energy savings along with information on financial options available to help the businesses proceed with the suggested energy efficiency measures.

FY12 Results: The summary results of the Small Business Energy Audit Program in FY12 appear in Table 11.

Table 11 – Small Business Energy Audit Program Results

Total Participants	Total Audits	Lifetime Energy Savings	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Ratio
123	123	N/A	$215,387	$0	N/A	N/A

FY13 Plans: The Audit Program which was funded through ARRA concluded in April 2012. There are no plans to offer the Audit Program in FY13.

RESIDENTIAL PROGRAMS

Through its Residential Programs, Efficiency Maine administers programs to increase efficient use of electricity, natural gas, and other heating fuels in Maine homes. In some cases the programs are designed and implemented specifically for the benefit of low-income customers, while other programs are designed for open access to all residential customers regardless of income.

RESIDENTIAL LIGHTING PROGRAM

Overview: Lighting accounts for 5-10% of total energy use in the average American home, costing between $50 and $150 per year in electricity bills. Compact fluorescent light bulbs (CFLs) use 75% less electricity for the same light output and last 6-10 times longer than traditional incandescent bulbs. CFLs save enough in avoided electricity bills that they pay for their higher cost compared to an incandescent bulb. Nonetheless, the higher initial cost of efficient bulbs – both CFLs and LEDs -- result in most people buying incandescent bulbs. Efficiency Maine's Residential Lighting Program works to overcome these barriers by collaborating with Energy Star lighting manufacturers and retailers to lower the price of CFLs and other cost-effective, high-efficiency lights and to educate consumers on the benefits of efficient lighting. This program is used by customers of all income levels.

FY12 Activities: In FY12, as in the prior year, the program's delivery strategy was reimbursing retailers for lowering their CFL prices. For the vast majority of sales, the financial incentive was made automatically to the customer at the point of sale, requiring no paperwork. For the second full year, Efficiency Maine decided not to advertise for efficient lights and instead focused all of its resources on reducing the price of efficient bulbs to make them more competitive with incandescent.

In FY2012, the program engaged a new distribution channel in addition to retailers. Efficiency Maine donated over 400,000 CFL's to The Good Shepherd Food Bank for its four warehouses, 238 pantries serving 40,000 families per month.

Other activity specifics of the program in FY12 include:

- Negotiated Memoranda of Understanding with lighting manufacturers and retailers representing approximately 400 stores throughout the state, including the "big box" retailers like Wal-Mart, Home Depot, Lowes, Sam's Club and BJs as well as hardware stores like

Aubuchon and Maine Hardware, ensuring that 100% of Efficiency Maine's mark down dollars were passed on to consumers in the form of lower CFL prices (typically a $1.25 per CFL reduction);

- Conducting 80 in-store demonstrations educating consumers and retail staff on the benefits of efficient lighting and appliances; and,

- Completing 5,306 store visits verifying marked down lighting pricing, training store staff, encouraging off-shelf merchandising and restocking coupons (as appropriate).

FY12 Results: Combining the 400,000 CFL's distributed through The Good Shepherd Food Bank with 1.7 million CFLs purchased at 400 retailers statewide resulted in the use of 2.1 million CFLs, nearly 12% more than the record breaking FY11 year. This makes Maine one of the highest users of CFLs in the country. The program was able to do this at the second lowest program costs per bulb ever. Summary results for the program were as follows:

Table 12 – Residential Lighting Program Results

Total Participants	Total Units	Lifetime kWh Savings	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Ratio
N/A	2.1 million CFLs	682,426,718	$4,172,340	$249,568	$43,701,746	9.88

Program Evaluation

Efficiency Maine contracted with The Cadmus Group, Inc. to conduct an impact and process evaluation of the Residential Lighting Program. The study, initiated in September 2011 and completed in November 2012, investigated lighting purchase and use, evaluated electric energy and demand savings, analyzed program cost-effectiveness, and examined program design and delivery. Research methods included: telephone surveys, in-depth interviews with program staff, statistical analysis of program price and sales data, and on-site metering of lighting use from December 2011 through July 2012.

The impact evaluation found:

- A typical Maine household has 15 CFLs installed, which represents 26% of sockets.
- On average 73% of CFLs purchased are installed in the first year.
- The difference in wattage between CFLs purchased through the program and the bulbs they replace is 49 watts. On average, each bulb saves 27 kWh in the first year and 37 kWh per year annually in subsequent years.
- The average Hours of Use (HOU) of CFLs is approximately 2 hours per day.
- The effective useful life of CFLs delivered by the program is 12.5 years.

- The net-to-gross ratio, which represents the estimated fraction of gross program savings that can be directly attributed to the program, was estimated to be 0.66 for the program overall, with higher NTG for standard CFLs relative to specialty CFLs.
- Applying these findings to FY2011 program data, the evaluation estimated:
    - First-year verified gross energy savings of 52,300 kWh and net energy savings 34,600 kWh;
    - In subsequent years, the bulbs delivered in FY2011 can be expected to result in verified gross energy savings of 71,600 kWh and net energy savings of 47,400 kWh; and
    - Lifetime Gross Savings of 659,088,000 kWh and Lifetime net savings of 434,932,000 kWh.
- The Gross Realization Rate was estimated to be 107%, meaning that FY2011 verified gross savings from the evaluation are slightly higher than program reported savings.
- The Total Resource Cost (TRC) benefit-cost ratio for FY2011 was estimated to be 9.62. This estimate is based on net savings and costs, with adjustments to lifetime savings to account for increased efficiency of baseline lighting due to federal legislation (EISA).

The process evaluation found:

- 93% of surveyed residents were aware of CFLs.
- Customers' primary reason for purchasing CFLs was most often to save energy (50%). The second most frequent reason was to save money (18%).
- Participating retailers consistently expressed satisfaction with the program, and praised the markdown component of the program, in particular, due to its simplicity and speed for both retailers and customers, relative to the coupon strategy.
- After the program shifted funds out of television advertising and into increased CFL incentives, along with in-store promotions, retailers experienced increased CFL sales.
- The program is reaching low-income customers, with approximately 1 in 5 CFL purchasers reporting income household income that would qualify for LIHEAP heating assistance.
- The residential lighting market is changing with the phase out of higher wattage incandescent bulbs due to EISA legislation. In the near-term, most lighting manufacturers expect halogens, CFLs and lower-wattage incandescent bulbs will be in highest demand; over the longer-term, they expect LEDs, halogens and CFLs to maintain a strong market presence.

It is also worth noting that federal legislation (called "EISA") requiring higher efficiency standards for certain classes of light bulbs will be phased in over the next several years. One result of this is that efficiency programs in Maine and everywhere else in the U.S. must begin to reduce the estimates of savings (of energy and money) from lighting programs compared to what would otherwise have happened without the programs. Efficiency Maine has factored these reduced savings into its results reported here.

FY13 Plans: The Residential Lighting Program strategy and activities planned for FY13 are the same as in FY12. The Trust is looking carefully at diversifying its residential lightings to include other efficient

alternatives, such as LEDs. Pilot projects in FY13 are expected to inform the strategy and scope for promoting these alternatives. The budget for the program in FY13 appears in Appendix C.

ENERGY STAR APPLIANCE PROGRAM

Overview: Efficiency Maine has worked with appliance retailers throughout the state to educate sales staff on the benefits of ENERGY STAR electrical appliances and offer rebates for customer purchases of new, qualified units. In the first half of FY12, this program offered $25-50 rebates as a prompt for consumers to ask why a particular appliance qualifies while others do not, which created an opportunity for sales staff to explain the long-term financial benefits of efficient appliances.

Advances in residential appliance technology give homeowners the opportunity to save significant amounts of energy and water when they are in the market to purchase a new unit. ENERGY STAR clothes washers, for example, consume about 20% less energy and 35% less water than regular washers saving consumers about $23 per year on utilities. Likewise, an ENERGY STAR refrigerator uses 15% less than a non- ENERGY STAR unit and saves $100's per year compared to a 1980's refrigerator. ENERGY STAR dehumidifiers use 15% less energy than a conventional one and can save users $20 per year.[8] It is often the case that consumers make appliance purchasing decisions without understanding the energy cost implications.

FY12 Activities: A summary of the residential Appliance Program activities in FY12 includes:

- Worked with retailers representing nearly 200 stores statewide to distribute rebate forms to customers who buy Energy Star refrigerators, clothes washers and dehumidifiers;
- Issued rebates ranging from $25 per dehumidifier to $50 per refrigerator or clothes washer;
- 80 in-store demonstrations educating consumers and retail staff on the benefits of efficient appliances and lighting; and,
- 1,492 store visits to label ENERGY STAR appliances, install/restore signs, train store staff, and restock coupons.

FY12 Results: This was Efficiency Maine's third year rebating ENERGY STAR appliances. The program was highly successful. Mainers purchased more than 29,000 energy efficient refrigerators, clothes washers and dehumidifiers saving millions of dollars through avoided energy costs. Summary results are as follows:

[8] See, www.energystar.gov.

Table 13 – Residential Energy Star Appliance Program Results

Total Participants	Total Units	Lifetime kWh Savings	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Ratio
N/A	29,822	60,675,000	$1,733,867	$1,248,740	$4,410,942	1.48

FY13 Plans: The ENERGY STAR Appliance Program strategy and activities planned for FY13 are the same as in FY12, with the exception that Efficiency Maine is beginning to look at tightening product eligibility for rebates. At some point, the program may introduce new criteria limiting the financial incentives to a sub-set of ENERGY STAR models, i.e., only those models that achieve the highest level of savings or offering tiered incentives based on each model's level of efficiency. The budget for the program in FY13 appears in Appendix C.

REFRIGERATOR RECYCLING PROGRAM

Overview: This program was started in January 2012 with the goals of reducing the number of secondary refrigerators and freezers in the state and accelerating the trading in of old units to be replaced by more efficient models. Reducing the number of refrigerators and freezers on the grid or upgrading those that stay on the grid both serve as effective ways to reduce the inefficient use of electricity.

FY12 Activities: This was a brand new program for Efficiency Maine. While quite successful in many other states and identified in the Triennial Plan as one of the Residential Program priorities, it had not previously been deployed in Maine largely due to funding constraints. The first part of FY12 comprised making arrangements with a contractor to roll out the program in Maine. In FY12, activities undertaken in the program included:

- Designed the program details, issued a request for proposals, and secured services from sub-contractors;
- Launched the program in January 2012;
- Developed a website allowing residents to estimate their energy savings and schedule pickups on-line;
- Ran media campaign including press events, direct mail, Google pay-per-click web ads, Yahoo Banner Ads, TV commercials, and print ads in newspapers across the state.

FY12 Results: From January 2012 to July 2012, residents turned in 3,504 old refrigerators and freezers for recycling. Sixteen were manufactured in the 1930s and 252 were more than fifty years old. The estimated total energy saved is over 22 million kWh assuming that the units were removed from the grid six years earlier than they would have been without the program.

Table 14 – Refrigerator Recycling Program Results

Total Participants	Total Units	Lifetime kWh Savings	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Ratio
3,504	3,504	22,264,416	$575,259	$0	$1,581,067	2.75

FY13 Plans: This program was originally budgeted for implementation over two years, covering FY12 and FY13. With new programs such as this, the Trust carefully tracks the early performance to confirm that the results are consistent with the Trust's expectations. In the case of the Refrigerator Recycling program the results were respectable, but slightly below, and different than, the Trust's initial expectations. Rather than continue in that direction, the decision was made to wind down the program and shift the funds to other residential opportunities.

LOW-INCOME APPLIANCE REPLACEMENT PROGRAM

Overview: The purpose of this program is to increase the efficiency of electricity use in low-income-eligible homes in Maine, and to satisfy the statutory requirement that at least 20% of the base level system benefit charge on electricity be used for the benefit of low income customers. The program advances this objective by paying to remove and recycle old, inefficient refrigerators and replace them with new, higher-efficiency refrigerators.

FY12 Activities: As in prior years, the Low Income Appliance Replacement Program in FY12 was implemented through a Memorandum of Understanding with MaineHousing which administered this program through Maine's Community Action Agencies (formerly "Community Action Programs" and referred to as "CAPs"). Through on-site visits, the CAPs monitored refrigerators in Low Income Home Energy Assistance Program-eligible homes and replaced them for free with high-efficiency refrigerators if the old units were found to be highly inefficient. Free CFLs were also installed. During the visits, residents were given literature that described ways to save energy.

FY12 Results: The results of this program are aggregated with the other Low-Income Program results in Table 15, below.

FY13 Plans: Based on MaineHousing reports that CAP agencies were having difficulty finding enough inefficient refrigerators in LIHEAP-eligible residences, this program was discontinued in December 2011. As described in the two program descriptions that follow, funding to benefit low-income customers was shifted to making upgrades to the building envelope and heating systems of electrically heated, low-income residences.

LOW-INCOME WEATHERIZATION PROGRAM – ELECTRIC, SINGLE-FAMILY

Overview: The purpose of this program is to increase the efficiency of electricity use in low-income-eligible, electrically heated, single -family homes in Maine, and to satisfy the statutory requirement that at least 20% of the base level system benefit charge on electricity be used for the benefit of low income customers.

FY12 Activities: This program began part-way through the fiscal year as a transition from the previous Low Income Appliance Replacement Program administered by MaineHousing. This program generally followed the guidelines of the existing DOE Weatherization Assistance Program (WAP) in order to seamlessly use Maine's existing WAP infrastructure and process. In the last 5 months of FY12, the program engaged CAPs to audit and upgrade all LIHEAP-eligible, electrically heated, single family homes that they could find. It was estimated that the budget allocated for this program could support a maximum of 114 audits and 88 upgrades.

FY12 Results: In the limited period that the program was active, 25 homes were identified as suitable and were audited to develop an action plan for implementing cost effective energy efficiency measures. In total, eight single-family homes received comprehensive upgrades.

The contract to complete this program lasted through June 30, 2012. At that time, results were compared with the parallel initiatives of delivering upgrades to multi-family (as opposed to single-family) low-income residences and investing in the Residential Lighting Program (which is known to have a significant percentage of participation from low-income customers). The comparison revealed that the funds could save more energy and be disbursed more rapidly through the other initiatives.

FY13 Plans: Efficiency Maine will not continue using electric SBC funds for weatherization of single-family, low-income homes in FY13. However, this should not be understood to mean that there are no programs in Maine for this sector and type of housing. The Weatherization Assistance Program (WAP) will continue to operate using funds from the federal government and be administered by Maine's designated WAP administrator, MaineHousing.

LOW-INCOME WEATHERIZATION PROGRAM – ELECTRIC, MULTI-FAMILY

Overview: The purpose of this program is to increase the efficiency of electricity use in low-income-eligible, electrically heated, multi-family homes in Maine, and to satisfy the statutory requirement that at least 20% of the base level system benefit charge on electricity be used for the benefit of low income customers.

FY12 Activities: As with the single-family counterpart described above, this program began in January 2012 as a transition from the previous Low Income Appliance Replacement Program. During the second half of FY12, the program:

- Developed a data set of nearly 10,000 LIHEAP-eligible, electrically heated residential units based on input from MaineHousing, USDA Rural Development, Housing & Urban Development and Housing Authorities across the state.
- Developed a process for program delivery, that included: prioritizing, screening, and auditing buildings, gaining building owner permission, and then bidding and contracting for the installation of upgrades, and inspecting the upgrades with independent contractors.

FY12 Results: These are the summary results of the first half year of program activity:

- Audited 1,376 units to identify cost effective energy efficiency measures;
- Upgraded 302 units,
- Installed 16 high efficiency mini-split ductless heat pumps; and
- Contracted another 832 units for upgrades, (including 178 to receive ductless mini-split heat pumps).
- The average savings per unit is more than a 20% reduction in electrical consumption.

FY13 Plans: The program plan for FY2013 includes reviewing the eligible housing database and the qualifications of the installer network to maximize efficiency and enhance quality control, but otherwise the program design and strategy is expected to remain the same. The budget for the program in FY13 appears in Appendix C.

Table 15 – Low Income Program Results

Total Participants	Total Projects	Lifetime kWh Savings	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Ratio
875	875	16,298,995	$930,311	-	$1,849,337	1.99

This table reflects the combined results of the Low Income Appliance Replacement Program and the Low Income Weatherization Program for Electric Single-Family and Multi-Family homes. It does not include results associated with the Residential Lighting Program or Residential Appliance Rebate Program, even though these programs convey a significant benefit to low-income customers.

RESIDENTIAL DIRECT INSTALL

Overview: The purpose of Efficiency Maine's Residential Direct Install pilot and incentive is to break down barriers to entry for homeowners to participate in weatherization programs and take first steps toward making their homes more comfortable and energy efficient. Initial funding for this pilot was allocated from the federal BetterBuildings Grant from the U.S. Department of Energy to encourage homeowners across the state to engage energy auditors, develop a plan for making energy upgrades to their homes, and complete a basic air sealing to their homes at the same time the audit is performed. This initiative is also designed to move homeowners a step closer to undertaking deeper energy retrofits such as insulating attics and basements and upgrading heating systems.

FY12 Activities: This pilot project was initially launched in April of 2012 and therefore only had a limited number of participants in FY12.

While not initially included in the launch of the program in the third quarter of FY12, Unitil System Benefit Charges allocated for energy efficiency for residential customers were incorporated into the Residential Direct Install pilot. Unitil funds are being used to "piggyback" on Better Buildings incentives to provide Unitil heating customers to be able to access as much as $1,200 per unit up to four units for a minimum of 12 hours of targeted air sealing and insulation work per unit. The impact afforded by this moderate investment in building envelopes is expected to provide impressive results in FY13.

Participation in Residential Direct Install with a minimum six hours of air sealing and insulation work has also been deemed to providing minimum required energy savings for projects funded by unsecured PowerSaver loans. This enables homeowner to receive an energy audit and initial work at a significant discount, then as an informed consumer with energy audit in hand, finance further energy efficiency improvements including more significant air sealing and insulation, upgrades of existing heating systems, or introduction of high efficiency space heating such as air source heat pumps.

FY12 Results: Given the late start of the program in FY12, only 47 homeowners had participated in the air sealing incentive by June 30, 2012.[9]

Table 16 – Residential Direct Install Results

Total Participants	Total Units	Lifetime Energy Savings (MMBTU)	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-To-Cost Ratio
47	47	8,243	$90,816	$ -	$160,263	1.76

FY13 Plans: ARRA BetterBuildings Grant Program funding provides sufficient dollars to support the completion of more than 2,500 air sealing project units, which will carry the program through most if not all of FY13. Given success of the program since its initiation, it appears offer an attractive option for delivering natural gas residential program funds and other funds that become available specifically for residential energy consumption reductions in future years. The budget for the program in FY13 appears in Appendix C.

HOME ENERGY SAVINGS PROGRAM (PACE and PowerSaver Loans)

Overview: The Home Energy Savings Program (HESP) was designed to raise awareness about the benefits of home weatherization and to encourage homeowners to make efficiency upgrades sufficient to save at least 20% of their total home energy use. This started as a rebate program in January 2010 and transitioned to a loan program (referred to as PACE loans and PowerSaver loans) by FY12, as described in more detail below.

Under HESP, Efficiency Maine initially allocated federal Recovery Act funds to pilot a program offering rebates for customers completing a whole-house weatherization retrofit. For customers who performed an energy audit of their homes and then made improvements that were modeled to achieve at least a 25% efficiency improvement, Efficiency Maine offered a rebate for 30% of the job cost. This Tier 1 rebate was capped at $1,500. For customers who made improvements that were modeled to achieve at least a 50% efficiency improvement, Efficiency Maine offered a rebate for 50% of the job cost. This Tier 2 rebate was capped at $3,000. Various promotional efforts were attempted including extensive advertising, specialized sales training for contractors, and a "bonus" rebate for early adopters. Funding for the rebate program was fully committed by the end of FY11 and the results were reported in the Trust's FY11 Annual Report.

[9] As of November 2012, the number of homes participating in the Residential Direct Install had grown to more than 600.

As the rebate pilot was ending, a new Revolving Loan Fund was launching under HESP to offer low-interest financing for customers who complete the audit and achieve a minimum 20% savings through home energy upgrades. The program design shift resulted in PACE loans and PowerSaver loans being offered during FY12 in an attempt to advance the following objectives:

1. Financing: to provide financing for residential, whole-house retrofits statewide, across multiple income levels;

2. Market-building: Building momentum in customer demand for energy audits and home retrofits to a level sufficient to sustain experienced, proficient and certified contractors, geographically dispersed across the state for at least the next decade;

3. Cost-effective energy savings: achieving an average of at least 20% energy savings per home through upgrades that more than pay for themselves in avoided energy costs;

4. Sustainability: Sustain funding to support the promotion of whole-house retrofits over 10 years beyond the grant period, establishing track record of program performance based on gathering and aggregating data that will prove the value of weatherization and attract investors who will support the program beyond the grant period; and,

5. Scalability and Replicability: Continue to develop best practices and share guidance with other jurisdictions on how to develop, deliver and document a residential retrofit program that is scalable and applicable to other regions of the country.

FY12 Activities: In the Fall of 2011, Efficiency Maine conducted a second round of public hearings to consider modifications to program rules for the Maine PACE Loan program. Alterations to technical rules were made to provide greater flexibility for transfer of funds to participants.

More than 150 municipalities across the state have taken the steps needed to pass a local PACE ordinance and establish an administrative contract with Efficiency Maine. Residents of these towns comprise 72% of the state population and have submitted a total of more than 1800 loan applications since the launch of PACE in April of 2011. Efficiency Maine staff fielded requests for information and presentations to a significant number of additional municipalities seeking to opt in to the PACE program throughout FY12.

The Trust also invested considerable time and effort managing and tuning the administrative process and structure for issuing and servicing loans. The Trust has been working closely with its financial master service provider, AFC First, a company with experience issuing and servicing small residential energy loans in several other states, as well as with our technical services team, Conservation Services

Group. As the "master servicer," this contractor provides all "back-office" administrative operations for the loans funded through this program. The master servicer is responsible for running a call center for inquiries about the Maine PACE program, conducting loan origination, researching applicant information used in the underwriting process, packaging closing documents, providing closing services, and recording PACE agreements in the registry of deeds. The master servicer is also responsible for loan servicing, managing delinquency, discharging PACE mortgages, and providing statistical data reporting.

In addition to working with its partner – AFC First -- on the delivery of PACE, Efficiency Maine supported AFC First's application to be the provider of HUD pilot PowerSaver loans to Maine residents. Along with approval to provide PowerSaver loans, AFC First was granted funds from HUD to help offset the costs associated with establishing loans in Maine. In the process, Efficiency Maine became a "HUD Title 1 Government lender," which enabled Efficiency Maine to offer PowerSaver loans to customers throughout Maine, regardless of where they live in the state.

During the year the Trust continued development of education and outreach materials for distribution to towns and their residents about the process for receiving a PACE loan. The Trust enhanced its loan webpage to provide a wide range of information and resources at www.efficiencymaine.com/PACE . PACE related pages provide documents and information for municipalities wishing to participate, a locator tool for homeowners to find local registered contractors and energy auditors, and links to apply for loans on-line. The website also links interested customers to two on-line calculator tools that help estimate if energy upgrades would be a worthwhile investment at a given home and the amount of savings they can anticipate by switching fuels or upgrading heating systems.

The Trust also implemented steps to drive awareness of the benefits of home weatherization and increase demand for home energy upgrades through: TV ads & public service announcements, radio ads and interviews, print advertising, PR articles, web ads, website, direct mail, phone campaigns, trade shows, trade associations, collaboration with non-governmental organizations and community groups, speaking engagements, and fairs.

FY12 Results: FY12 was the first full year in which PACE loans were offered through Efficiency Maine. It also saw the launch of the PowerSaver loan program at the beginning of the last FY12 quarter.

Through the end of FY12, there were 133 municipalities that had opted into the PACE program. 1,172 loan applications had been received resulting in 236 loans borrowing just over $3 million. Another $1.75 million in loan applications were still in process.

Through the end of FY12, the average PACE loan amount was $12,739 and the average project financed through the program was calculated to save 40% compared to its prior energy consumption levels.

FY13 Plans: The program strategy and activities planned for FY13 are the same as in FY12. The Trust will consider expanding the range of financing tools available to customers so that weatherization projects can be within reach of a larger segment of Maine's household income levels. The budget for the program in FY13 appears in Appendix C.

Table 17 – Home Energy Savings Program Results

Total Participants	Total Projects	Lifetime Savings (MMBTUs)	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Ratio
236	236	320,313	$787,812	$2,542,421	$6,199,253	1.86

Program Evaluation of the Rebate Pilot

Efficiency Maine contracted with The Cadmus Group, Inc. to conduct an evaluation of the rebate pilot initiative. The study, completed in November 2011, evaluated the energy savings (impacts) achieved by the participants and assessed customer experience. Research methods included on-site measurement and verification, engineering review and simulation modeling, and customer telephone surveys.

Key findings of the evaluation were:

- The gross program realization rate was estimated at 88%, meaning that verified savings from the evaluation were 90% of program reported savings;
- The evaluation found that program documented and reported measure installations matched field observations, except at a few sites;
- Blower door testing values from the evaluation were 99% of program reported values;
- The net-to-gross (NTG) ratio, which represents the estimated fraction of gross program savings that can be directly attributed to the program, was estimated to be 0.86 for the program; and,
- The Total Resource Cost (TRC) benefit-cost ratio was estimated to be 2.56 based on net savings and costs. This compares to the Trust's initially reported gross TRC value of 2.78, before adjusting for the realization rate and NTG.
- Program participants were very satisfied, and reported being more comfortable in their homes and seeing noticeable decreases in their fuel bills.
- The rebate motivated participants to initiate the audit and invest in improvements, as did the possibility of saving money on energy bills.
- The rebate provided a more effective incentive to complete energy upgrades compared to tax credits.
- Customers reported that upfront costs presented the most significant participation barrier to making recommended energy upgrades.

REPLACEMENT HEATING EQUIPMENT PROGRAM

Overview: Funded by a grant from the U.S. Department of Energy, this fuel-neutral program offered rebates from $300 to $500 for energy efficient boilers, furnaces, water heaters and air conditioners. The goal was to encourage homeowners replacing their heating equipment to purchase the most energy efficient option, regardless of fuel type.

FY12 Activities:

- Worked with retail stores to promote in-store purchases, supplying training, point-of-sale signs, brochures and rebate forms;
- Collaborated with HVAC professionals to promote the program to homeowners;
- Designed the Efficiency Maine website to describe the program, enable customers to make on-line reservations and download rebate claim forms;
- Maintained the website with updates about outstanding fund balance, providing notice to all consumers and vendors when the limited funds were fully committed.

FY12 Results:

From July 2011 to December 2011 when all funding was fully invested, nearly 1,000 homeowners selected energy efficient heating system components, encouraged by the incentives provided by the Efficiency Maine program. The program saw a broad range of efficient heating and cooling systems installed, primarily oil or gas boilers and furnaces. Installers also gained experience with new technology as an increasing number of customers started to ask about heating system efficiency. The energy saved over the full life of the installed measures is estimated to be the equivalent of nearly 850,000 gallons of heating oil.

Table 18 – Replacement Heating Equipment Program Results

Total Participants	Total Units	Lifetime Savings (MMBTUs)	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Ratio
976	976	117,827	$812,616	$236,528	$3,094,014	2.95

FY13 Plans: Because no further funding is available, the program was discontinued in December 2011 and there are no plans to restart it.

LOW-INCOME WEATHERIZATION ASSISTANCE PROGRAM (WAP) BY MAINEHOUSING

Maine State Housing Authority is the designated administrator of the Weatherization Assistance Program that provides grants to low-income homeowners and renters to reduce energy costs. This program is funded with federal funds. Weatherization improvements may include insulation, weather-stripping, caulking, and some incidental and/or safety-related repairs. MaineHousing offers this program to consumers through Community Action Agencies who screen people for eligibility as part of the Low-Income Home Energy Assistance Program (LIHEAP) application process. Up to 15% of MaineHousing's LIHEAP budget may also be spent on weatherization (including heating system repairs/replacements). The Efficiency Maine authorizing statute requires the Trust to report on activities of the WAP in the annual report.

Table 19 – Weatherization Assistance Program Results

Total funds received/expended by Maine Housing on Weatherization Production (includes amounts from LIHEAP spent on weatherization)				
	GRANT PERIOD	PRODUCTION BUDGET	PRODUCTION EXPENSES	UNITS
ARRA	4/1/2009-6/30/2012	$33,340,781	$33,340,781	5,887
DOE 2009 Regular	1/1/2009-3/31/2012	$3,279,552	$3,279,552	505
DOE 2010 Regular	4/1/2010-3/31/2012	$1,631,600	$1,631,600	326
SERC (ARRA)	1/1/2011-6/30/2012	$6,302,993	$6,278,100	714
DOE 2011 Regular	4/1/2011-6/30/2012	$1,782,124	$1,783,256	329
2010 LIHEAP Wx	10/1/2009-9/30/2010	$3,414,820	$3,414,820	789
2011 LIHEAP Wx	10/1/2010-9/30/2011	$5,536,767	$5,536,767	917
2012 LIHEAP Wx	10/1/2011-9/30/2012	$1,338,925	$1,343,766	218
DOE 2012 Regular	4/1/2012-3/31/2013	$2,147,822	$0	0
2013 LIHEAP Wx	10/1/2012-9/30/2013	$4,300,000	$0	0
	Total	**$63,075,384**	**$56,608,642**	**9,685**

ALTERNATIVE ENERGY PROGRAMS

Through its Alternative Energy Programs, Efficiency Maine administers a variety of offerings for business, institutional and residential customers. This section of the Annual Report describes the Alternative Energy Programs delivered in FY12. Unlike prior sections of the report, this section is not organized by the source of the funds used to pay for the programs.

The electric SBC-funded Solar/Wind Rebate program was a statutorily mandated program for Efficiency Maine to operate, but the statutory authority made no mention of meeting a cost-effectiveness standard. The Renewable Resource Fund was also a statutorily mandated program that directed Efficiency Maine to promote "research and development" and "demonstration projects" of emerging technologies, activities which are known to rarely be cost-effective in terms of avoided energy costs, yet may serve a valuable public policy purpose.

SOLAR/WIND REBATE PROGRAM

Overview : The law that created the Solar/Wind Rebate Program and authorized funding through a System Benefit Charge that funded these rebates was repealed in FY11 and has not been re-authorized. Remaining Solar/Wind Rebate Program funding and administration by Efficiency Maine was subsequently transferred to the Renewable Resource Fund by the state legislature.

Efficiency Maine continued to fund rebates using ARRA funds through all of FY12. Maintaining a rebate program through FY2012 was viewed as critical to minimize disruption to the renewable energy related businesses and jobs that have developed in the past seven years of rebate availability.

With guidance from the Legislature, Efficiency Maine undertook a rulemaking process in December 2011 to develop a modified approach to incentivize cost-effective alternative energy installations. The new incentive program was launched in April 2012. It incorporates an elevated quality assurance system to ensure best practices for installations in the state for long-term system operation and maximized financial return for program participants.

FY12 Activities: The Trust administered a rebate program for solar thermal, solar PV, and small wind projects that met established criteria for project eligibility. In all cases, the rebates were limited to systems located on the "customer's side of the meter." This means they are helping the customer offset consumption of power from the grid, and that the systems are not sized or intended for commercial generation of electricity for sale onto the grid. As of April 2012, rebates are provided only to cost-

effective installations where the end user is demonstrated to have a simple payback on their investment. Under the new program structure, rebate amounts are based on projected annual energy production instead of a percentage of cost across all renewable technologies.

FY12 Results: The rebate program assisted Maine customers in installing a total of 409 renewable energy systems in FY12.

- Solar thermal installations – 230
- Solar PV installations – 176
- Small wind installations – 3

Part of the rulemaking on the Renewable Resource Fund covered the establishment of an alternate cost-effectiveness test specifically for renewable energy installations. This test compares the projected value of the energy saved annually by the end user against the annual net cost of the installation after tax credits and incentives. The Trust applied this approach to calculating cost-effectiveness presented in Table 20.

Table 20 – Solar/Wind Rebate Program Results

Total Participants	Total Projects	Lifetime Energy Savings (MMBTU)	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Benefit-to-Cost Test
409	409	197,272	$ 657,901	$ 6,953,917	$ 5,824,103	0.84

Because the cost-effectiveness is below 1, Efficiency Maine will track the performance of this program very closely. Several points are worth noting about the cost-effectiveness. First, Efficiency Maine does not have information about what federal tax credits customers may have taken advantage of. Because there are very significant federal tax credits available for solar installations, we expect that the participant's actual costs are quite a bit lower than reflected in Table 19. If this is correct, then it could be sufficient to move the cost-effectiveness above 1. Second, the Efficiency Maine costs to support the program are very modest, and they have a greater than 10-to-1 leveraging effect of private funds. Third, the costs of renewable energy systems (notably PV) has dropped significantly in recent years which is bringing these renewable systems more into the mainstream. Keeping this program available to support the marketplace of small suppliers and contractors who help customers install their own, on-site energy producing systems improves the likelihood that as conventional energy prices rise and/or renewable system costs fall, the market infrastructure will be there to serve Maine's customers with more options.

FY13 Plans: The Renewable Resource Fund rebate structure, strategy and activities planned for the FY13 will be the same as in FY12. Incentives are expected to remain a primary tool for promoting installation of customer-sited renewable systems, until all Solar/Wind Law funds are fully expended, currently projected to occur around the end of FY13. The budget for the program in FY13 appears in Appendix C.

RENEWABLE RESOURCE -- RESEARCH, DEVELOPMENT & DEMONSTRATION PROGRAM

Overview: This program is intended to address the desire for Maine to offer support for the research, design and demonstration of emerging clean energy technologies. As provided for in statute, the program funding that is authorized for funding comes from voluntary contributions made by Maine electricity consumers, and from electricity suppliers who elect to meet their renewable portfolio standard obligations by making alternative compliance payments. In recent years the revenues from these sources has been extremely limited, and no other revenues were secured in FY12 to fund this program.

FY12 Activities: As required by new legislation, the Trust undertook a rulemaking creating Chapter 103: Renewable Resource Fund Regulations in order to define criteria for the award of renewable energy technology grants and to provide rebates for cost-effective installations of renewable energy technology.

The rule includes selection criteria for the competitive bid process for renewable energy research and development projects by Maine educational institutions; selection criteria for the bid process for community demonstration projects requiring use of cost-effectiveness and other criteria in selecting projects to fund. The rule designates qualification criteria for rebates of renewable energy technologies including means of determining cost-effectiveness and meeting quality assurance requirements.

Given limited amounts of available funds in the Voluntary Contribution portion of the Renewable Resource Fund and the requirement by the legislature to establish new rules for determining cost-effectiveness of renewable technology installations, no RFPs seeking proposals for community demonstration or research and development projects were issued in FY12.

FY13 Plans: Voluntary contributions and revenues will be directed through competitive RFP's to cost-effective community demonstration installations of renewable energy technologies and research and development projects at applicable Maine University system educational institutions. Per alterations to the Renewable Resource Fund law made during the 2012 legislative session, the Trust anticipates establishing a rulemaking process for renaming the fund and to also clarify the availability of voluntary funds to support energy efficiency technology as well as renewable energy technology. The budget for the program in FY13 appears in Appendix C.

CROSS-CUTTING STRATEGIES [10]

EDUCATION AND INFORMATION

Overview: Through its Energy Education and Information Program, Efficiency Maine strives to increase consumer awareness of cost-effective options for conserving energy by installing energy-efficient equipment, using energy more efficiently, using more alternative or renewable energy, and financing these measures. Energy Education and Information Programs convey to Maine businesses and homeowners the numerous benefits resulting from energy efficiency. Some of these benefits include: saving money, time and resources; promoting energy independence; reducing harm to the environment and human health; helping the Maine economy through job creation and job retention; and reducing operating and maintenance costs. In the case of homeowners, EMT conveys the additional benefit of increasing home comfort.

Through numerous communications channels, Efficiency Maine urges consumers who are planning to purchase new lighting, appliances, electronics, and other equipment to consider buying the more energy efficient models available. Information is disseminated through the Efficiency Maine web site, printed flyers and brochures, traditional advertising, social media, and other multimedia tools, as well as targeted training and industry events such as forums and symposia.

FY12 Activities:

Save Like a Mainer Campaign

Throughout FY12, Efficiency Maine conduced the "Save Like a Mainer" energy efficiency awareness campaign. The campaign, which promotes a culture of conservation, unites Mainers in a common purpose by highlighting prominent energy efficiency success stories. These stories tangibly demonstrate how energy efficiency saves energy and money, increases home comfort, and provides lasting value to homeowners and businesses. The individuals and companies featured serve as models that inspire others to Save Like a Mainer. Stories represent demographic and geographic diversity, target various Efficiency Maine program audiences, and meet other criteria.

Residential stories consist of homeowners who have participated in various HESP, PACE, and PowerSaver programs. For businesses, iconic Maine companies both large and small are selected based

[10] This category of programs and initiatives was previously referred to as "Enabling Strategies" in the Triennial Plan and other reports.

on the amount of energy and/or money the organization saved installing various measures, as well as how many jobs were created as a result of Efficiency Maine programs.

Communication channels included advertising through web sites, banner ads, social media, and traditional advertising (print ads, TV, radio, etc.), as well as through outreach such as Chamber events, trade shows, speaking engagements, and earned media.

Schools for Energy Efficiency (SEE)

Delivered by a non-profit organization through a grant from Efficiency Maine, the Schools for Energy Efficiency program enlists and organizes volunteer facility managers, teachers and students at designated schools to set energy saving targets, develop and implement a plan to meet those targets, and monitor, measure, and report on progress.

Last year, two school districts – SAD 57 Waterboro/Massabesic School District and SAD 60 North Berwick -- consisting of 15 schools participated in the program.

Community Energy Nights

Delivered by the Maine Math and Science Alliance, organizers targeted eight Maine towns and cities where schools have been active in energy efficiency initiatives and hosted “Family Energy Nights” for students and parents. These sessions are meant to be a discovery opportunity for both students and their families to immerse themselves in hands-on energy and energy efficiency demonstration projects at their schools.

Building Operator Certification (BOC)

Through a collaboration with the Maine Community College System, Efficiency Maine offered three BOC Level I courses in FY12, and a BOC Level II course. Four other regional courses were offered through other efficiency program administrators in Massachusetts and New York. BOC webinars were also offered at various times throughout the year for continuing credits. A Commercial Energy Auditor II course was also offered to increase resources for commercial building energy analysis and to fill in the gap for multi-family building analysis skills.

Maine Green Schools Program

Efficiency Maine partners with fellow state agencies whenever possible. One example of this effort is the Maine Green Schools program where the Maine Department of Environmental Protection receives an annual grant of approximately $15,000 from the federal Environmental Protection Agency and then

works with Efficiency Maine to deliver mini-grants to schools for energy efficiency projects. This year the schools that participated were:

School	Project
• Brunswick School Department	Energy monitoring equipment and analysis
• St. John Valley Technical Center	Energy audit
• Warsaw Middle School, Pittsfield	Window improvements
• Houlton High School	Heating pipe insulation
• Oxford Hills School District	Energy monitoring equipment and analysis

INNOVATION PROGRAM

Overview: Efficiency Maine's Innovation Program aims to support pilot programs for assisting in the demonstration of commercially available, but not yet well-established, energy efficiency products or new ways of delivering cost-effective measures. Through the Innovation Fund, Efficiency Maine offers competitive grants to support market players seeking to demonstrate technologies or program designs that, if they were deployed at scale, could show substantial energy savings opportunities for the state.

FY12 Activities: During FY12, the Trust issued an RFP seeking proposals to demonstrate innovative heating alternatives for space and water heating customers in Maine.

- The Innovation Fund Program Request for Proposals resulted in seven proposals for review and two awards;
- Grants were awarded to Bangor Hydro Electric Company to support a pilot initiative focusing on ductless mini-split heat pumps and to Vermont Energy Investment Corporation to test the feasibility of heat pump water heating technology in Maine.

FY13 Plans: The Innovation Fund Program strategy and activities planned for FY13 are the same as in FY12. The budget for the program in FY13 appears in Appendix C.

RESEARCH & EVALUATION

Overview: The purpose of Efficiency Maine's Research and Evaluation strategy is to provide data-driven research and analysis to inform program delivery, verify program results and ensure ongoing program and organizational improvement.

The third-party evaluations conducted as part of this strategy are designed to:

- Document and verify the program impacts on energy and demand savings and program cost-effectiveness relative to goals;
- Understand why effects occurred and identify opportunities for improvement in program design and implementation;
- Assess program effects on the energy marketplace; and,
- Inform adjustments in program strategies and allocation of resources.

FY12 Activities: Efficiency Maine completed four evaluation projects (see FY12 Results) and initiated evaluation projects for the Residential Lighting Program and the PACE Loan Program, both of which will be completed in FY13.

Table 21 – FY12 Research and Evaluation Projects Initiated

Program	Type	Prime Contractor	Budget	Funding Source	Start	End
Residential Lighting Program	Impact & Process	The Cadmus Group, Inc.	$200,000	SBC	9/26/11	11/2/12
PACE Loan Program	Impact & Process	Opinion Dynamics Corporation	$395,000	ARRA-Better Buildings	11/28/11	6/30/13
Baseline and Opportunities Study	Market Assessment	The Cadmus Group, Inc.	$300,000	SBC	3/26/12	12/31/12

Data collection and analysis methods employed in these evaluation projects include:

- Review of program databases, project documentation and program materials;
- In-depth interviews with program staff and stakeholders;
- Surveys of program participants, non-participants and trade allies; and,
- Site visits, including on-site data collection (which may use data loggers to measure performance of lights or other equipment), and verification.

In FY12, Efficiency Maine made several upgrades to its database of energy efficiency projects. The new platform consolidates the data for both Business Programs and the Residential Programs. It brings increased capacity to ensure consistent and accurate estimates of energy savings. The new system also enables contractors (such as Qualified Partners) to expedite the processing of incentives, eliminating significant paperwork.

FY12 Results: During FY12, Efficiency Maine completed independent evaluations of four programs as described in the following table.

Table 22 – FY12 Evaluations Completed

Program	Type	Prime Contractor	Budget	Funding Source	Start	End
Business Incentive Program	Impact & Process	Opinion Dynamics Corporation	$200,000	Conservation Program Fund (SBC)	6/15/11	11/30/11
Home Energy Savings Program	Impact	The Cadmus Group, Inc.	$150,000	ARRA-SEP	4/18/11	11/30/11
Commercial Project Grants	Impact	Navigant Consulting, Inc.	$150,000	ARRA-SEP	4/18/11	1/31/12
Large Project Grants	Impact	Navigant Consulting, Inc.	$150,000	ARRA-SEP	4/18/11	3/31/12

All but the Commercial Project Grants program evaluations were reported previously in this report along with the reporting on activities and results of the program. Because the Commercial Project Grants program activity was reduced to monitoring and oversight in FY12, with no new project activity or savings, this program did not receive a individual write up in this Annual Report. We have summarized the evaluation results for that individual program here.

Commercial Project Grants Program Evaluation

Efficiency Maine contracted with Navigant Consulting, Inc. and subcontractor Turner Building Science to conduct an impact evaluation of the Commercial Project Grants program. The study, completed in January 2012, evaluated the energy savings (impacts) achieved by the Commercial Project Grants. The evaluation covered the 51 grant projects completed through December 31, 2011. Research methods included on-site measurement and verification, engineering review, and telephone surveys.

The key findings by the evaluation were:

- Realization rates (evaluation verified savings / program reported savings) were estimated to be:
  - 0.67 for Site Energy Savings (all fuels in MMBtu)
  - 0.76 for Annual Electricity Savings
  - 0.66 for Fossil Fuel Savings
  - Electric efficiency projects and renewable electricity projects had higher realization rates than other project types
- The net-to-gross ratio, or estimated fraction of savings that can be directly attributed to the program, was:
  - 0.62 for Site Energy Savings (all fuels in MMBtu units)
  - 0.79 for Electricity Savings
  - 0.60 for Fossil Fuel Savings
  - Electric efficiency projects and renewable projects (electric and other) had higher NTG ratios than other project types

- The Total Resource Cost (TRC) benefit-cost ratio was:
    - 2.85 based on *gross* savings and costs
    - 2.35 based on *net* savings and costs

FY13 Plans: During FY13 Efficiency Maine will complete the Residential Lighting Program and the PACE Loan Program evaluations, which began in FY12. It will also conduct an evaluation of the ARRA-funded Retro-Commissioning Pilot Program, and will plan for future evaluations of residential and business programs. The budget for the program in FY13 appears in Appendix C.

Finance and Administration

Audited Financial Report

The Trust's certified public accountant has issued its audit of financial statements as of the year ended June 30, 2012. The report was unanimously accepted by the Board of Trustees.

The report provided the following opinion, indicating that the audit was:

> [C]onducted in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. Au audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinions.
>
> In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities and major fund of Efficiency Maine Trust, as of June 30, 2012, and the respective changes in financial position for the year then ended in conformity with accounting principles generally accepted in the United States of America.[1.]

The audited revenues, expenditures and balance sheet for FY12 are summarized in the following tables.

Table 23 - FY12 Revenues

Fund Source	Funding Amount ($)	
System Benefit Charges		13,888,855
· Electric	13,238,286	
· Natural Gas	650,569	
Renewable Resources Fund		110,349
Federal Funds [A]		11,665,299
· ARRA State Energy Program (SEP)	5,902,197	
· ARRA Appliance Rebate Fund	419,682	
· ARRA Energy Efficiency Community Block Grant (EECBG)	3,487,615	
· ARRA Better Buildings (PACE Revolving Loan Fund)	1,672,815	
· DEP School Energy Project	11,852	
· State Energy Program-Annual	81,628	
· State Energy Program-Multi-Family	15,675	
· USDA	73,835	
Maine Power Reliability Project (MPRP) Settlement		1,750,000
Forward Capacity Market		1,861,206
Regional Greenhouse Gas Initiative (RGGI)		4,706,486
Interest on Accounts and Loans and Other Revenues		179,827
Renewable Resources Funds		22,536
Total Revenues		34,184,558

[A] ARRA is the American Recovery and Reinvestment Act;
DEP is the Department of Environmental Protection;
USDA is the U.S. Department of Agriculture.

The Trust has benefited from a number of federal grants, most of which are funded through the American Reinvestment and Recovery Act (ARRA). The ARRA funding streams will begin expiring in FY 2013 and there are no expectations that these funds will be replaced with other federal funds. One of the ARRA programs, which will expire in September 2013, is being used to develop a revolving loan fund for home energy projects. It is expected that as the loans made with these funds begin to make repayments, the repayment stream can be used to make new loans on a funds-available basis or to leverage revenue bond issues used to enhance the loan fund, although there is no timeline or specific plan in place to pursue the path of bonding.

Table 24 - FY12 Expenditures

Use of Funds	Amount ($)	
Administration		3,428,155
Residential Programs		10,822,940
· Low Income	915,772	
· Non-Low Income	9,907,168	
Business Programs		20,048,061
Cross-Cutting Strategies		2,903,776
· Financing and Training	4,261	
· Codes and Standards	81,484	
· Education and Awareness	822,415	
· Evaluation	1,128,922	
· Alternative Energy Program	729,858	
· Innovation	136,836	
Interagency Grants		830,491
Total Expenditures		38,033,423[11]

As described elsewhere in this Annual Report, during 2012, the Trust's major program areas were residential, business and enabling strategies. The residential programs were highlighted by the PACE loan program, which provided low-interest financing for whole house weatherization jobs and relied on ARRA funding, price incentives for compact fluorescent light bulbs (CFLs), and weatherizing electrically-heated low-income homes. Other residential programs included rebates for appliances and refrigerator recycling. The Business Incentive programs provided incentives for both a prescriptive list of energy efficiency equipment and for custom projects. The enabling program is intended to provide broad, market-wide support for meeting long term efficiency targets. Financing and training activities included commercial loans through a revolving loan fund and Building Operator Certification (BOC) training. Education and awareness activities included funding for workforce development through the community colleges and the establishment of an efficiency awareness campaign to share testimonials and case studies of successfully completed home and business energy upgrades. Finally, during 2012, the program staff commissioned third-party evaluators to complete measurement and verification projects that will be undertaken during 2012 and 2013.

[11] Expenditures in this table reflect all payments made by the Trust during FY12. This includes payments made for projects that were awarded in FY11 but not completed and paid until FY12, as commonly occurs on the larger projects funded through the Large Customer Program and the Commercial Grant Program. The Trust reports the programs' energy savings, costs, and cost-effectiveness in the fiscal year in which the projects were awarded, which explains the discrepancy between the Total Expenditures in this table and the Efficiency Maine Costs in Tables ES-1 and ES-2 and in Appendices A and B.

Table 25 - Balance Sheet

Classification		Amount ($)	
Assets			44,082,299
	· Cash and cash equivalents	18,115,752	
	· Investments	17,205,963	
	· Receivables	8,579,133	
	· Capital Assets	109,990	
	· Other Assets	71,461	
Liabilities			3,872,218
	· Payables	3,260,926	
	· Payroll liabilities, short & long term	75,865	
	· Deferred Revenues	525,965	
	· Lease obligations	9,462	
Net Assets			40,210,081
	· Capital Assets, shown net of depreciation	100,528	
	· Restricted Net Assets (fund balance)	40,109,553	

The restricted net assets are the result of a very large, multi-year federal grant being only partially expended in FY12 and a variety of smaller program funds that were committed but not fully spent down in FY12. Key elements of the restricted net assets includes: More than $20.5 million of the restricted net assets are attributable to the Revolving Loan Fund used for PACE and PowerSaver loans to help Maine homeowners weatherize their homes and upgrade their heating systems (the Revolving Loan Fund was awarded to the Trust as part of a multi-year grant from the U.S. Department of Energy using federal Recovery Act funds); Approximately $4.5 million of the restricted net assets was budgeted for the weatherization of electrically-heated, low-income homes in the second half of FY12, but the funds were not fully expended until the first half of FY13; Nearly $5 million of the restricted net assets comprise RGGI funds that are committed to the Large Customer Program, most of which was awarded through two rounds of competitive bids in FY12 where the project invoices were not billed to the Trust until FY13, and the balance of which was held back for a new round of competitive bids in the first half of FY13; nearly $1.4 million of the restricted net assets was transferred near the end of the fiscal year through the settlement of the Maine Power Reliability Program, which directs that fixed portions of the funds be used for low-income weatherization, large industrial efficiency projects, and for other EMT electric conservation programs; $1.2 million is for the small renewable system rebates that received additional federal funding in FY12 to extend the life of the program into FY13; Nearly $800,000 was for the Small Business Loan Fund; and more than $650,000 was slated for natural gas programs where implementation was temporarily slowed in order to ensure that projects would meet the cost-effectiveness criteria; and $1.1 million was for accelerated retirement of second refrigerators/freezers that was budgeted to span FY12 and FY13 and was only partially spent in FY12.

The Trust's rate of expenditure is a function of customer uptake for financial incentives and the Trust's desire to maintain relatively steady and predictable support for the marketplace from the end of one fiscal year to the beginning of the next. The Trust prefers to end each year with a small amount of carry-

forward funding for any program that is designed to continue into the next year rather than running out of funds and creating a gap of one or more months in market support. Generally, only small fund balances are expected in future years. As the volume of federal ARRA funds that was available in FY11 and FY12 is expended, the Trust does not forecast having significant fund balances in FY13 and beyond except to the extent that the Revolving Loan Fund is carried forward.

The Trust did not have any capital asset acquisitions during the year. The Trust had no borrowing activity during the year and has no plans for borrowing during 2013.

Written Policies and Procedures

The Trust developed and instituted new written policies and procedures to ensure standardized implementation of various financial and administrative practices associated with administering programs. The Contract Invoice Process: Roles and Responsibilities helps to ensure segregation of duties and reduces risk of paying for unallowed costs. The Efficiency Maine Trust Monitoring and Compliance Plan, adopted by the Board on September 9, 2011 applies to all grants administered by the Trust and complements the invoice process procedure to ensure proper documentation of payments that are reimbursed by the Trust.

During FY12, another improvement for the Trust was the development and establishment of the Confidential Information Management System (CIMS). This system was modeled on a system implemented by Efficiency Vermont to safeguard the confidentiality of utility customer data, and was developed with assistance from the Vermont Energy Investment Corp. who had designed the system for Efficiency Vermont.

Financial Management System

The Trust executed a significant upgrade to its financial management system in FY12. Following a competitive bid process, the Trust shifted its books into the MUNIS financial management system. The MUNIS system is designed to allow fund accounting, and better enables the Trust to perform its accounting using on an accrual basis.

OTHER INITIATIVES

ISO-NE FORWARD CAPACITY MARKET (FCM)

Overview: Efficiency Maine Trust has been participating in ISO-New England's Forward Capacity Market (FCM) since its inception in 2006. The forward capacity market is a market-driven approach toward ensuring there are enough generation and demand resources on the electrical grid to meet the peak demands each summer and winter. Efficiency Maine and other providers of demand resources offset the need for generation during these peak periods, and can participate in this market. One megawatt of saved energy is given the same value as one megawatt produced by a generator.

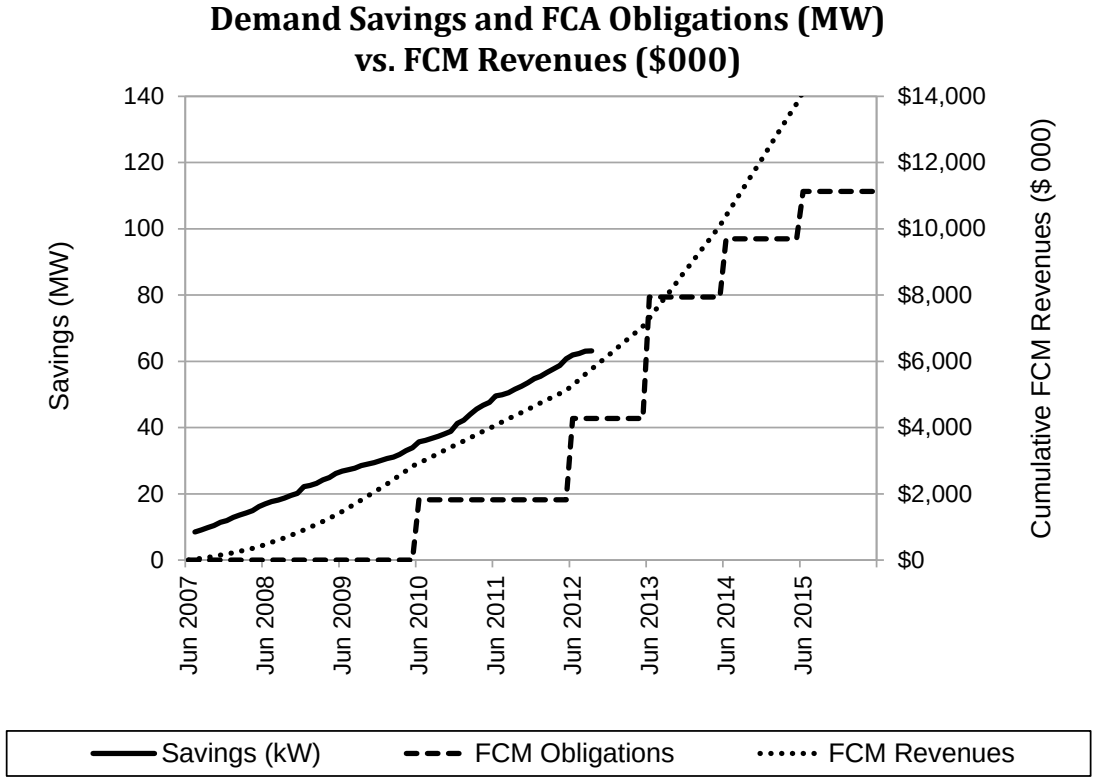
At the most basic level there are four steps to the forward capacity market. The ISO-NE forecasts the peak demand that will need to be met three years ahead of time, hence a forward market. It then asks for a show of interest from owners of new or existing generation units, completed energy efficiency projects, or distributed generation projects who are interested in providing capacity during this future year. ISO-NE then puts those potential market participants through a qualification process to ensure each is a viable source of providing or reducing energy during peak load hours. Finally, ISO-NE runs a descending clock auction for all qualified participants. Those who own the most cost-effective resources are given a capacity obligation, and are guaranteed revenue for the capacity they provide.

As a market participant, the Trust assumes three areas of responsibility: (1) to report on our progress meeting existing capacity obligations from prior auctions; (2) to show the ISO-NE that Efficiency Maine's program results meet the ISO-NE measurement and verification protocols; and (3) to assess the risks and rewards of future auctions, and participate accordingly.

Each month Efficiency Maine reports to ISO-NE on the increasing amount of capacity our programs have delivered to date. All measures that Efficiency Maine has helped customers to install are recorded in the Efficiency Maine database. The database takes into account how often, and at what time of day, those pieces of equipment are in operation, and adds up the total amount of aggregate capacity. To ensure the accuracy of this report, the ISO-NE requires an annual independent certification to review the processes behind Efficiency Maine's monthly reports. All aspects of Efficiency Maine's tracking, verification, and reporting activities are reviewed and certified for their accuracy and compliance with the rigorous requirements of ISO New England's measurement and verification manual.

To date, Efficiency Maine has accumulated more than 63 megawatts (MW) of summer demand savings, and this number grows each month. During FY12, Efficiency Maine participated in one forward auction and prepared for a second. In April of 2012, Efficiency Maine took on an obligation to supply an additional 15.7 MW in June of 2015 during the Sixth Forward Capacity Auction (FCA 6) at a price of $3.434 per kilowatt per month. In June of 2012, the Trust completed its qualification package for FCA #7. The forward auction for the seventh auction (FCA 7) will occur in February of 2013.

The chart below shows a summary of the amount of demand savings that Efficiency Maine has delivered, is obligated to deliver via the FCM auctions, and the amount of revenue expected from this market. Revenues are estimates based on past performance of Efficiency Maine programs and the price of its Capacity Supply Obligation (CSO). Actual revenue will vary based on fees and incentives should Efficiency Maine's programs exceed the CSO.



NON-TRANSMISSION ALTERNATIVE (NTA) – PILOT PROGRAM

Overview: In the final settlement of the Maine Power Reliability Program docket, the Maine Public Utilities Commission approved the establishment of a pilot program to test the ability of non-transmission alternative resources – distributed generation, energy efficiency, and demand response – to defer or displace the need for new transmission lines and substations while meeting grid reliability standards.

FY12 Activities: Efficiency Maine, as a potential deliverer of low-cost energy efficiency capacity, has participated in the docket (Docket No. 2011-108). Throughout the proceeding, Efficiency Maine has provided data and analysis to represent the interests of customers and contractors who may be able to deliver non-transmission alternatives (NTAs), at or below the cost of transmission, by means of implementing energy efficiency upgrades. Efficiency Maine urged the pilot program to institute procedures and standards that would enable energy efficiency resources to compete on a level playing field with other transmission and non-transmission resources.

FY12 Results: On April 30, 2012, the Commission issued an order approving the basic outlines of a process for a pilot program to deliver non-transmission alternatives in the Boothbay Harbor segment of the grid in Central Maine Power's utility territory. The program is required to use competitive solicitations to select resources, and because it is a pilot program, provisions are included to ensure that a variety of resources are selected and tested, so long as their cost is less than the cost of conventional transmission capacity and they can operate reliably during peak demand periods.

FY13 Plans: The NTA pilot is scheduled to issue an RFP seeking NTA resources in September, 2013 and to award contracts for winning bidders late in 2013 and into early 2014. Resources will be expected to be operational by July 1, 2014. Efficiency Maine will review opportunities to deliver NTA capacity through energy efficiency projects and bid in resources that appear to meet the criteria for the bid and cost less than transmission.

LEGISLATIVE RECOMMENDATIONS

As provided in statute, the Annual Report must include "Any recommendations for changes to the laws relating to energy conservation."[12]

[12] 35-A MRSA §10104(5)(C).

In the course of recent discussions surrounding approval of the Trust's Second Triennial Plan, the Board made several findings about the targets contained in section 10104(4)(F) of the Efficiency Maine Act.[13]

The Trustees wished in their findings to convey their interpretation of the long-term statutory targets (such as weatherizing 100% of homes by 2030, or saving 30% of natural gas by 2020, or reducing peak electricity demand by 100 MW by 2020) as indicating desired levels of performance, (or "goals"), but not to constitute required minimum levels of performance.

The Board's findings expressed the view that "… certain of the referenced targets are not attainable from a technology and cost-effective standpoint." This finding was applied in particular to the long-term targets to: weatherize 100% of homes and 50% of businesses by 2030; achieve 30% electricity savings by 2020; and achieve 30% natural gas savings by 2020. As such, the Board recommended "that the Legislature should review the original targets and amend as needed..." and also review the requirements of paragraph (4)(C) of Title 35-A MRSA section 10104. ("Findings of the Efficiency Maine Trust Board," November 7, 2012, p. 3.)

Therefore, the Legislative Recommendation respectfully submitted in this report is a request for the Legislature to review the targets found in section 10104(4)(F) of Title 35-A (the Efficiency Maine Trust Act). The Trust's recommendation is further to amend these targets as needed to reflect the likelihood of these targets being achieved considering the time left to the target dates, the state of technology, and the potential for reaching the targets consistent with the Trust's requirement that it use its funds only on "cost-effective" projects.

[13] 35-A MRSA §10104(4)(F).

APPENDICES

APPENDIX A

FY2012 EFFICIENCY MAINE PROGRAM IMPACTS

SBC AND RGGI FUNDED PROGRAMS

Program	Annual kWh Savings	Lifetime kWh Savings	Efficiency Maine Costs	Participant Cost	Lifetime Energy Benefit	Cost/kWh (lifetime)	Benefit To Cost Ratio
Business Incentive Program	40,565,749	592,752,866	$ 9,355,717	$ 25,874,806	$ 44,208,732	$ 0.059	1.25
Large Customer Program	40,685,233	467,859,118	$ 4,578,526	$ 8,632,639	$ 32,001,587	$ 0.028	2.42
High Performance Schools	0	3,349,500	$ 221,937	$ 167,668	$ 261,777	$ 0.116	0.67
Direct Install Pilot	0	-	$ 127,888				
Residential Lighting	134,912,741	682,426,718	$ 4,172,340	$ 249,568	$ 43,701,746	$ 0.006	9.88
Residential Appliances	5,332,000	60,675,000	$ 1,733,867	$ 1,248,740	$ 4,410,942	$ 0.049	1.48
Refrigerator Recycling	3,710,736	22,264,416	$ 575,259	$ -	$ 1,581,067	$ 0.026	2.75
Low Income Programs	1,037,695	16,298,995	$ 930,311	$ -	$ 1,849,337	$ 0.057	1.99
Cross-Cutting Strategies	0	-	$ 1,333,220	$ -	$ -	N/A	-
Administration	-	-	$ 908,001	$ -	$ -	N/A	-
Total	**226,244,154**	**1,845,626,614**	**$ 23,937,065**	**$ 36,173,421**	**$ 128,015,188**	**$ 0**	**2.13**

ARRA FUNDED PROGRAMS

Program	Annual Energy Savings (MMBTU)	Lifetime Energy Savings (MMBTU)	Efficiency Maine Costs	Participant Costs	Lifetime Energy Benefit	Price for Lifetime MMBTU	Benefit-To-Cost Ratio
Maine Advanced Building	3,509	70,173	$ 199,754	$ 1,425,720	$ 1,473,794	$ 23.16	0.91
Retro-Commissioning	10,965	54,826	$ 354,052	$ 593,691	$ 996,641	$ 17.29	1.05
Home Energy Savings Program (PACE)	16,016	320,313	$ 787,812	$ 2,542,421	$ 6,199,253	$ 10.40	1.86
Residential Direct Install	412	8,243	$ 90,816	$ -	$ 160,263	$ 11.02	1.76
Solar and Wind	9,864	197,272	$ 657,901	$ 6,953,917	$ 5,824,103	$ 38.59	0.77
Cross-Cutting Strategies	0	-	$ 234,322	$ -	$ -		-
Administration	0	-	$ 306,603	$ -	$ -		-
Total	**40,765**	**650,827**	**2,631,260**	**11,515,749**	**$ 14,654,054**	**$ 21.74**	**1.04**

APPENDIX B

EFFICIENCY MAINE PROGRAM EXPENDITURES

	Program	Incentive	Technical Support	Marketing	Administrative	Total
SBC and RGGI Programs	Business Incentive Program	$ 6,374,703	$ 2,820,445	$ -	$ 160,570	$ 9,355,717
	Large Customer	$ 4,309,622	$ 96,021	$ -	$ 172,883	$ 4,578,526
	High Performance Schools	$ 188,934	$ 24,024	$ -	$ 8,979	$ 221,937
	Direct Install Pilot	$ -	$ 99,826		$ 28,061	$ 127,888
	Residential Lighting	$ 2,926,387	$ 1,065,739	$ -	$ 180,215	$ 4,172,340
	Residential Appliances	$ 1,414,300	$ 251,974	$ -	$ 67,593	$ 1,733,867
	Refrigerator Recycling	$ 175,200	$ 376,788	$ -	$ 23,271	$ 575,259
	Low Income	$ 836,333	$ 42,542	$ -	$ 51,436	$ 930,311
	Cross-Cutting Strategies	$ -	$ -	$ 1,181,719	$ 151,501	$ 1,333,220
	Administration	$ -	$ -	$ -	$ 908,001	$ 908,001
	SBC & RGGI Sub Total	**$ 16,225,478**	**$ 4,777,359**	**$ 1,181,719**	**$ 1,752,510**	**$23,937,065**
ARRA Programs	Commercial New Construction (ME Advanced Building)	$ 92,280	$ 102,842	$ -	$ 4,632	$ 199,754
	Retro-Commissioning	$ 295,406	$ 48,454	$ -	$ 10,192	$ 354,052
	Residential Direct Install	$ 37,969	$ 50,020	$ -	$ 2,827	$ 90,816
	Home Energy Savings / PACE	$ 2,542,421	$ 314,054	$ 401,964	$ 71,795	$ 3,330,233
	Solar/Wind Rebate	$ 623,714	$ 20,547	$ -	$ 13,640	$ 657,901
	Cross-Cutting Strategies	$ -	$ -	$ 127,128	$ 107,194	$ 234,322
	Administration	$ -	$ -	$ -	$ 306,603	$ 306,603
	ARRA Sub-Total	**$ 3,591,790**	**$ 535,918**	**$ 529,092**	**$ 516,882**	**$ 5,173,681**
	Natural Gas Program	**$ 32,403**	**$ 66,816**	**$ -**	**$ 11,733**	**$ 110,952**
	Total	**$ 19,849,670**	**$ 5,380,093**	**$ 1,710,811**	**$ 2,281,124**	**$ 29,221,699**

APPENDIX C

EFFICIENCY MAINE TRUST
FY2012 BUDGET APPROVED BY THE BOARD OF TRUSTEES

Efficiency Maine Trust
Fiscal Year 2013 Amended Budget -- Statement of Revenues & Expenditures

	EMT Administration Fund (2015)	Regional Greenhouse Gas Initiative Fund (2020)	Conservation Program Fund (2030)	Forward Capacity Market (2035)	Natural Gas Conservation Fund (2040)	Small Business Energy Conservation Revolving Loan Fund (2045)	Renewable Resource Fund (2050)	Maine Power Reliability Program Fund (2055)
REVENUES AND FUNDING	1,407,564	8,177,402	20,541,187	3,019,400	772,355	165,000	883,197	2,500,000
EXPENDITURES								
Administrative Expenses								
Personnel Expenses	804,651	47,925	558,721	-	-	-	-	-
Facilities, Maintenance, & Utilities Expenses	19,508	1,554	7,557	1,427	1,427	-	-	-
Furniture, Fixtures & Equipment	55,000	-	110,500	-	-	-	-	-
IT & Communications Costs	11,019	575	4,512	1,555	1,555	-	-	-
Office Expenses	54,224	2,555	15,004	4,176	4,176	-	-	-
Communications	511,250	-	-	4,500	-	-	-	-
Travel	11,555	555	4,551	1,400	1,400	-	-	-
Meetings & Conference Expenses	15,504	475	2,542	752	752	-	-	-
Professional Fees	175,245	7,000	55,015	12,500	12,500	-	-	-
Banking, Administrative Services & Memberships	9,054	715	5,555	1,155	1,155	-	-	-
Business Insurance	9,045	700	5,505	1,250	1,250	-	-	-
Technical Consultancy and Support	-	-	452,250	506,000	-	-	-	-
Subtotal Administrative Expenses	1,269,564	63,743	1,068,214	726,426	25,026	-	-	-
Program Expenses								
Residential Programs								
Residential Low-Income								
Low Income Weatherization	-	-	5,656,149	-	104,775	-	-	150,000
Single Family Weatherization	-	-	750,000		245,466	-	-	-
Lighting	-	-	500,000	-	-	-	-	-
Subtotal Residential Low-Income	-	-	7,216,149	-	350,244	-	-	150,000
Residential Non Low-Income								
Weatherization & Efficiency	-	-	-	-	-	-	-	-
Lighting Appliance & Electronics	-	1,462,754	2,655,007	756,742	-	-	-	476,804
Appliance Rebate	-	5,055	-	-	-	-	-	-
Refrigerator Recycling	-	515,500	650,000	500,000	-	-	-	-
Technical Consulting	-	-	-	-	-	-	-	-
Revolving Loan Program	-	-	-	-	-	-	-	-
PACE EM&V	-	-	-	-	-	-	-	-
Residential Direct Install	-	-	-	-	137,407	-	-	-
Subtotal Residential Non Low-Income	-	1,803,387	3,315,007	1,256,742	137,407	-	-	476,804
Independent M&V Program Review	-	-	606,400	-	-	-	-	-
Subtotal Residential Programs	-	1,803,387	11,140,456	1,256,742	490,651	-	-	626,804
Business Programs								
Business Incentive Program	-	545,877	5,533,661	505,255	142,155	-	-	526,505
Large Industrial Projects	-	4,556,106	-	-	-	-	-	1,400,000
Maine Advanced Building Program	-	-	400,000	-	-	-	-	-
Retro Commissioning	-	-	-	-	-	-	-	-
Maine High Performance Schools	-	-	2,155,154	-	-	-	-	-
MHPS Project Verification	-	-	205,600	-	-	-	-	-
Maine Green Schools	-	-	-	-	-	-	-	-
Direct Install	-	-	700,000	-	-	-	-	-
Municipal Projects	-	-	-	-	-	-	-	-
Multifamily Retrofits	-	-	-	-	-	-	-	-
Commercial Grants	-	-	-	-	-	-	-	-
Commercial Loans	-	-	-	-	-	165,000	-	-
BOC Trainings	-	-	-	-	-	-	-	-
Outside Contracted Services	-	-	55,550	151,724	-	-	-	-
USDA REAP Grant	-	-	-	-	-	-	-	-
Subtotal Business Programs	-	5,205,079	7,108,205	745,962	242,155	165,000	-	1,726,505
Education, Awareness & Innovation Programs								
Workforce Development - Community Colleges	-	-	-	-	-	-	-	-
Energy Education	-	-	150,254	55,000	-	-	-	-
Outside Contracted Services	-	-	-	15,000	-	-	-	-
Other Innovation Programs	-	565,500	476,100	100,000	-	-	-	-
Subtotal Education, Awareness & Innovation Programs	-	565,500	626,154	200,000	-	-	-	-
Alternative Energy Programs								
Solar/Wind Rebate Program	-	-	-	-	-	-	725,700	-
Renewable Demonstration Projects	-	-	-	-	-	-	70,051	-
Subtotal Alternative Energy Programs	-	-	-	-	-	-	795,751	-
Subtotal Program Expenses	-	7,371,940	18,876,795	2,232,724	732,836	165,000	795,751	2,352,609
Payments to State Agencies & Transfers Out								
Payments to State Agencies								
MPUC - Oversight & Evaluation	138,000	-	-	-	-	-	-	-
MSHA - Database Repository								
MSHA-Carbon Management								
DECD - Maine Technology Institute	-	-	-	-	-	-	55,000	-
DEP - Include $70k MCCI Inc. Budget	-	255,000	-	-	-	-	-	-
Total Payments to State Agencies	138,000	255,000	-	-	-	-	55,000	-
Interfund Transfers								
Transfers out to Admin Fund	-	506,719	520,465	60,250	14,493	-	49,446	147,391
Transfers out to Multifamily Fund	-	-	75,713	-	-	-	-	-
Total Interfund Transfers	-	506,719	596,178	60,250	14,493	-	49,446	147,391
Subtotal to State Agencies & Transfers Out	138,000	741,719	596,178	60,250	14,493	-	84,446	147,391
TOTAL EXPENDITURES	1,407,564	8,177,402	20,541,187	3,019,400	772,355	165,000	883,197	2,500,000

Efficiency Maine Trust
Fiscal Year 2013 Amended Budget -- Statement of Revenues & Expenditures

	ARRA SEP Grant Fund (3020)	ARRA EECBG Grant Fund (3015)	ARRA Better Buildings Grant Fund (3025)	US Department of Agriculture Grant Fund (4020)	SEP Multifamily Grant Fund (4025)	EPA Green Schools Grant DEP/EPA (4015)	SEP Formula Grant OEIS (4010)	FY 2013 Budget Total
REVENUES AND FUNDING	3,480,573	1,258,264	20,550,009	145,000	6,036,284	14,386	50,000	69,000,621
EXPENDITURES								
Administrative Expenses								
Personnel Expenses	71,855	70,504	261,201	-	85,890	-	-	1,530,145
Facilities, Maintenance, & Utilities Expenses	2,275	2,855	5,574	-	2,101	-	-	45,540
Furniture, Fixtures & Equipment	-	-	-	-	-	-	-	18,520
IT & Communications Costs	1,200	1,445	4,770	-	1,200	-	-	37,700
Office Expenses	5,017	4,551	14,405	-	5,815	-	-	84,530
Communications	54,500	-	201,225	-	-	-	-	57,175
Travel	1,514	1,461	4,553	-	4,500	-	-	31,855
Meetings & Conference Expenses	705	755	2,504	-	551	-	-	25,550
Professional Fees	11,725	15,050	45,125	-	10,825	-	-	53,550
Banking, Administrative Services & Memberships	1,055	1,155	5,020	-	954	-	-	22,710
Business Insurance	1,172	1,505	4,515	-	1,055	-	-	25,000
Technical Consultancy and Support	-	-	255,000	-	-	-	-	1,415,150
Subtotal Administrative Expenses	149,443	105,436	785,864	-	91,161	-	-	4,284,877
Program Expenses								
Residential Programs								
Residential Low-Income								-
Low Income Weatherization	-	-	-	-	-	-	-	5,920,927
Single Family Weatherization	-	-	-	-	-	-	-	998,466
Lighting	-	-	-	-	-	-	-	800,000
Subtotal Residential Low-Income	-	-	-	-	-	-	-	7,719,393
Residential Non Low-Income								
Weatherization & Efficiency	-	-	-	-	-	-	-	-
Lighting Appliance & Electronics	-	-	-	-	-	-	-	5,429,737
Appliance Rebate	-	-	-	-	-	-	-	5,063
Refrigerator Recycling	-	-	-	-	-	-	-	1,447,500
Technical Consulting	265,000	-	-	-	-	-	-	265,000
Revolving Loan Program	-	-	11,312,424	-	-	-	-	11,312,424
PACE EM&V	-	-	2,066,667	-	-	-	-	2,066,667
Residential Direct Install	-	-	5,066,223	-	-	-	-	5,195,410
Subtotal Residential Non Low-Income	265,000	-	18,457,314	-	-	-	-	25,742,041
Independent M&V Program Review	-	-	-	-	-	-	-	808,400
Subtotal Residential Programs	265,000	-	18,457,314	-	-	-	-	34,069,834
Business Programs								
Business Incentive Program	-	-	-	-	-	-	-	5,533,466
Large Industrial Projects	166,000	-	160,100	-	-	-	-	6,062,396
Maine Advanced Building Program	250,000	-	-	-	-	-	-	650,300
Retro Commissioning	187,500	-	-	-	-	-	-	187,500
Maine High Performance Schools	-	-	-	-	-	-	-	2,186,134
MHPS Project Verification	-	-	-	-	-	-	-	203,600
Maine Green Schools	-	-	-	-	-	14,386	-	14,386
Direct Install	-	-	-	-	-	-	-	700,000
Municipal Projects	-	1,118,501	-	-	-	-	-	1,118,501
Multifamily Retrofits	-	-	-	-	5,945,123	-	-	5,945,123
Commercial Grants	201,472	-	-	-	-	-	-	201,472
Commercial Loans	-	-	-	-	-	-	-	165,000
BOC Trainings	95,420	-	-	-	-	-	-	95,420
Outside Contracted Services	161,600	-	505,541	50,000	-	-	-	955,415
USDA REAP Grant	-	-	-	57,000	-	-	-	57,000
Subtotal Business Programs	1,045,292	1,118,501	665,731	57,000	5,945,123	14,386	-	24,058,793
Education, Awareness & Innovation Programs								
Workforce Development - Community Colleges	1,101,200	-	-	-	-	-	-	1,191,200
Energy Education	11,600	34,327	-	-	-	-	50,000	333,161
Outside Contracted Services	145,600	-	-	-	-	-	-	160,600
Other Innovation Programs	-	-	-	-	-	-	-	932,500
Subtotal Education, Awareness & Innovation Program	1,348,880	34,327	-	-	-	-	50,000	2,624,661
Alternative Energy Programs								
Solar/Wind Rebate Program	857,372	-	-	-	-	-	-	1,266,070
Renewable Demonstration Projects	184,776	-	-	88,000	-	-	-	262,829
Subtotal Alternative Energy Programs	872,148	-	-	88,000	-	-	-	1,528,899
Subtotal Program Expenses	3,331,130	1,152,828	19,113,045	145,000	5,945,123	14,386	50,000	62,282,167
Payments to State Agencies & Transfers Out								
Payments to State Agencies								
MPUC - Oversight & Evaluation	-	-	-	-	-	-	-	138,000
MSHA - Database Repository			481,400					481,400
MSHA-Carbon Management			169,700					169,700
DECD - Maine Technology Institute	-	-		-	-	-	-	35,000
DEP - Include $70k PDC Inc. Budget	-	-	-	-	-	-	-	235,000
Total Payments to State Agencies	-	-	651,100	-	-	-	-	1,059,100
Interfund Transfers								
Transfers out to Admin Fund	-	-	-	-	-	-	-	1,298,764
Transfers out to Multifamily Fund	-	-	-	-	-	-	-	75,713
Total Interfund Transfers	-	-	-	-	-	-	-	1,374,477
Subtotal to Agencies & Transfers Out	-	-	651,100	-	-	-	-	2,433,577
TOTAL EXPENDITURES	3,480,573	1,258,264	20,550,009	145,000	6,036,284	14,386	50,000	69,000,621

APPENDIX D

REVENUES
FROM SYSTEM BENEFIT CHARGES
AND
ALTERNATIVE COMPLIANCE MECHANISM

PUC Assessments and Revenue Collections - FY 2012

System Benefit Charge (SBC)

Assessment Quarter:	Apr-Jun 2011	July-Sep 2011	Oct-Dec 2011	Jan-Mar 2012	
Billing Date:	1-Aug-11	27-Oct-11	18-Jan-12	15-Apr-12	
Name					Total - FY12
Bangor Hydro-Electric Co	$ 452,775.00	$ 505,717.00	$ 483,211.00	$ 499,211.00	$ 1,940,914.00
Central Maine Power Co	$ 2,445,895.00	$ 2,778,352.00	$ 2,476,623.00	$ 2,686,089.00	$ 10,386,959.00
Eastern Maine Electric Coop	$ 31,542.00	$ 32,889.00	$ 31,241.00	$ 36,267.00	$ 131,939.00
Fox Island Electric Coop	$ 1,878.00	$ 5,043.00	$ 3,387.00	$ 3,138.00	$ 13,446.00
Houlton Water Co	$ 22,317.00	$ 23,206.00	$ 23,277.00	$ 26,846.00	$ 95,646.00
Kennebunk Light & Power	$ 34,779.64	$ 39,106.42	$ 34,559.24	$ 38,567.94	$ 147,013.24
Madison Electric Works	$ 9,992.00	$ 9,227.00	$ 8,849.00	$ 10,780.00	$ 38,848.00
Maine Public Service Co	$ 108,094.00	$ 106,595.00	$ 112,296.00	$ 134,544.00	$ 461,529.00
Swan's Island Electric	$ 640.00	$ 980.00	$ 716.00	$ 686.00	$ 3,022.00
Van Buren Light & Power Co	$ 4,567.83	$ 4,424.36	$ 4,600.70	$ 5,376.59	$ 18,969.48
Northern Utilities - Unitil					
					$ -
Totals	$ 3,112,480.47	$ 3,505,539.78	$ 3,178,759.94	$ 3,441,505.53	$ 13,238,285.72

State Budget Projections	FY 2013	FY 2014
Bangor Hydro-Electric Co	$ 1,985,000	$ 1,993,786
Central Maine Power Co	$ 10,260,500	$ 10,669,903
Eastern Maine Electric Coop	$ 130,000	$ 135,533
Fox Island Electric Coop	$ 13,500	$ 13,812
Houlton Water Co	$ 95,000	$ 98,251
Kennebunck Light & Power	$ 156,000	$ 151,018
Madison Electric Works	$ 38,000	$ 39,906
Maine Public Service Co	$ 473,500	$ 474,101
Swan's Island Electric	$ 3,000	$ 3,104
Van Buren Light & Power Co	$ 20,000	$ 19,486

Natural Gas

Assessment Quarter:	Apr-Jun 2011	July-Sep 2011	Oct-Dec 2011	Jan-Mar 2012	
Billing Date:	1-Aug-11	27-Oct-11	18-Jan-12	15-Apr-12	
Name					Total - FY11
Northern Utilities - Unitil	$ 119,086.38	$ 66,212.42	$ 149,098.50	$ 316,171.74	$ 650,569.04
					$ -
					$ -
Totals	$ 119,086.38	$ 66,212.42	$ 149,098.50	$ 316,171.74	$ 650,569.04
FY13 Projection					$ 523,889.00
FY14 Projection					$ 523,889.00

Alternative Compliance Mechanism (ACM)

Name	11-Jul-11				Total - FY12
Katahdin Services Company	$ 182.79				$ 182.79
PPL Energy Plus, LLC	$ 22,353.39				$ 22,353.39
					$ -
					$ -
Totals	$ 22,536.18	$ -	$ -	$ -	$ 22,536.18