efficiency MAINE

Saving energy for Maine

2005 Annual Report

TABLE OF CONTENTS

Introduction and Summary …….. 1

Impacts of 2005 Efficiency Programs …… 4

ENERGY STAR® Residential Lighting Program …….. 5

Low Income Appliance Replacement Program …… 7

Business Program …… 9

Building Operator Certification Program …… 13

Maine High Performance Schools Program…..……. 15

State Buildings Program …….……. 16

School Energy Education..……... 17

Program Review ……... 19

Summary and Conclusions ……..…… 21

Introduction and Summary

The Maine Public Utilities Commission's Efficiency Maine Program marks its third anniversary this year. Over the last three years, the Program has evolved continuously. During the Program's first year, the Commission implemented a number of "interim" programs patterned after successful programs operated elsewhere. The Commission then fine tuned and transitioned many of the interim efforts into full scale programs for the second year of program operation. During this past third year of operations, Efficiency Maine promotional efforts have increased participation rates in all programs and increased energy savings by 65% more than last year's program. The energy savings from last year's programs alone equal as much electricity as is used by more than 4,000 average Maine households. The increased efficiency reduces electricity bills by over $2.8 million and provides environmental benefits by avoiding the emission of 55,000 pounds of sulfur dioxide, 20,000 pounds of nitrogen oxides, 34 million pounds of carbon dioxide.

The Efficiency Maine business program experienced a 45% increase over last year's energy savings and continues to expand with the enthusiastic support of and promotion by our trade partners. This year the Program developed the Philip C. Hastings Award in memory of our first program director to recognize the individual or organization whose efforts have furthered the Program's goals. The award was presented by Governor John Baldacci to the Associated Grocers of Maine, for their extraordinary support of the Efficiency Maine Business program.

Our High Performance New Schools program is now working with all 17 of the publicly funded new schools under construction in Maine to ensure they are built using state of the art efficient construction practices.

We have expanded our educational program efforts and developed a "training catalog" of courses designed to increase awareness of efficiency opportunities in multiple sectors. During this past year, we delivered nine courses on specific aspects of energy management and efficiency to meet the training needs of over 160 individuals and companies.

Efficiency Maine's residential programs have also expanded. Energy savings in the residential lighting program for fiscal year 2005 increased by 35% over the previous fiscal year. During the spring and early summer, Efficiency Maine staff and consultants began planning a television campaign using an advertisement developed especially for the program by our public relations firm. The ads were run in conjunction with the United States Environmental Protection Agency "Change a Light – Change the World" campaign. During the same time period, Program staff and consultants negotiated special lighting promotions with Maine's two major grocery store chains, the Aubuchon Hardware stores, and Maine Hardware. The negotiations were successfully completed in time for the fall lighting campaigns. All but two of Maine's Wal-Mart stores have joined our list of regular retail partners. The lead time, advance preparation, and pro-

motional work resulted in the sale of more than 100,000 efficient lights in the past three months, exceeding the sales of the entire twelve prior months[1].

The Commission must allocate at least 20% of the Conservation fund to programs that provide efficiency services for Low Income consumers. During the last fiscal year the program replaced over 1,500 refrigerators, two times as many as the prior year, and 18,000 efficient lights, three times as many as the year before in low income households. During the summer, we agreed with the Maine State Housing Authority to double the number of customers served by the Low Income Appliance replacement program to 3000 by the end of calendar year 2005. Funds from the Conservation Fund were also used to purchase electricity saving measures such as efficient lights, furnace filters, and pipe insulation that were installed in the first launch of the Operation Keep ME Warm program.

We continue our collaboration with other State agencies. The MPUC, the Maine Bureau of General Services (BGS), and the Maine Department of Education (MDOE) have finalized BGS Rule Chapter 60, "Improvement of Energy Efficiency in State Buildings." This rule will ensure that all publicly funded buildings in Maine will be designed and built to be 20% more energy efficient than required by the commercial building energy code. To simplify and facilitate the process, we have developed the "Maine Benchmark," a handbook that instructs contractors on how to achieve the energy savings specified by law. Together with BGS, MDOE, and the United States Department of Energy, we are developing training sessions to introduce the Maine Benchmark to the community of building professionals who design and build public buildings. We have worked with the Maine Department of Corrections and the Bureau of General Services to complete two guaranteed energy savings contracts. We continue to collaborate with the Maine Office of Energy Independence and Security to help implement projects such as Operation Keep ME Warm. And we work with the Maine DEP to promote more efficient, less polluting uses of energy. Most recently, the Commission has funded and jointly implemented a project with Maine's Energy Resources Council aimed at encouraging Maine consumers to reduce electricity usage during periods of electricity shortage.

Rapidly increasing program participation rates combined with a capped budget are forcing the Commission examine new ways to maximize program benefits while minimizing program costs. At the beginning stages of our programs, funding levels exceeded program expenses and resulted in funds being carried over from one year into the next. As program participation increases, these carry over balances are shrinking and will vanish by the end of this fiscal year. To make the most of these limited resources, the Commission initiated Docket No. 2005-446, a proceeding to review the Program's original goals, objectives and strategies to ensure their continued relevance. We requested input on how to improve the operation of existing programs and ideas for new programs we should implement. We hosted a day long energy conference with national experts on efficiency programs to get the benefit of experiences in other

1 The sales and energy savings of these products are not included in the tables of this report because they occurred in FY'06.

states. To ensure prudent expenditure of ratepayer funds, we conducted our first program evaluation by participating with other program implementers in a joint evaluation of our Building Operator Certification training program. The evaluation concluded that the program is well received and overwhelmingly cost effective. We will next initiate and conduct an independent evaluation of our business program to determine whether there are ways to improve the delivery method or cost effectiveness and increase energy savings. Through our review, we have concluded that the menu of programs currently offered through Efficiency Maine remains sound and should be continued with minor changes.

Increased participation in the Efficiency Maine programs has certainly been driven in part by our promotional efforts. But it also comes against a backdrop of rapidly rising energy prices, the specter of shortages, and a public that is increasingly aware of energy issues. The price of electricity is being driven up by increases in the price of natural gas, the fuel for much of New England's generation fleet. As this report is being written, the Standard Offer price for residential and small commercial customers is nearly 7 cents per kWh and will rise to more than 8 cents next March. By comparison, the energy savings generated through the Efficiency Maine program that have a levelized cost of 2.7 cents per kWh are a bargain for Maine consumers. With this in mind, the Commission will make every effort in the coming year to stretch limited Conservation Fund dollars to reach as many Maine homes and businesses as possible.

The table at right provides an overview of Efficiency Maine's fiscal year 2005 programs. The estimated energy savings are based on the latest information available. The "Program Costs" are actual program expenditures from July 1, 2004 through June 30, 2005. Program benefits are energy costs avoided by program measures over their installed lives[2]. Section 2 of this report provides a more in-depth description of the operation and achievements of each program. Section 3 provides an overview of our investigation into the goals, objectives, and standards of program operation. Section 4 provides projected revenues for future years, along with our expectations for how the program expenditures will match projected revenues.

2 Energy costs avoided were generated in the Avoided Energy Cost Study conducted for New England program implementers in 2003 by ICF consulting. Program B/C ratio includes program and participant costs in the denominator and avoided energy costs as numerator.

Impacts of 2005 Fiscal Year Efficiency Programs

Program	Energy Savings (MWh/yr)	Program Costs	Program Benefits	B/C Ratio	Emission Reductions
Low Income Appliance Replacement	3,387	$1,480,328	$2,684,122	1.8	2,093 tons CO2 6,706 lbs. SO2 2,473 lbs. NOx
Residential Lighting	5,637	$1,631,000	$2,631,000	1.6	3,484 tons CO2 11,161 lbs. SO2 4,115 lbs. NOx
Business	13,330	$3,558,976	$ 12,017,000	2.4	8,238 tons CO2 26,393 lbs. SO2 9,371 lbs. NOx
Building Operator Certification	5,674	$112,170	$2,112,187	5.8	3,507 tons CO2 11,235 lbs. SO2 4,142 lbs. NOx
High Performance Schools*	NA	$112,747	NA	NA	NA
State Buildings	482	$214,390	$396,088	1.85	298 tons CO2 954 lbs. SO2 352 lbs. NOx
Energy Education Programs	NA	$24,594	NA	NA	NA
Other Accounts**	NA	$361,115	NA	NA	NA
Total	**28,510**	**$7,100,415**	**$19,839,935**	**2.26**	**17,620 tons CO2 56,449 lbs. SO2 20,453 lbs. NOx**

* 16 schools are in various stages of construction but have not been completed, so no savings are claimed.
** "Other Accounts" includes state accounts and control charges, memberships and sponsorships.

Residential Lighting Program

The Maine Public Utilities Commission's Efficiency Maine program launched an ENERGY STAR® Residential Lighting Program in February 2003. ENERGY STAR® is a combined effort of the United States Department of Energy and United States Environmental Protection Agency to raise consumer awareness of energy efficient products. The average home spends between $85 and $127 per year on energy for lighting. ENERGY STAR® labeled lights can cut these costs by three quarters.

The program's goal is to increase the sale of efficient lighting products and to create a self-sustaining market for them. Success will be measured by increased product sales and availability, as well as increased consumer awareness of efficient lighting.

The Residential Lighting Program promotes ENERGY STAR® lighting products via retail partners who support the program by:

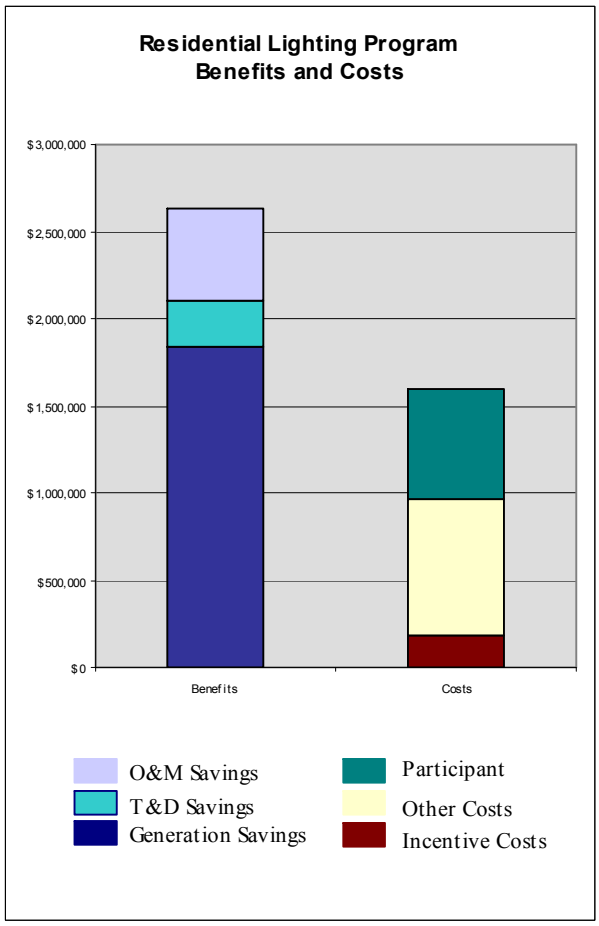
- Educating customers on efficient lighting products;
- Accepting program coupons;
- Providing product displays; and,
- Hosting promotional events.

Program representatives have trained the sales staff of 166 retail partners on the benefits of energy efficient lighting. This year, 31 events at retail locations demonstrated the value of face-to-face sales by promoting the sale of 4,385 bulbs.

Program promotions included:

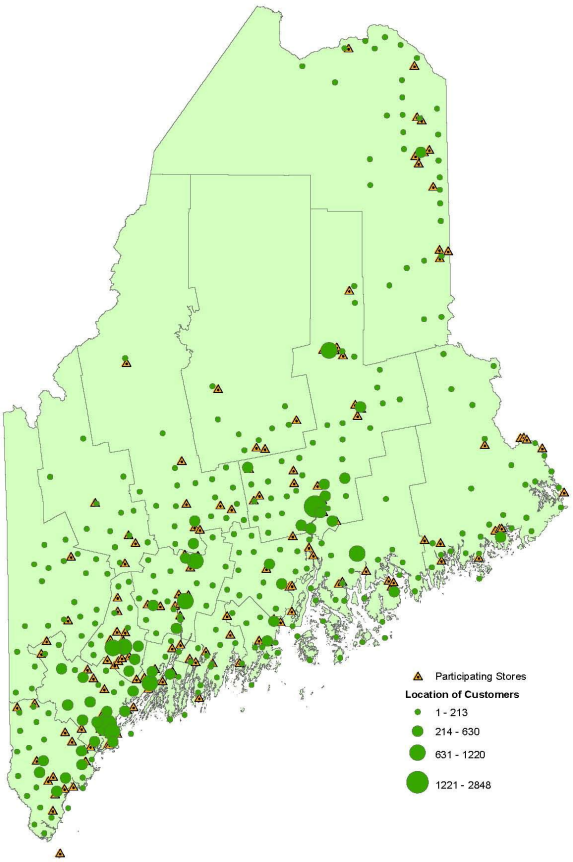
- An Efficiency Maine TV spot;
- US EPA public service announcements with an Efficiency Maine tagline; and,
- Ads and articles in newspaper home improvement sections.
- 3 Home shows;
- Radio advertisements;
- Community partnerships;
- Habitat for Humanity; and,
- Portland Symphony Show House;

Promotion is working. Sales of efficient lighting have doubled from the program's first year and the number of participating retailers and web site hits are all increasing. Energy savings from the past year are 5.6 million kWh per year that will save consumers more than $5.2 million in energy costs over their lives. The program benefits exceed its costs by 1.6 to 1. And the increased efficiency avoids the emission of 3,484 tons of CO_2, 11,161 pounds of SO_2, and 4,115 pounds of NOx.



Partnering with Habitat for Humanity in Cumberland.

Efficiency Maine
Energy Star Residential Lighting Program

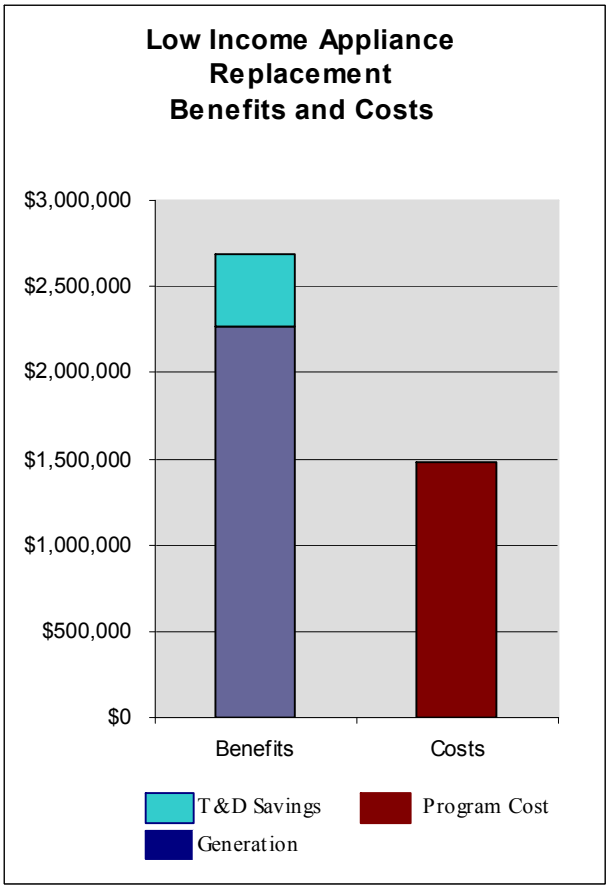


Low Income Appliance Replacement Program

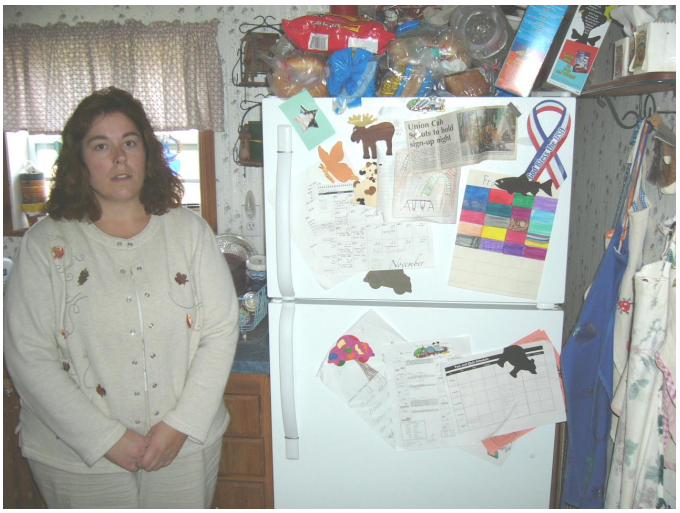
Efficiency Maine's Low Income Appliance Replacement program is a collaborative effort between the Maine PUC and the Maine State Housing Authority (MSHA) to reduce low income consumer electric bills through energy efficiency. The program replaces inefficient refrigerators and installs energy efficient lighting in the homes of qualified low income consumers. Program goals are to increase the affordability of electricity services for low income customers, reduce electricity consumption, and provide environmental benefits. Efficiency programs for these customers are important. Though their electricity use per household may be low relative to other customers, their energy costs consume a greater percent of their incomes.

Program administrative costs are minimized by working with MSHA to supplement an existing federal program administered by MSHA and delivered by the Community Action Programs (CAPs) that provides energy audits and weatherization services to qualified customers. The Efficiency Maine program supplements these efforts through a memorandum of understanding (MOU) with MSHA under which CAP energy auditors arrange for the replacement of refrigerators when the estimated energy savings are greater than 750 kWh per year. Auditors also install efficient compact fluorescent lamps (CFLs) in locations where they will provide the greatest energy savings.

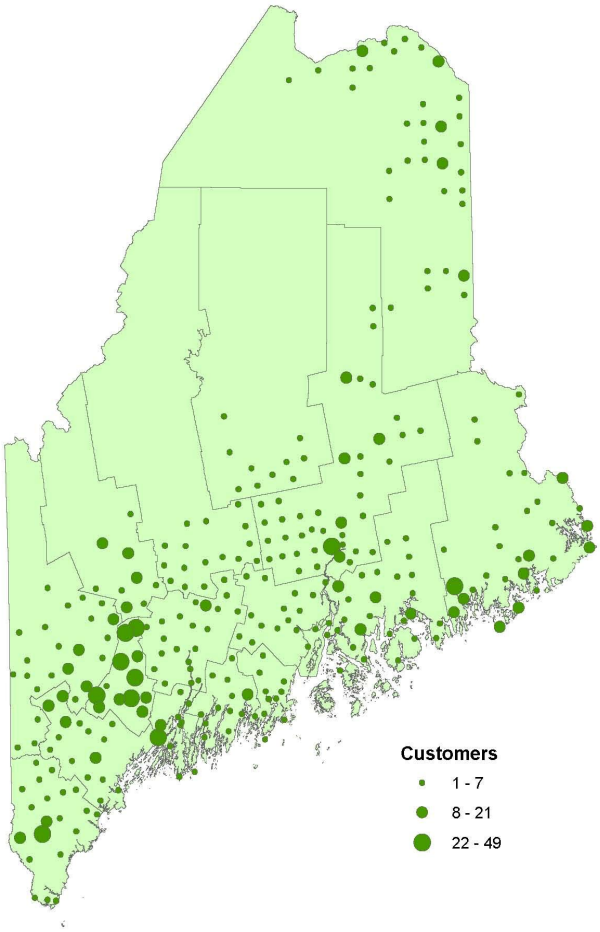
In this third year, Maine's CAPs have delivered over 1,500 refrigerators[1] (twice as many as last year) and more than 18,000 CFLs (three times as many as last year) to low income customers. Altogether, the refrigerators and efficient lights should save each customer about 1,400 kWh per year and about $190 per year on their electricity bills. The program is cost effective with a benefit to cost ratio of 1.8 to 1. Avoided emissions include 2,093 tons of carbon emissions and 6,076 and 2,473 pounds of SO_2 and NOx respectively. At the request of Maine's Office of Energy Independence and Security, Efficiency Maine and MSHA have amended their MOU to expand the program to reach more than 3,000 homes during the next calendar year.



1 Replacement activity for FY '05.



Efficiency Maine
Appliance Replacement Program



Business Program

The Maine Public Utilities Commission launched the combined Efficiency Maine Business Program on September 1, 2004. The “combined” program functions as an umbrella program that bundles energy saving opportunities into groups of measures suitable for various customer types (e.g. schools, municipalities, farms) which had been treated as separate programs prior to reorganization.

The new program is now the "One Stop Shop" for Maine's businesses, schools and other entities desiring to increase their electric energy efficiency. The Efficiency Maine website guides consumers through the incentive application process and provides the applications necessary for pre-established or custom incentives. Energy saving tips for businesses are available as well as case studies that document how other, similar businesses have saved energy. The site provides a number of tools customers can use to estimate the value of energy efficiency improvements at their businesses. Small business customers receive support tailored to their needs, as do private and public kindergarten through twelfth grade schools. Larger commercial and industrial customers continue to receive assistance from program staff members who have the technical knowledge required for projects that are more complex. Customers can also receive personal assistance with a call to the Efficiency Maine hot line at 1-866-376-2463 (1-866-ES MAINE).

The umbrella structure allows Efficiency Maine and its contractors to direct customers to the appropriate area of the program rather than overwhelming them with too many choices and application forms. Under the new structure, all businesses are eligible for up to $50,000 in incentives per calendar year regardless of their size. In addition, a list of pre-established cash incentives for qualified equipment is provided, including a select group of incentives available only to kindergarten through twelfth grade schools and small businesses.

Program Allies, the 341 manufacturers, wholesalers, retailers, professionals and contractors that work with Efficiency Maine to promote, install and service energy efficient equipment, are vital to the Business Program success. The Program has added 116 Allies since last year’s report. These Allies serve as the program’s primary delivery channel for efficient electrical equipment, and their participation is an important part of the program's market transformation objective. Should the program end tomorrow, these businesses will be better equipped to promote and sell energy efficient equipment than they would have been without our effort. Training programs, business association functions, and trade shows are proving to be an effective means of educating and creating change in the marketplace. Continual outreach with key business and trade associations is also an important component in building the credibility and reputation of Efficiency Maine programs. The outreach events in which Efficiency Maine participated, ranged from major trade shows attracting hundreds of people to select groups invited by Program Allies. The events included:

- 48 trade shows;
- 16 speaking engagements; and,
- 17 training sessions.

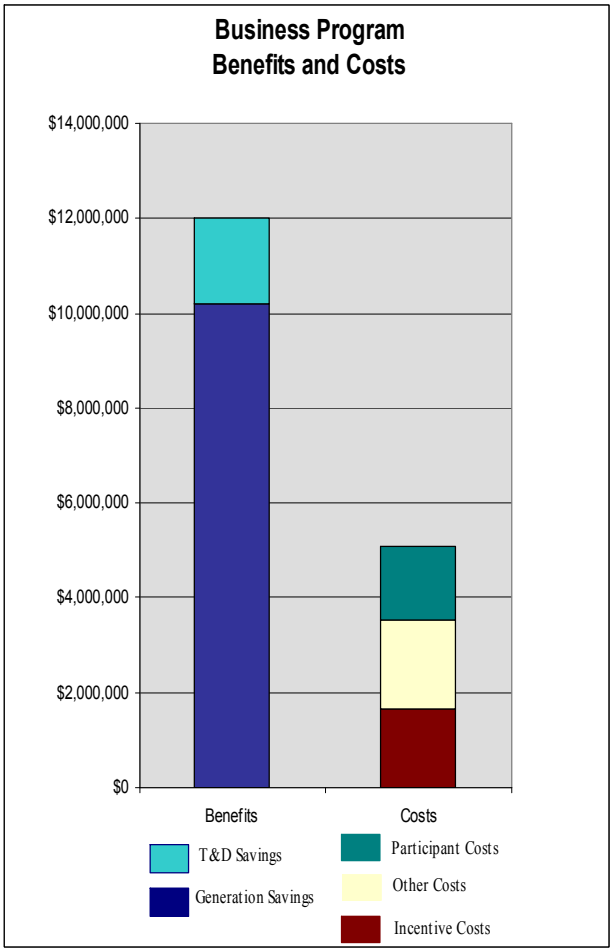
Our communications plan includes

monthly e-mail newsletters to Program Allies and a quarterly printed newsletter which highlights projects, Program Allies, and technical information. The quarterly newsletter is distributed statewide to over 6,500 businesses, associations, nonprofits, and government agencies, as well as to Program Participants and Program Allies. As mentioned above, our Web site features a list of resources geared to specific technologies or industry areas and includes case studies suitable for various industry types. The scope of the measures and types of projects listed is growing with our experience.

The Efficiency Maine Web Site's paperless access to the pre-established incentive list, applications, and technical resources allows us to change incentive amounts and add technologies quickly and without having to print new forms. The site also provides a searchable database of Program Allies throughout the state. Our Geographic Information System (GIS) linked database helps customers to locate Program Allies whose businesses are within a prescribed radius of their location by simply entering their zip code.

As a whole, the Business Program is cost effective with a Benefit to Cost Ratio of 2.4 to 1. When viewed independently, the small business component is slightly less cost effective with a B/C ratio of 2.2 to 1 than the general business component which has a ratio of 2.7 to 1. During fiscal year 2005, the Efficiency Maine Business Program provided $1,598,980 in financial incentives to 315 Maine businesses and schools and it has helped them save more than 13 million kWh of electricity. The estimated reduction in their annual operating costs is more than $1,400,000. Over their lives these measures will save their owners more than $20,000,000 in energy costs. Environmental benefits include the avoidance of 8,238 tons of CO_2, 26,393 pounds of SO_2, and 9,371 pounds of NOx.

The program will continue to evolve over the coming year. We will implement a number of recommendations received in our investigation into our programs. For example, we will gradually add to our field staff, expand the use of technical assistance studies, and allow customers to bundle two years worth of incentives into one. We will also conduct an independent process and impact evaluation to seek other ways to improve the program.



The Jackson Laboratory

Jackson Laboratory in Bar Harbor, embarked on a program to measure and benchmark its energy use. The information gained helped to identify and provide economic justification for energy efficiency projects. Using the Business Program, the Laboratory installed more efficient motor drives and lighting systems.

Research at the Jackson Laboratory.

> "Whether research or mouse production, being energy efficient is a critical component of creating the greatest value we can."
>
> Dr. Charles Hewitt, Jackson Vice President and CEO

McCormick's Thriftway

After learning about the Business Program through the Associated Grocer's of Maine, Barry McCormick of McCormick's Thriftway in Unity installed efficient lighting, refrigerator controls, and energy efficient evaporator fans on the store's walk-in cooler.

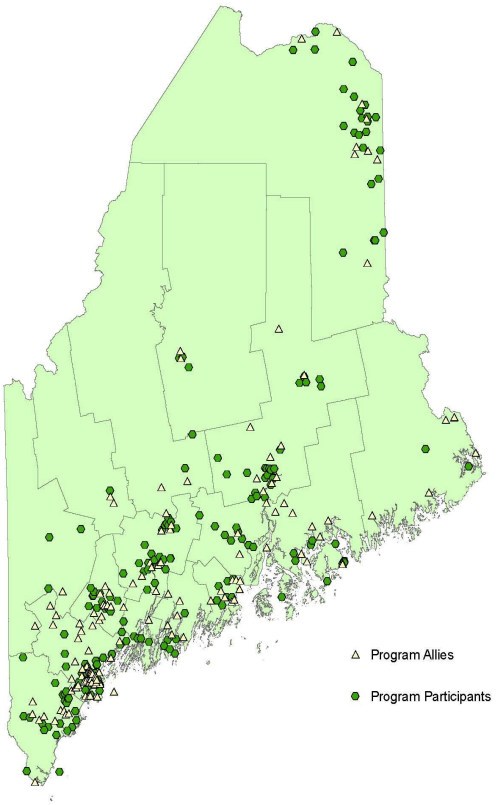
> "Comparing our old lighting with the new is like night and day. We are seeing a significant drop in our monthly bill. The only way we could do these projects was with the incentives"
>
> Barry McCormick, owner of McCormick's Thriftway

Nonantum Resort, Kennebunkport ME.

Nonantum Resort

When the Nonantum Resort needed to replace the HVAC system in its lobby, General Manager Tina Hewett said they worked with their contractor to identify an efficient unit.

Efficiency Maine Business Program



"After I learned about Efficiency Maine's incentives, we talked with our contractor about using them. The incentive allowed us to buy a more efficient unit than we otherwise would have and we will continue to benefit from greater energy savings"

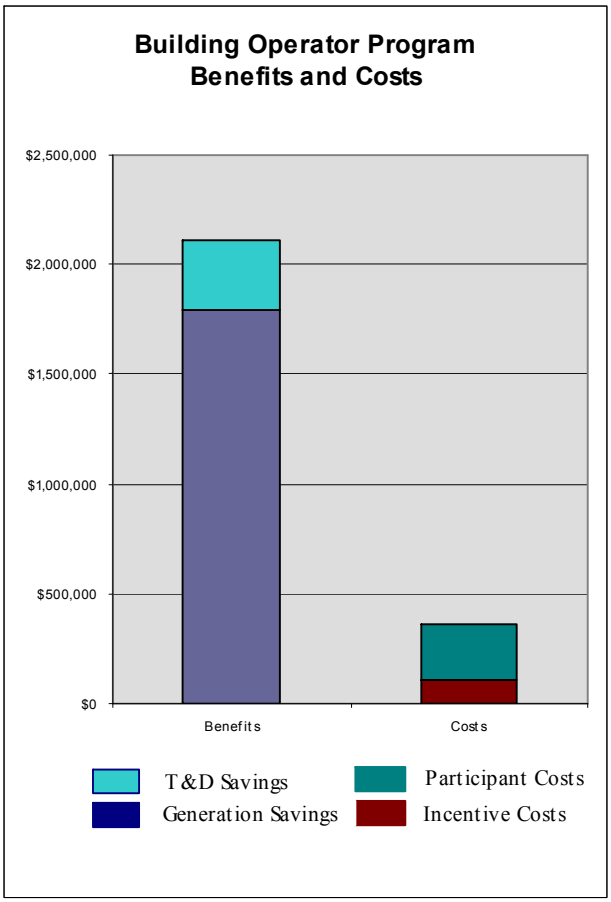
Tina Hewett, General Manager, Nonantum Resort

Building Operator Certification Program

Efficiency Maine's Building Operator Certification (BOC) program is provided in cooperation with the Northeast Energy Efficiency Partnerships (NEEP). The program is an eight-day course offered over a four month period that provides building staff training to improve energy efficiency and reduce maintenance costs in their facilities. An evaluation of the program documented average energy cost savings in municipal buildings of $15,114 per year through the improved maintenance practices taught in the course. Instructors draw from their own experience to provide practical advice to students. The course also provides information on non-energy issues such as indoor air quality and occupant comfort. The BOC program complements other Efficiency Maine programs by alerting students to their availability.

The BOC course has so far been marketed primarily to public school systems but sessions have also included operators of State buildings. Tuition has not been charged to schools, state agencies, or other entities funded through state and local taxes. Efficiency Maine's objective in targeting the operators of such facilities is to reduce their energy costs and spread program benefits to state and local taxpayers who pay for facility operating costs.

Since the start-up of the program in 2002, nine BOC courses have been provided across the State. Course locations include Portland, Bangor, Presque Isle/Houlton, Calais, York, Augusta, Auburn and Old Town. More than 250 students from across the state have graduated from the program and our program evaluation shows that 84% of those students improved the comfort or productivity of their building's occupants and reduced energy costs from skills they learned in the course. Some of the savings are achieved with the installation of more efficient equipment. Others are achieved through improvements in facility operations and maintenance practices. This program is highly cost effective with a benefit to cost ratio of 5.8 to one. Facilities operated by this year's course graduates are expected to save 5,637 MWh per year and avoid 3,507 tons of CO_2 and 11,235 and 4,142 pounds of SO_2 and NOx respectively. During FY'06 Efficiency Maine will provide two BOC Level 1 and two level II courses. We will also explore the expansion of the course to private sector companies for a fee.

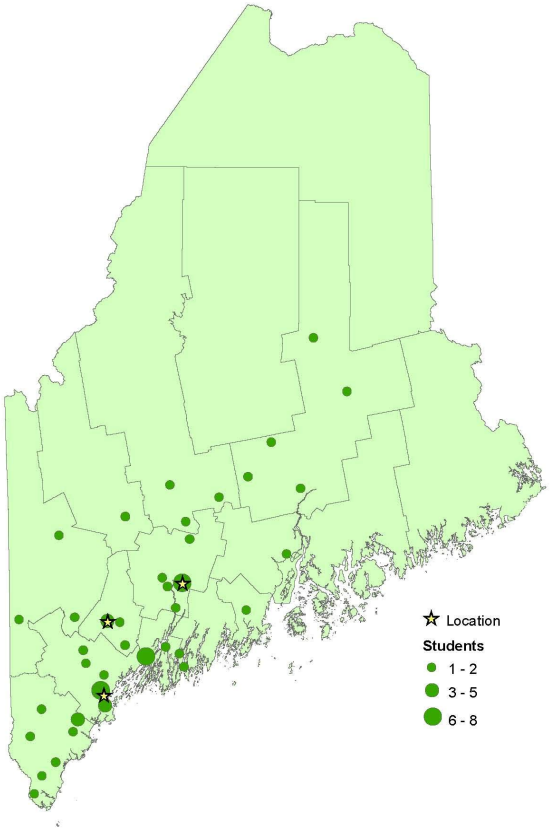


BOC Level I, Auburn ME.

"Learning from what other facility operators have overcome and dealt with; Instructors were great."

Sam Bradeen, Maine Department of Corrections, CCF/MVY, Charleston, ME

Efficiency Maine
Building Operator Certification (BOC) Program



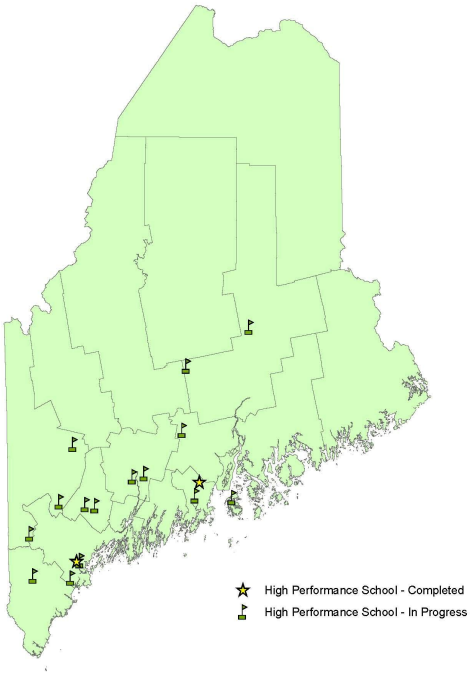
Maine High Performance Schools Program

Efficiency Maine's High Performance Schools Program was created to capture the opportunities for efficiency in new school construction. Five to ten new public schools are built in Maine each year and they are the greatest expenditure of public money on construction projects. Since the buildings will last 50 years, building them to high standards of energy efficiency will reduce operating costs for many years. Better design and construction practices can reduce their annual operating costs by up to twenty-five percent. Participation in the program will make buildings more comfortable and enhance the educational experience. With limited state and local funding, efficiency measures that raise initial building costs may not be included in new school designs. To address this problem, Efficiency Maine developed the Maine High Performance Schools program. The program aims to reduce energy consumption and lower operation and maintenance costs through financial and technical assistance to new schools to pursue better designs and install more efficient equipment.

The program is a partnership of the Maine Department of Education (MDOE), Bureau of General Services (BGS), and the Maine School Management Association (MSMA). The Commission's State Energy Program and the United States Department of Energy are also involved with a grant to help MSMA promote the program. This level of partnership is far greater than in similar programs in other states. It ensures school departments are aware of the program early enough to include efficiency as a priority in the design process. A second set of program grants helps reduce the purchase cost of more efficient equipment.

All 17 schools currently eligible for public funding have signed on to the program. A second group of schools identified by the MDOE will be required by law to be 20% more energy efficient than the current commercial building energy code. The 20% above code requirement will serve as the new baseline for building performance. Based on experience we have gained to date, we are confident that cost effective efficiency opportunities remain beyond the new 20% mandate. In the next year, we will pursue recommendations made in our investigation into programs to focus more effort on the building design process. We will continue to encourage LEED construction principles, but we will eliminate the grant for pursuing LEED certification to devote more funds towards enhancing the new building design process.

Efficiency Maine
High Performance Schools Program



State Buildings Program

The Commission's State Buildings Program was initiated as an "interim" program in the spring of 2002. At the time, there were several State buildings that had been identified as inefficient. Some of these buildings were undergoing substantial renovation. The program provided funding to assist the Bureau of General Services (BGS) with the incrementally higher costs of more energy efficient equipment. As a result of program funding, a number of lighting upgrades in multiple buildings were accomplished and a major upgrade to the Governor Baxter School for the Deaf was made more efficient.

Over the past year, the State Buildings Program has shifted emphasis. Instead of using conservation fund money to help purchase more energy efficient equipment, Program staff are working with other State agencies to acquire energy efficiency through other mechanisms.

We have worked with Maine's Department of Corrections to help develop a third party, performance based energy savings contract. Under the contract, an Energy Service Company (ESCO) will finance and install $945,000 worth of energy improvements in the Maine State Prison facility at Warren. The project is guaranteed by the developer to return $245,000 in annual energy savings which will endure well beyond the 4 - year payback period. We are also working with the Bureau of General Services on a pilot, third-party contract for five buildings under the Bureau's control in the Augusta area. Preliminary indications are that a $780,000 investment will yield a 17% reduction in energy consumption and $123,000 per year in reduced operating costs. The project will be used to demonstrate the feasibility of borrowing money to invest in appropriately negotiated guaranteed savings contracts. Our goal is to establish a prescribed set of circumstances for which the Legislature would grant the State Division of Administrative and Financial Services the authority to enter into such contracts.

Through funding from the Henry P. Kendall Foundation and the US Department of Energy's (US DOE) Rebuild America program, we have worked with BGS to develop the "Maine Benchmark". The Benchmark is a document that describes how to meet the requirement that all publicly funded construction or leased space be 20% more energy efficient than required by current commercial building energy codes. During development of the Benchmark, we worked with multiple stakeholders to customize the document for Maine's climate and construction practices. Funding from US DOE will help us next year to provide training on how to use the Benchmark for the various entities involved in constructing publicly funded buildings. Our work on the Benchmark with the designers and contractors involved in construction of publicly funded spaces will provide them with experience that will transfer to privately funded projects.

School Energy Education Program

There are two education programs operating in Maine that provide education on energy issues to kindergarten through twelfth grade students. The Maine Energy Education Program (MEEP) serves students in central and southern Maine, while a second program operated by Maine Public Service Company serves students in northern Maine. Both programs increase consumer knowledge of energy efficiency. Lack of knowledge is a fundamental market barrier to economically efficient behavior. The programs provide students with information on electricity production, its use and conservation at home and at school, and the effects of energy use on the environment and the economy. Lessons learned in school spill over into the home, improving energy awareness.

The MEEP program combines general awareness classroom training activities with practical skills that allow students to monitor their school building's energy use. It also offers a component called "Energy Patrols." The patrols are older students who increase teacher and student awareness of energy issues through classroom skits, distribution of informational materials, and reminders to turn off computers and lights that are not in use. MEEP has demonstrated that schools with active Energy Patrols have reduced their energy consumption. During the 2005 fiscal year, MEEP provided classroom presentations to 102 schools across the State.

Maine Public Service Company's Energy Education Program dates back to the 1970's. The program includes two components. One educates students about energy issues in the schools, and the other provides a broader overview of societal energy issues.

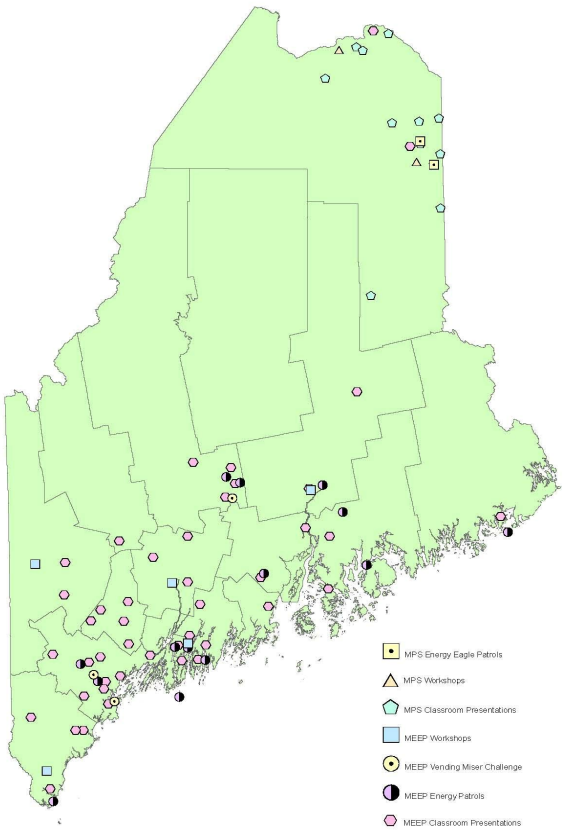
Maine Public's "Energy Eagle Patrol" is similar to the "Energy Patrol" in that a team of students raise awareness of energy issues in schools by distributing energy efficiency informational materials and reminding fellow students and teachers to turn off lights. The patrol program includes presentations on how to read electric meters, the advantages of fluorescent lighting, and the energy use of computers. Last year, one Energy Eagle Patrol team was established in each of the following schools: Zippel Elementary School in Presque Isle, Fort Street Elementary School in Mars Hill and Patrick Therriault School in Sinclair.

Maine Public Service's BE Energy Wise (BEEP) program is part of a larger, national energy education effort. BEEP materials are designed to fulfill educational learning standards in most disciplines and at all grade levels. Portfolios of student work developed through the program are entered into a national competition. During the 2005 fiscal year, the Maine Public Service Company program conducted 59 educational presentations and reached over 1,410 students.

Consumer education is an integral part of the Commission's Efficiency Maine market transformation objective. Comments gathered in our Docket 2005-446 to examine the entire Conservation Program encouraged the continuation of such educational efforts. Therefore both programs will be continued as part of the Commission's ongoing education efforts.

Governor Baldacci, Representative Gary Plummer, Senator William Diamond, and Beth Nagusky, Director of Energy Independence and Security present an award to Corrinna Swanson from Manchester School in Windham for her energy savings ideas.

Efficiency Maine
Energy Education Programs



Program Review

35-A M.R.S.A. §3211-A (the Conservation Act or the Act) directs the Maine Public Utilities Commission (Commission) to "develop and, to the extent of available funds, implement conservation programs.. .." It also requires that "[t]he commission shall establish and, on a schedule determined by the commission, revise objectives and an overall energy strategy for conservation programs." In Chapter 380 of the Commission's Rules, we stated that we will review the goals, objectives, and strategies of the Efficiency Maine program "no less frequently than every three years." Chapter 380, § 3(B)(3). Public review and stakeholder input on the conduct of the efficiency programs are necessary to ensure that the programs we implement remain relevant and the level of public confidence in them remains high. To that end, on July 7, 2005, the Commission initiated Docket No. 2005-446 "Proceeding to Review Goals, Objectives, and Strategies for Conservation Programs and to Consider Revisions to Efficiency Maine Program Plan."

In our Notice of Proceeding, we described our preliminary views concerning our 2005 goals, objectives and strategies. We reported on the progress of the program as a whole and each program individually in achieving the requirements set out in the Act. We described our preliminary views on changes to our program plan, and we solicited comments from interested parties on our proposed goals, objectives and strategies, as well as on our proposed changes to the program plan. We held two public hearings; one on September 14, 2005 for stakeholders to provide comments to the Commission, and one on October 20, with nationally recognized experts in the efficiency field to examine what is happening nationally in the industry. In the proceeding, we received comments from 15 separate stakeholder groups.

The Commission concluded the Goals, Objectives, and Strategies as determined in our initial program planning and design Docket No. 2002-162 remain relevant and should be retained for at least three more years. Based on the comments received, we determined that a number of minor changes can be made to existing programs within the current contracts. We concluded that the targets for Low Income Appliance replacement can be increased. The residential lighting program can include more cooperative promotional efforts with industry. The business program can aggregate two years worth of incentives into one when it appears it will be valuable to the customer. The business program can also expand its field staffing to better address questions from customers as the number of customers involved in the program increases. We determined that our High Performance Schools program should focus more attention on the design phase of building construction. To free up funds to do this, we modified the program by ordering that the separate grant for pursuing LEED Certification be eliminated.

The majority of comments received were directed at our Efficiency Maine Business program, which represents approximately one-half of our program budgets and provides almost one-half of the energy savings achieved. Some of the comments recommended major structural changes for the program which we declined to make in the context of the proceeding.

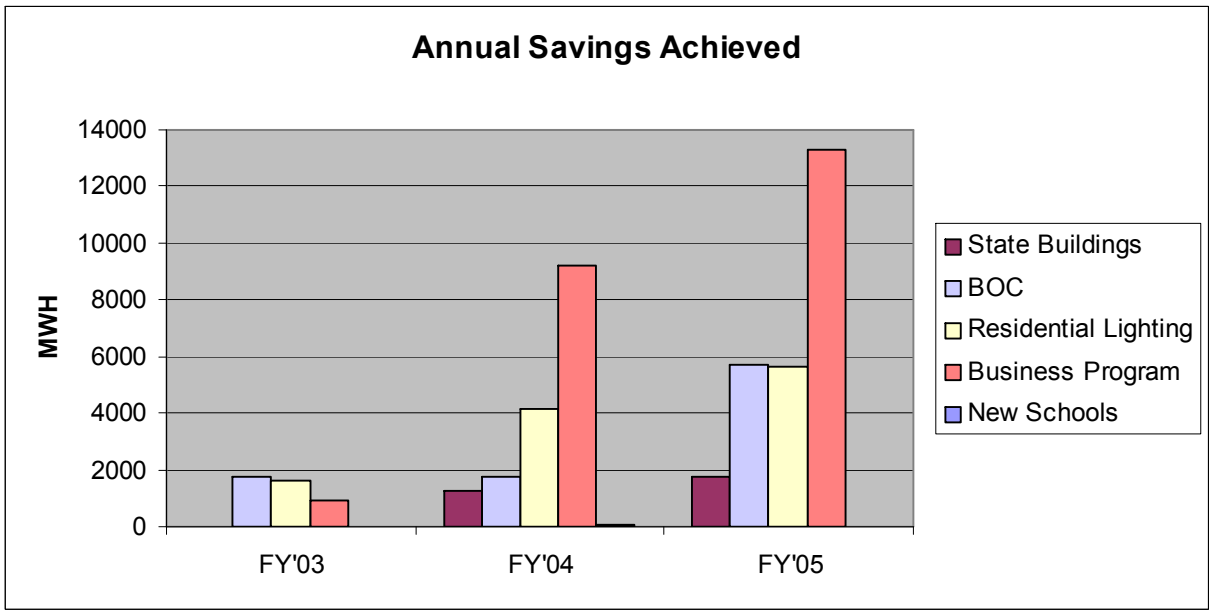
Instead, we directed staff to initiate a formal, independently conducted evaluation of the program to investigate whether there are ways to improve the method of delivery, the cost effectiveness of the program, or the level of savings achieved. Evaluation results on the level of savings and the method of program delivery will be used to develop our future solicitations for program implementation services. Some other comments encouraged the Commission to increase Program staffing levels and to develop closer ties to participating consumers. We recognized that our current staffing levels are barely adequate to accomplish our current mandates and will implement those recommendations to the extent permitted by current statute.

Three new programs were suggested by stakeholders; a new commercial construction program, a new residential construction program, and an existing homes program. Due to the extraordinarily high energy prices currently being experienced by homeowners, we were persuaded to explore the addition of an existing homes performance program. As discussed above, we do not have the staffing or budget levels necessary to implement a full fledged program of this nature at this time. We have instead directed program staff to explore granting to the Office of Energy Independence and Security (OEIS) a maximum of $150,000 per year for three years to run a pilot whole house program. The grant is contingent on OEIS developing a plan that will deliver a satisfactory program, a budget that accurately reflects that program, and adequate funding to implement the pilot.

We do believe we can incorporate some of the suggestions made for other new programs into the structure of existing programs. For example, our High Performance Schools Program (essentially a new commercial building program) will focus more effort on improving new building design practice. Equipment installed in new commercial buildings can qualify for the current business program incentive structure, and the next time we solicit implementation bids for the program, we will include a new construction component in the request. We will promote efficiency in existing residential buildings and in the construction of new dwellings by educating builders and contractors about the virtues of energy efficient construction practices and efficient equipment. We will provide workshops and training on building energy codes to contractors and code enforcement officials, and we will drive consumer demand for more efficient homes by continuing our general promotions of energy efficiency and by working with the Maine State Housing Authority to train and certify residential energy auditors.

Summary and Conclusions

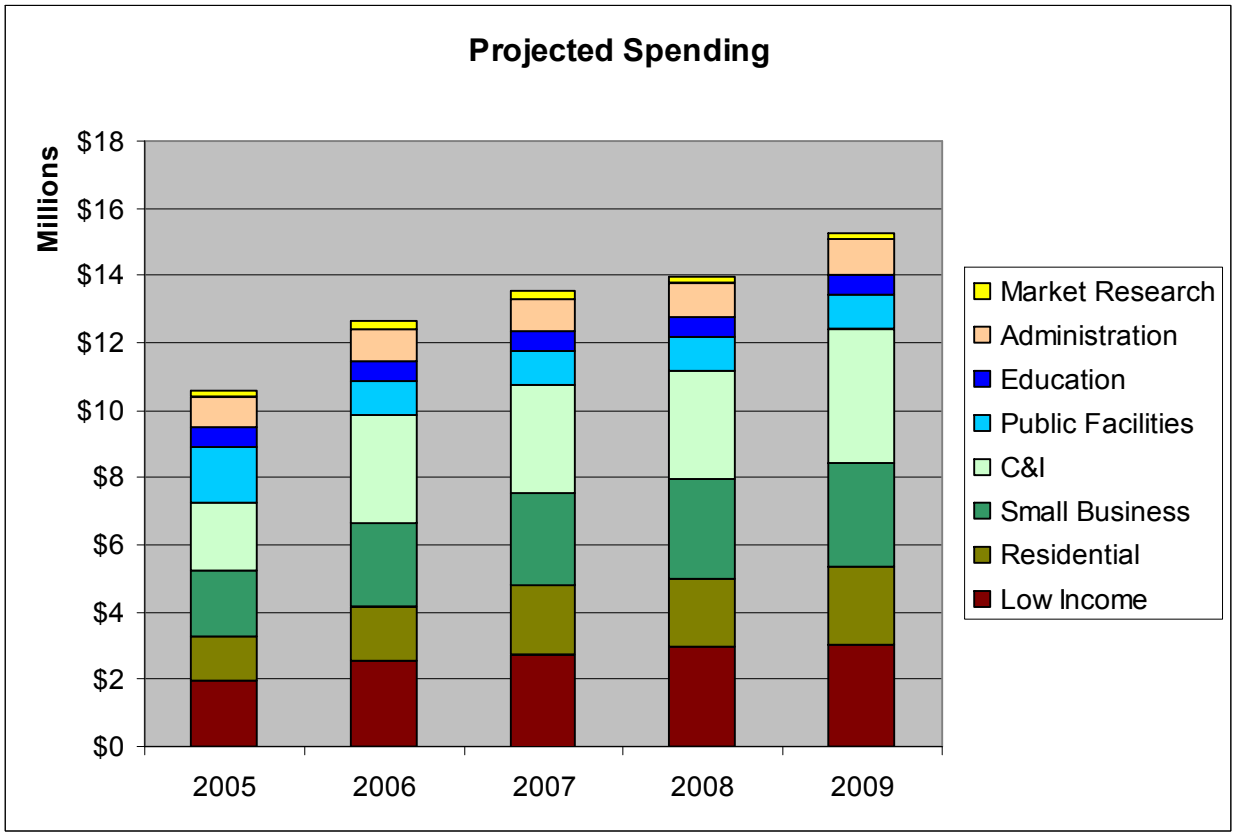
Since May of 2002, the Maine Public Utilities Commission (PUC) has planned, initiated, and implemented energy efficiency programs. This is a unique role among PUCs in that only in Maine does the Public Utilities Commission perform this function. The Commission's implementation of the Efficiency Maine conservation programs has successfully met all statutory requirements including those for program cost effectiveness. The costs of efficiency investment are outweighed by 2.3 to 1 by the benefits of avoided power supply costs. The program energy savings have grown each year. Expenses have increased, but the amount of investment in energy efficiency we have been able to stimulate has increased more. The figure below shows steady gains in energy efficiency achieved for each year over the past three years.



The Commission has also met the statute's requirement for targeted spending in the low income and small business sector's. During fiscal year 2003, program spending on the low income and small business sectors was 21% and 19% respectively. In FY'04, 19% of our budget was spent on the low income sector and 19% was spent on the small business program. Finally, in FY'05, the Efficiency Maine program spent 22% of available funds on our low income efforts and 20% on small business.

Program energy savings have outpaced the projections made during the Commission's proceeding (Docket No. 2002-162) to initiate the programs. After three years, the program's cumulative energy savings are nearly 63% greater than projections made for the program during the 2002-162 conservation docket.

Our projected revenues and the amount of these revenues we expect will be spent in each program area are presented below. The projected revenues displayed in this figure are based on the most recent data available from each of the utilities. Utility revenues in turn are based on projected sales levels which can be influenced by such external factors as weather or the economy. The revenue projections should therefore be viewed only as projections. It is also important to note that the expenditure levels for each of the program areas presented below can vary. Continued expansion of existing programs such as seen this year in the Commercial and Industrial (C&I) and Residential Lighting programs, or the addition of new programs such as OEIS' Home Performance program or the "Save A Watt 10% Challenge" may require the Commission to reallocate expenditures. The Commission may make other changes in 2008 when it conducts its next three year program review in 2008.



Efficiency Maine is a statewide effort to promote the more efficient use of electricity, help Maine residents and businesses reduce energy costs, and improve Maine's environment. Efficiency Maine is funded by electricity consumers and administered by the Maine Public Utilities Commission.

For more information, please contact:

Denis Bergeron
Director, Energy Programs Division
Maine Public Utilities Commission
242 State Street, 18 State House Station
Augusta, Maine 04333-0018
Tel: (207) 287-3349 Fax: (207) 287-1039
E-mail Address: denis.bergeron@maine.gov
Web Address: http://www.efficiencymaine.com

This Report was published by the Maine Public Utilities Commission, Division of Energy Programs. This publication is printed under appropriation #014-65A-0966-01.