

# Efficiency Maine

2009 Annual Report



Business Program • Residential Program • Low-Income Programs • Education and Training Programs • Related Programs



*Leading the Way to a Brighter Future*

A program of the Maine Public Utilities Commission

The Maine Public Utilities Commission (MPUC) is pleased to present this 2009 Efficiency Maine Annual Report for the Fiscal Year (FY) from July 1, 2008 to June 30, 2009.

Efficiency Maine was established in 2002 as a statewide effort to promote the more efficient use of electricity, help Maine residents and businesses reduce energy costs, and improve Maine's environment.

As detailed in 35-A M.R.S.A. §3211-A, Efficiency Maine's five primary objectives are to:

- 1) Increase consumer awareness of cost-effective options for conserving energy;
- 2) Create more favorable market conditions for the increased use of efficient products and services;
- 3) Promote sustainable economic development and reduced environmental damage;
- 4) Reduce the price of electricity over time for all consumers by achieving reductions in demand for electricity during peak use periods; and
- 5) Reduce total energy costs for electricity customers in the State by increasing the efficiency with which electricity is consumed.

This annual report presents the highlights of Efficiency Maine's programs for FY 2009 as well as projections for FY 2010. For more information and to see our Program Evaluations, please go to [efficiencymaine.com](http://efficiencymaine.com).



# Efficiency Maine 2009 Annual Report

## Table of Contents

Overview.....	2
Business Program .....	6
Residential Lighting Program .....	10
Low-Income Programs.....	14
Education and Training Programs .....	16
Building Operator Certification.....	19
High Performance Schools Program.....	21
Related Programs.....	22
Conclusions and Projections .....	25
Appendices .....	27
Appendix A: Business Program.....	27
Appendix B: Residential Program .....	31
Appendix C: Low-Income Programs.....	33
Appendix D: Building Operator Certification Program .....	34
Appendix E: High Performance Schools Program .....	35
Appendix F: Education and Training Programs.....	35
Appendix G: Emission Reductions .....	36
Appendix H: Utility Conservation Fund Assessments for Efficiency Maine.....	36



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## Overview of 2009: A Year of Progress and Challenges

### A Time of Economic and Energy-Cost Volatility

The 12 months covered by this report were a period of economic retrenchment and uncertainty across the country. With the importance of energy to economic activity in Maine and elsewhere, efficiency remained a high priority for families, businesses, government agencies and policymakers—especially at the outset of the fiscal year, when energy prices skyrocketed.

A combination of easing energy prices and tight household budgets, however, depressed investment in certain efficiency measures, especially CFLs, as FY 2009 progressed.

### Efficiency Remains Maine’s Best Energy Value

While energy prices fluctuated and economic conditions worsened, Efficiency Maine continued to deliver a steady program of energy-saving solutions for Maine businesses, families and communities. Our programs have proved over the past six years that they are cost-effective, saving on average nearly \$3 for each dollar spent. In FY 2009, it cost Efficiency Maine 4.1¢ for each kilowatt-hour (kWh) of

electricity saved. Buying that electricity would have cost consumers three to four times that price, making efficiency the best energy value for Maine.

### Program Review

Efficiency Maine’s mandate is to achieve both immediate energy savings and long-term changes in attitudes and behavior, while addressing societal goals of equal geographical dispersion and to help the disadvantaged. The six main programs to achieve these goals are:

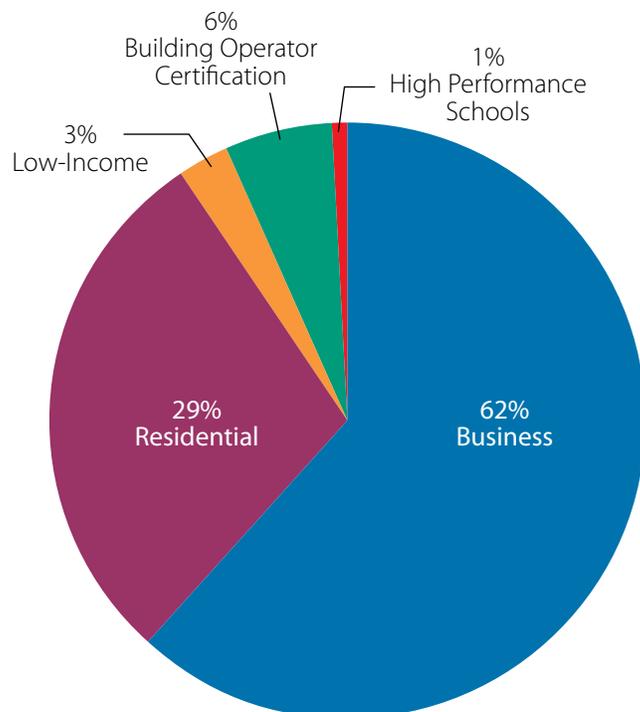
- Business
- Residential
- Low-Income Programs
- Education and Training
- Building Operator Certification
- High Performance Schools (HPS)

(By the end of FY 2009, the HPS program had been transferred to the new Commercial New Construction Programs.)

Results among Efficiency Maine’s major programs were as follows in 2009:

- The **Business Program** achieved record levels of participation, completing 1,438 projects for 929 companies. Lifetime savings of

*Efficiency Maine 2009 Percent of Lifetime Megawatt hour (MWh) Savings by Program*



**Efficiency Maine Program Impacts, 2009 & Cumulative (2004-2009)** Efficiency Maine programs are subject to quantitative benefit-to-cost analysis. In 2009, the "Lifetime Economic Benefits" (that is, the total dollar value of electricity consumption that will be averted by energy-efficiency measures) outweighed the combined costs (to Efficiency Maine and Participants) by a "Benefit-to-Cost Ratio" of 2.76 to 1.

Program	Annual MWh Savings	Lifetime MWh Savings	Efficiency Maine Costs	Participant Costs	Lifetime Economic Benefits	Cost/kWh	Benefit-to-Cost Ratio
<b>Business</b>	34,066	447,879	\$8,260,680	\$8,599,470	\$49,004,495	\$0.038	2.91
<b>Residential Lighting</b>	30,609	208,140	\$1,919,567	\$2,486,542	\$23,295,324	\$0.021	5.29
<b>Low-Income</b>	3,911	22,890	\$2,542,165	\$0	\$2,535,595	\$0.111	1.00
<b>Building Operator Certification</b>	8,214	41,072	\$90,171	\$4,011,892	\$5,332,935	\$0.100	1.30
<b>High Performance Schools</b>	423	5,812	\$536,173	\$336,119	\$1,089,236	\$0.150	1.25
<b>Education and Training<sup>1</sup></b>	N/A	N/A	\$451,122	N/A	N/A	N/A	N/A
<b>Other Accounts</b>	N/A	N/A	\$177,319	N/A	N/A	N/A	N/A
<b>2009 Total</b>	77,223	725,793	\$13,977,196	\$15,434,024	\$81,257,586	\$0.041	2.76
<b>Cumulative (2004 - 2009)</b>	393,331	3,805,221	\$63,443,446	\$67,376,520	\$391,570,616	\$0.034	2.99

<sup>1</sup> Education and training programs are a long-term investment in a more energy-efficient economy. The energy savings or economic benefits that result are difficult to quantify and are not included in this report's measures of electricity savings and other benefits.

447,879 MWh nearly matched last year's record levels and accounted for 62% of total energy savings generated by Efficiency Maine. Participating businesses will save nearly \$50 million on electric bills over the life of their new equipment. (This is 10% below last year's level, primarily because of declines in avoided electrical costs and the exclusion from the program of the largest electrical customers.)

- Economic conditions and other factors created challenges for the **Residential Lighting Program (RLP)**. Purchases of 705,091 energy-efficient CFLs were 35% below 2008's record level, which is attributable to the economic downturn, concern about mercury in CFLs, and, to some extent, the Program's great strides in prior years. Even this reduced number of CFLs will have a substantial positive impact, saving 30,609 MWh and \$23.3 million in electricity costs over the useful lifetime of the bulbs. Our expanded CFL recycling program is helping keep mercury out of Maine landfills, and we introduced Maine consumers to attractive new bulb designs.
- The **Low-Income Programs** incurred a lower benefit-to-cost ratio of 1 for the first time because of lower avoided electrical costs, reporting changes and other issues.<sup>1</sup>
- Efficiency Maine's **Education Programs** helped raise awareness of energy-efficiency opportunities among large numbers of school-age students with a lively and effective curriculum. The first three units of a new standards-based, hands-on energy curriculum, "PowerSleuth," became available to schools statewide.

- **Professional Training** courses offered 691 professionals—more than double last year's number—valuable skills and hands-on experience to save money for their employers, clients and customers, while reducing their environmental impact. An unprecedented number of attendees at solar installation courses augurs well for future energy savings.

- The **Renewable Programs**, which reduce Maine's carbon footprint and contribute to our energy security, offered rebates for home wind energy systems for the first time, while continuing to fund rebates for qualifying solar thermal and photovoltaic systems. Renewables will get a major boost from the Federal "stimulus" package, the American Recovery and Reinvestment Act (ARRA) in 2010.

## 2009 Highlights

- 77,223 MWh in annual savings (-27% vs. 2008)
- \$81.3 million in lifetime economic benefits (-34% vs. 2008)<sup>2</sup>
- 2.76 to 1 Program-wide benefit-to-cost ratio (-28% vs. 2008)
- 4.1¢ per kilowatt hour (kWh) for efficiency savings (+1.0¢ vs. 2008)
- 705,091 CFLs purchased as a result of program efforts (-35% vs. 2008)
- 1,438 business projects completed (+53% vs. 2008)
- 338,106 metric tons of lifetime carbon dioxide (CO<sub>2</sub>) emission reductions (-40% vs. 2008)

(continued)

## Overview of 2009 (continued)

### Cumulative Energy Savings 2004–2009

The cumulative savings of Efficiency Maine since 2004 equal 3.8 million MWh of electricity—savings that keep funds in Maine, contribute to our energy independence, and reduce power plant emissions. The incentives, technical assistance, and other services provided by Efficiency Maine equate to the power used annually by nearly 600,000 Maine homes<sup>3</sup>— and save Maine business and residential consumers nearly \$400 million in energy costs.

Over the years 2004–2009, each dollar invested in Efficiency Maine programs returned \$2.99 in net economic benefits—a very favorable ROI. It has cost Efficiency Maine an average of just 3.4¢ per kWh to save energy—79% less than to purchase more electric generation in today’s market. And unlike many generating costs, the savings typically stay in Maine.

### Ensuring Geographic Equity

Efficiency Maine works hard to ensure that every Maine resident and business has equal access to all our services. Our auditors have visited facilities in every corner of Maine, and our incentives have benefited farmers, homeowners, office buildings and retail establishments from Kittery to Fort Kent. Statistics show that the benefits of Efficiency Maine are approximately proportionate to the population distribution by county.

### Regional Efforts

Efficiency Maine has also begun to emphasize regional approaches to energy efficiency. For example, we are developing a program in conjunction with the Cooperative Extension Services to provide educational programming in locations around the state, and we continue to support Maine Partners for Cool Communities as they

develop efficiency programs and policies in dozens of communities. Most importantly, we encouraged regional applications in our Energy Efficiency and Conservation Block Grant Program, and as of the date of this report we had received six proposals from groups representing more than one municipality. We are encouraged that these proposals will, upon full review, offer new ideas for achieving efficiency beyond the borders of one community.

### Continuing to Improve Maine’s Environment

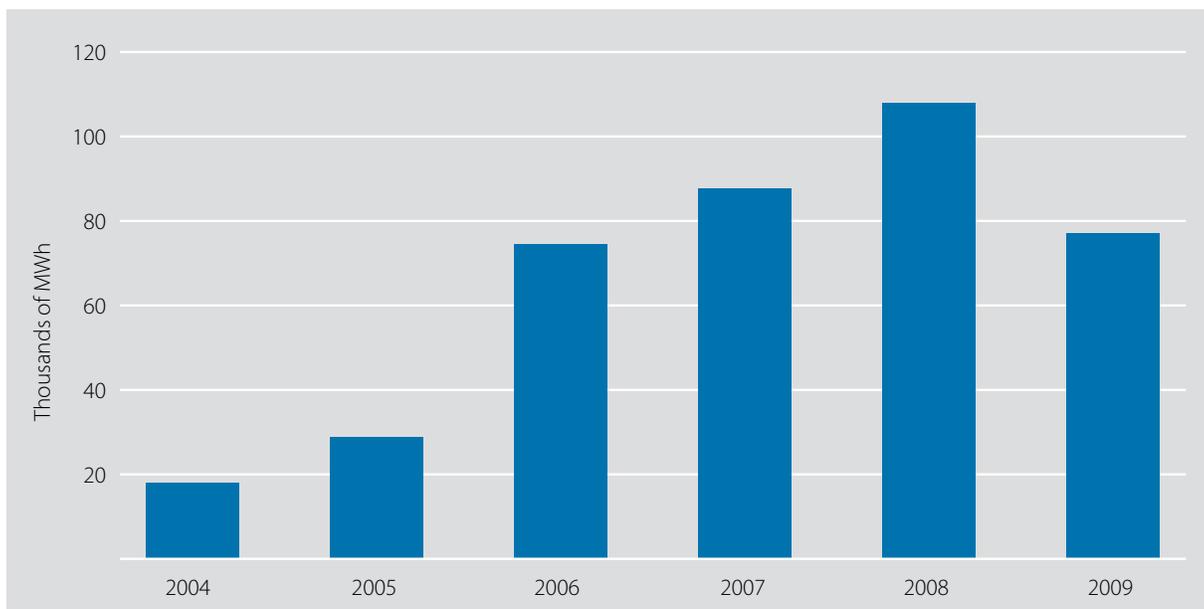
Efficiency Maine’s programs have made a big difference for the environment as well. Since 2004, these programs have made possible the following cumulative reductions in unwanted emissions from electric power generation:

- 2.0 million metric tons of carbon dioxide (CO<sub>2</sub>)
- 2,634 metric tons of sulfur dioxide (SO<sub>2</sub>)
- 1,240 metric tons of nitrogen oxide (NOx)<sup>4</sup>

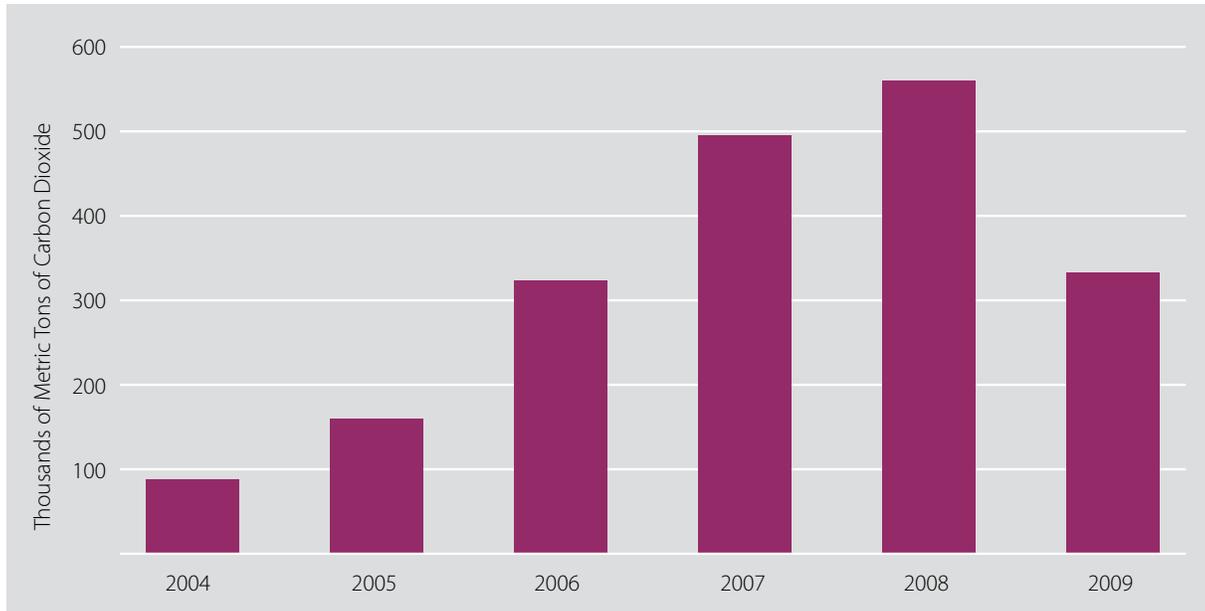
The reduction of these unwanted emissions is equivalent to what would be achieved by keeping 51,585 cars off the road for a full decade,<sup>5</sup> improving the health of our communities and reducing the risk of climate disruption. We are proud of Efficiency Maine’s continued success in achieving reductions in greenhouse gases that benefit all of us in Maine—and beyond.

The past twelve months saw increasing revenue from the quarterly auctions of carbon dioxide emissions allowances through the Regional Greenhouse Gas Initiative or RGGI. These proceeds are administered in Maine by the Energy and Carbon Savings Trust, which reinvests these funds in the Maine economy to achieve more efficiencies and promote fossil fuel conservation across the state. To date, \$13,507,410 have been raised from Maine carbon credit auctions, the vast majority of which are used to deliver expanded efficiency programs for consumers and businesses.

#### Efficiency Maine Program-Wide Annual MWh Savings 2004-2009



## Efficiency Maine Program-Wide CO<sub>2</sub> Emissions Savings 2004-2009



## Organization of this Report

The following pages of this report present a more detailed review of Efficiency Maine's individual programs, including highlights and a look ahead at FY 2010 and beyond. On pages 25–26 are conclusions from 2009 and projections for 2010. On pages 27–36 are tables presenting more detailed 2009 and historical trend data.

### Footnotes:

<sup>1</sup> Estimated savings and costs may differ from those reported in previous years as our analytical approach has been refined. In particular, Low-Income Program benefits for 2008 and 2009 reflect the common practice of replacing appliances that may not meet the cutoff date (1995), but are clearly functioning inefficiently.

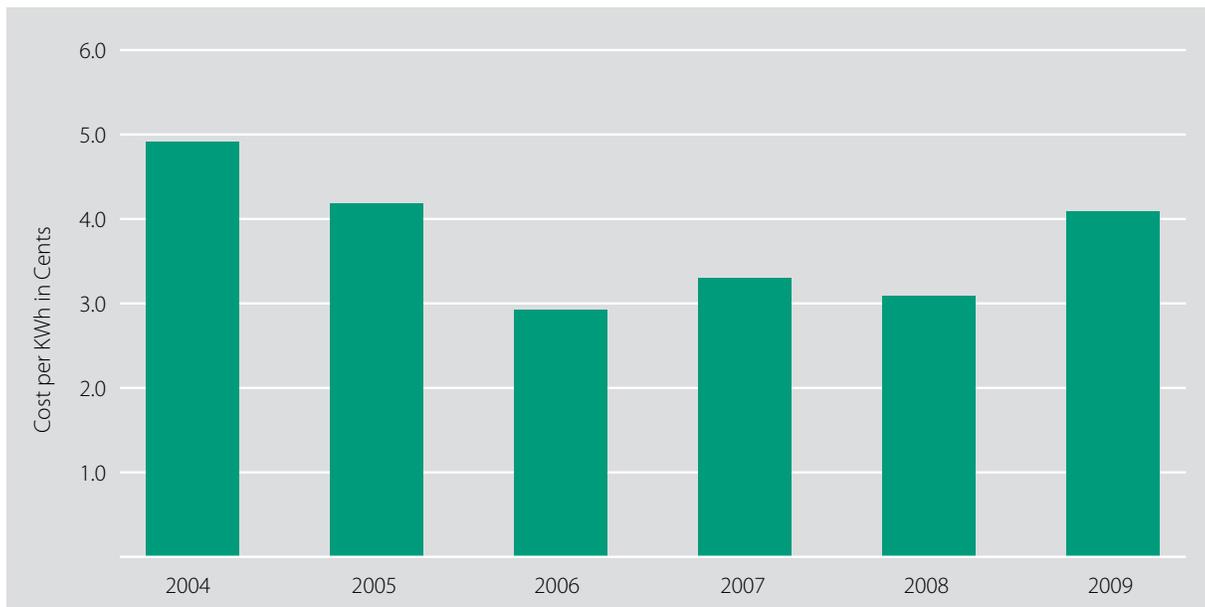
<sup>2</sup> Lifetime economic benefits and the benefit-to-cost ratios are calculated by estimating the total lifetime electricity reductions of the efficient products multiplied by future avoided energy costs and adjusted for total Program and participant costs all discounted to the present year. In 2009, the Maine Public Utilities Commission helped sponsor the "Avoided Energy Supply Costs" for New England, along with other electric utilities, gas utilities, and efficiency program administrators. This study is updated every two years and provides the baseline avoided costs for the energy efficiency programs, based upon current market conditions and fuel cost projections. In 2009, avoided costs dropped significantly, and the benefit-to-cost ratios of our energy efficiency program reflect this trend.

<sup>3</sup> The average Maine residential customer consumes 6,360 kWh per year. Energy Information Administration, 2007. <http://www.eia.doe.gov/cneaf/electricity/esr/table5.html>

<sup>4</sup> CO<sub>2</sub> is the major contributor to global warming, SO<sub>2</sub> concentrations exacerbate or may cause asthma and respiratory illness, and NO<sub>x</sub> is a major contributor to acid rain and ground level ozone (smog).

<sup>5</sup> Emission estimates per MWh are based on Avoided Energy Supply Costs in New England: 2009 Report by Synapse Energy Economics <http://www.synapse-energy.com/Downloads/SynapseReport.2009-10.AESC.AESC-Study-2009.09-020.pdf>

## Efficiency Maine Program-Wide Cost/kWh for Energy Savings 2004-2009





## Business Program

### Growing to Meet the Challenges of a Changing Market

In its sixth year, the Efficiency Maine Business Program offered technical assistance and cash incentives to help a record number of Maine businesses, large and small, implement a record number of projects to reduce electricity usage and costs.

This was the first full fiscal year without serving large industrial consumers, and the loss of those efficiency opportunities is reflected in the results for the year. Lifetime MWh saved remained approximately the same as in FY 2008, but the cost of achieving those savings increased, yielding a lower benefit-to-cost ratio. In addition, the projected cost of electricity in future years declined somewhat, which translates into a lower dollar value of program benefits over their lifetime.

### 2009 Highlights

- 929 businesses and other organizations, with the help of 525 approved trade allies, completed 1,438 energy-efficiency projects—a 53% increase over FY 2008.
- The Program generated annualized MWh savings of 34,066.
- Maine businesses realized total economic benefits attributable to the Program of \$49.0 million in avoided electrical costs. The total of participant costs plus program costs, however, increased by 33% to \$16.9 million, so the overall benefit-to-cost ratio fell 32% to 2.91 to 1.

### Program Partners

The Efficiency Maine Business Program works closely with more than 500 partners (called “Program Allies” until recently (*see Looking Ahead, page 9*), including contractors, vendors, suppliers, wholesalers and associations. They help support the Business Program by:

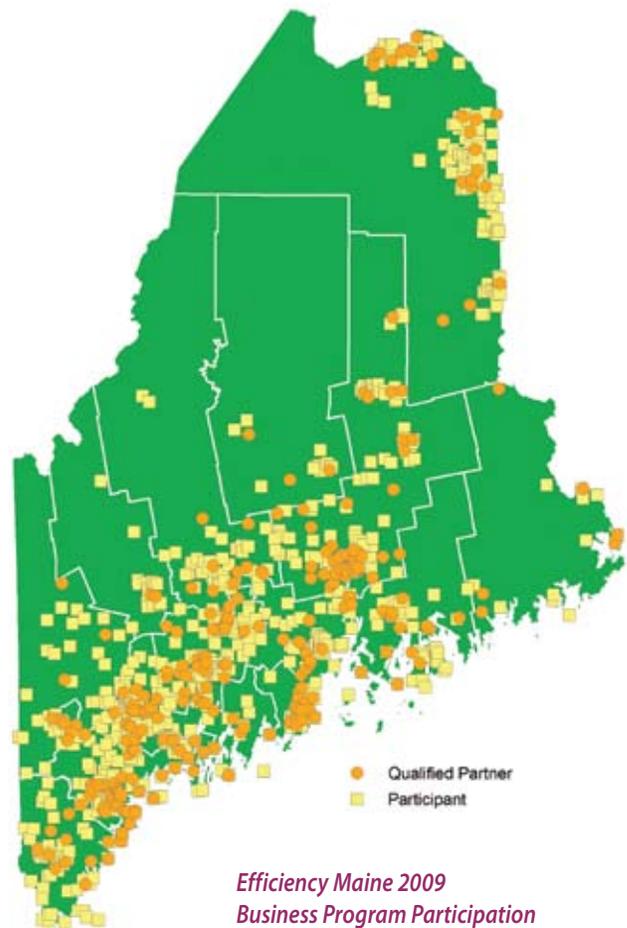
- Marketing the Program to their customers and members (introducing 29% of new participants to the Program in 2009)
- Working with customers to implement efficiency measures
- Helping prepare the paperwork, cost-effectiveness calculations and reports required

Many promote and sell energy-efficient equipment by maximizing their customers’ use of incentives, and often invite Efficiency Maine staff to meet with their customers and train their employees.

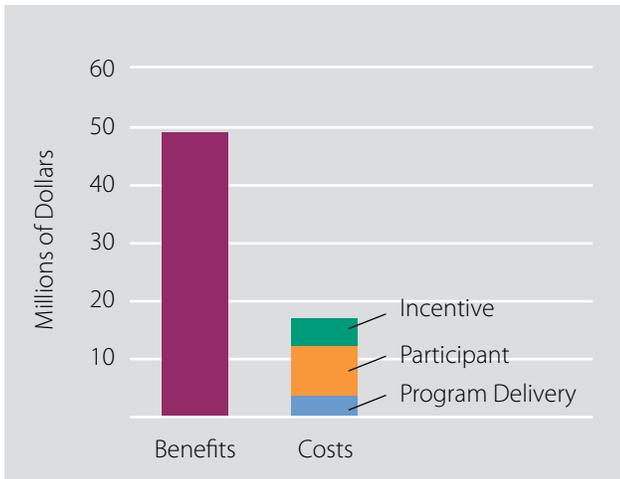
In 2009, Efficiency Maine staff supported its partners by participating in 33 trade shows, more than 47 speaking engagements and 25 training sessions.

### Big Savings for Small Businesses

By statute, Efficiency Maine must dedicate a minimum of 20% of total Program funds to small businesses, defined as those with 50 or fewer employees, or less than \$5 million in annual sales. While larger companies yield greater efficiency savings per dollar invested, small businesses are vital to Maine’s economy and are typically the most in need of cash. During FY 2009, small businesses accounted for 75% of Program participants and received 33% of the \$4.9 million in incentives paid out.



**Efficiency Maine 2009 Business Program Benefits vs. Costs**



**June 24, 2009:** The Shipyard Brewing Company's president, Fred Forsley, received an Efficiency Maine Recognition Award for the company's "green" energy practices.

**Lighting the Way**

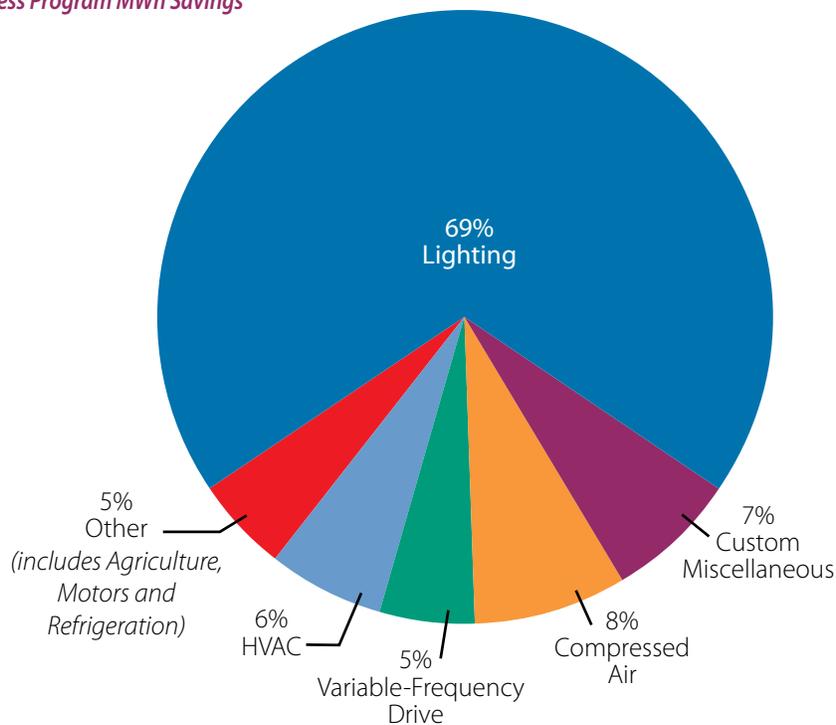
Lighting continued to represent the greatest source of savings for businesses in 2009 (69% of total savings), followed by compressed air (8%), HVAC (6%) and Variable-Frequency Drive (VFD) motor controllers (5%). The average estimated useful life for equipment rebated by the Program is 13 years.

In 2009, Efficiency Maine engaged a larger and more diverse set of Maine businesses in energy-efficiency activity. Accomplishments include:

- Pilot-testing a national program for the commercial new construction market
- Contacting local Chambers of Commerce and other associations to provide brochures, newsletter articles and speakers
- Implementing a field staff plan for more direct and proactive contact with potential participants

(continued)

**Efficiency Maine 2009 Business Program MWh Savings by Technology**



## Business Program (continued)

### Spreading the Word: Media Activity

The Business Program conducted a targeted marketing effort to reach a wide variety of businesses statewide in 2009, using a range of media channels and methods:

- **Public Relations** Throughout the year, the Efficiency Maine Business Program successfully used Recognition Award events to thank participants and increase media and public awareness of its work. These events were well attended by Efficiency Maine Program Allies, local and state dignitaries, and the media. They received wide coverage through both traditional and social media, particularly the awards presented to the Maine Air National Guard and Shipyard Brewing.

Meet the Maine team that helps you beat high energy costs.



### Efficiency Maine helps all kinds of businesses save on their electric bills.

For Maine businesses today, improving efficiency can mean the difference between success and failure...and Efficiency Maine can help make energy efficiency easier to achieve.

Our expert field staff, engineers and support staff offer advice on energy-saving equipment, on-site energy audits, and energy-management planning for your business—all free. And you may qualify for cash incentives to help you upgrade to more efficient lighting, motors, and heating and cooling equipment.

So get the leading-edge technical assistance you need to start reducing your electric bills, today.

Visit [efficiencymaine.com](http://efficiencymaine.com), or call 866-376-2463.

*Pictured left to right:  
Lisa Jastard, Jonas Winfield,  
Richard Daughtry, Nancy Knowlton,  
Peter Laha, Joe Moran, Ed Dairon*



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*The EM Team* Seven of the highly dedicated, expert Business Program field staff take center stage in this *Mainebiz* magazine ad.

EM

## Warehouse Lighting

CASE STUDY
BETTER LIGHTING, LOWER ELECTRIC BILLS & REDUCED EMISSIONS



**Objectives:**

- Replace multiple aging buildings with a single modern warehouse
- Gain additional space in which to store and maneuver beverages
- Save on lighting costs
- Reduce maintenance costs
- Reduce carbon footprint

**Solutions:**

Nappi Distributors worked closely with Bay Electric, an Efficiency Maine Program Ally, to create a brand new warehouse to replace their complex of seven buildings in Portland. The new facility includes 635 High Performance T8 lamps and matching ballasts, 53 T5s and 123 28-watt CFLs.

**Nappi Distributors: satisfying a growing thirst without a lot of extra “juice”**

Nappi Distributors, Maine’s leading beverage wholesaler, replaced seven outdated buildings with a new, 155,000 SF warehouse and office complex in Gorham. With help from Efficiency Maine, Nappi installed lighting that is so much more efficient, the company’s electric bills have fallen in spite of the larger space and rising rates.

*“We did everything at our new facility with an eye to the future—for our company, for our customers and for our children. I can look my daughter in the eye and tell her we’re part of the energy solution. And Efficiency Maine helped.”*

—Frank Nappi, Jr.,  
President  
Nappi Distributors

**Estimated Annual Savings**

Electricity.....	\$34,305
Labor.....	\$2,000



*Seeing the Light* One of four case studies produced in 2009 featured Nappi Distributors, which incorporated highly efficient lighting into its new warehouse.

- **Radio** The marketing team continued its series of Green Business Minutes on radio stations WGAN (Portland) and WVOM (Bangor). A total of 16 spots aired in 2009 featuring Efficiency Maine personnel discussing the benefits of the Program and new technologies, as well as testimonials by participants and Allies.
- **TV** In March, Efficiency Maine representatives participated on *Mainebiz Sunday*, a television talk show on WCSH (Portland) and WLBS (Bangor), to explain how businesses could benefit from Business Program services and incentives.
- **Print Ads** A print campaign, featuring a range of actual businesses that have benefited from our Programs, continued primarily in *Mainebiz*, a weekly publication with the highest business readership in the State.
- **E-News** Monthly bulletins alerted Allies and their customers about new energy-saving technologies and ways to take advantage of the Business Program.

## Looking Ahead

During the first half of FY 2010, Efficiency Maine has begun implementing the following efforts to engage a larger and more diverse set of Maine businesses in energy-efficiency activity:

- The Program Ally designation has been replaced with the more robust Efficiency Maine Qualified Partners program. Qualified Partners must meet new standards of expertise in order to provide exceptional delivery of Efficiency Maine programs to businesses. In return, Qualified Partners receive important new benefits, including free or discounted training, exclusive listing on the Efficiency Maine website, and increased access to Efficiency Maine engineering and field staff.
- To encourage companies to undertake efficiency measures despite the soft economy, a 25% bonus has been added to all incentives through December 31, 2009.
- Efficiency Maine has begun the rollout of Maine Advanced Buildings, a new program for the commercial new construction market.
- Television advertising has been produced and aired to reach even more potential business participants.
- Co-op media funds have been allocated to help promote both program participants and Qualified Partners.

**“Thanks to Efficiency Maine, we’re part of the solution—for the environment and our kids!”**

—Ruth Libby



**Expert technical advice plus financial incentives can help your business save energy and save money.**

When Ruth Libby opened Ruth’s Reusable Resources, she was excited to learn she could make it greener — and save a lot of money — by switching to more efficient lighting and controls.

Efficiency Maine provided nearly \$8,000 in incentives for new lighting fixtures and motion sensors. The results: an estimated \$11,000 in annual savings on Ruth’s lighting bills — nearly 75%! This helps Ruth continue to give recycled business supplies to Maine schoolteachers — FREE — keeping a lot of stuff out of the waste stream, and giving a lot of kids some extra inspiration.

Our expert team offers free technical advice and generous cash incentives to help all kinds of businesses upgrade to more efficient lighting, motors, and heating and cooling equipment. **To start reducing your electric bills, visit [efficiencymaine.com](http://efficiencymaine.com), or call 866-376-2463.**

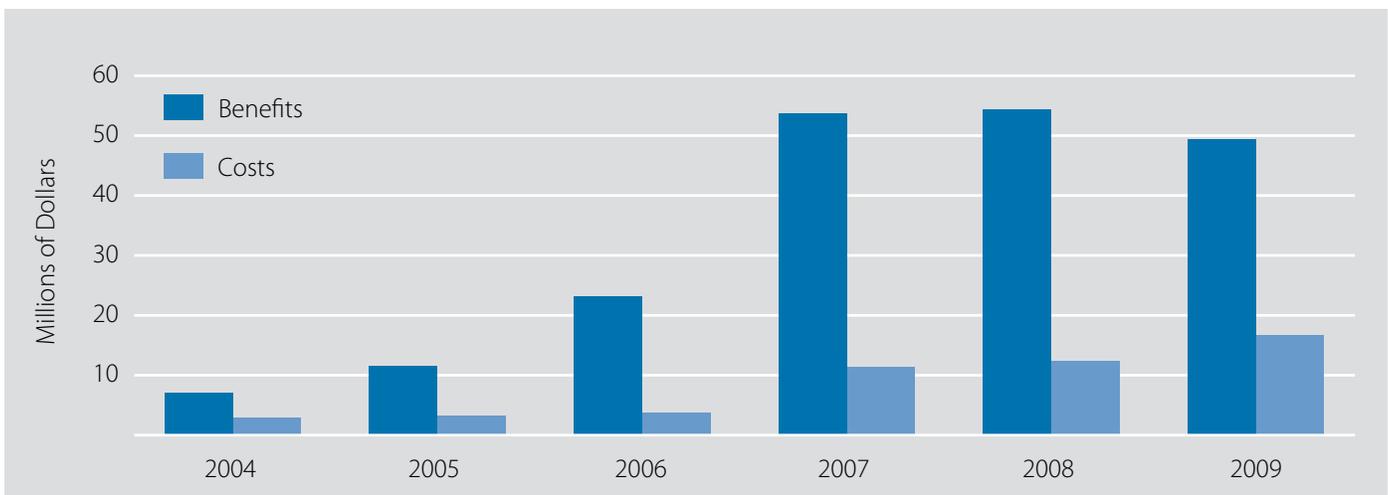
*Ruth Libby, from Ruth’s Reusable Resources, and Peter Laiho, Efficiency Maine Field Consultant, examine a motion sensor, one of the many energy-saving measures at Ruth’s 3Rs.*



**Leading the Way to a Brighter Future**  
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*Real People, Real Savings* A new series of Mainebiz ads in 2009 featured actual Business Program participants such as Ruth’s Reusable Resources.

**Efficiency Maine Business Program Benefits vs. Costs 2004-2009**





## Residential Lighting Program

In 2009, the Residential Lighting Program (RLP) instituted a major change in the way discounts are provided to consumers, moving away from the complicated and cumbersome process of applying for rebates in favor of a seamless direct “buy-down” implemented with the help of retailers. By eliminating coupons, CFLs have become as easy to buy as other bulbs.

Nonetheless, data shows that FY 2009 was a slow year for residential CFLs across the country, and Maine was not immune to that trend. *(See The National Perspective sidebar.)* Public perceptions about mercury in CFLs may have also played a role in decreasing utilization of these bulbs in Maine.

Despite the decline in the number of bulbs sold, the benefit-to-cost ratio of promoting CFL sales continues to be positive, with every dollar invested by Efficiency Maine returning \$5.29 in economic benefits. Compact fluorescent technology remains the single most important measure for achieving proven reductions in energy expenses in Maine residences.

The administrative changes associated with eliminating the coupon program required a retraining of personnel in 365 participating stores and the establishment of new systems for tracking the sales of bulbs and reporting the incentives to Efficiency Maine. Notwithstanding the costs associated with these changes, the program cost of the RLP decreased from \$2,840,083 in FY 2008 to \$1,919,567 in FY 2009.

There is evidence that certain sectors of the residential market are adopting CFLs as standard lighting. Approximately half of Maine residences account for 80% of CFL purchases. Many of

these residences have already replaced incandescent bulbs in many fixtures. Given the five-to-seven year life of most CFLs, they may not be purchasing new bulbs in the short term.

The economic recovery is expected to spark a resumption of the long-term trend from incandescents to CFLs, and we will continue our efforts to inform Maine consumers about how much money and energy they can save. *(See Looking Ahead, page 13.)*

### 2009 Highlights

- Sales of CFLs directly attributable to Efficiency Maine’s price reductions dropped by 35% in 2009 to 705,091, in line with the trend nationally and in other New England markets.
- Despite the decline, these CFLs generated significant benefits cost-effectively:
  - 30,609 MWh in annual savings
  - \$23.3 million in lifetime economic value
  - A benefit-to-cost ratio of 5.29 to 1
- Our 365th participating store joined the RLP, and field staff report that many stores—especially supermarkets—are dedicating increased valuable shelf space to these products.
- The number of CFLs recycled through our Program increased by 176%, from 2,299 bulbs in 2008 to 6,366 bulbs in 2009, and the number continues to grow, as seen in the accompanying graph.

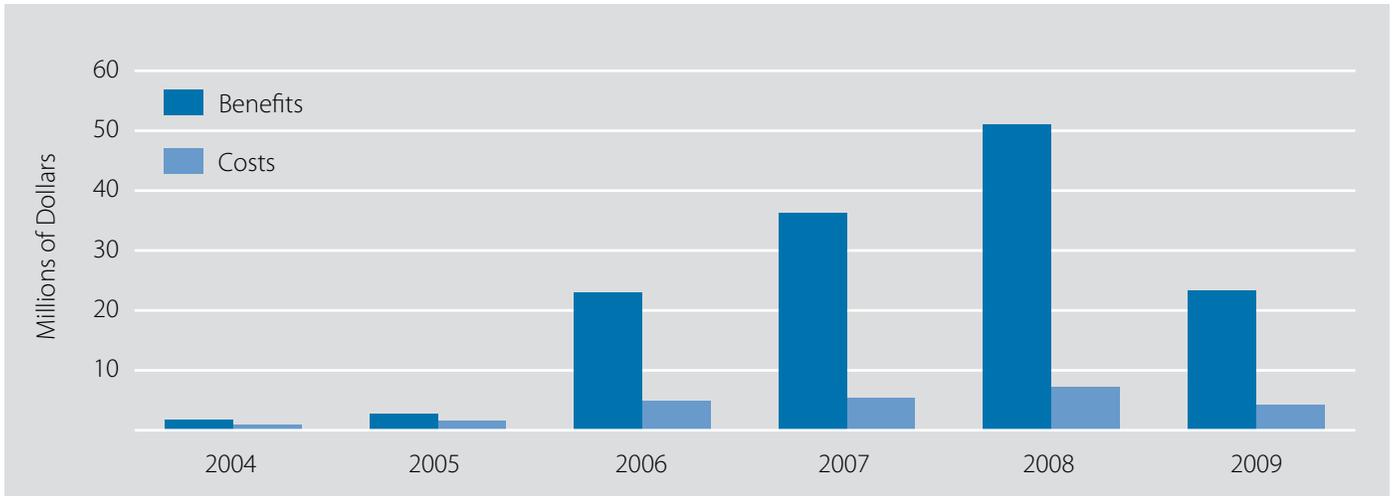
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### The National Perspective

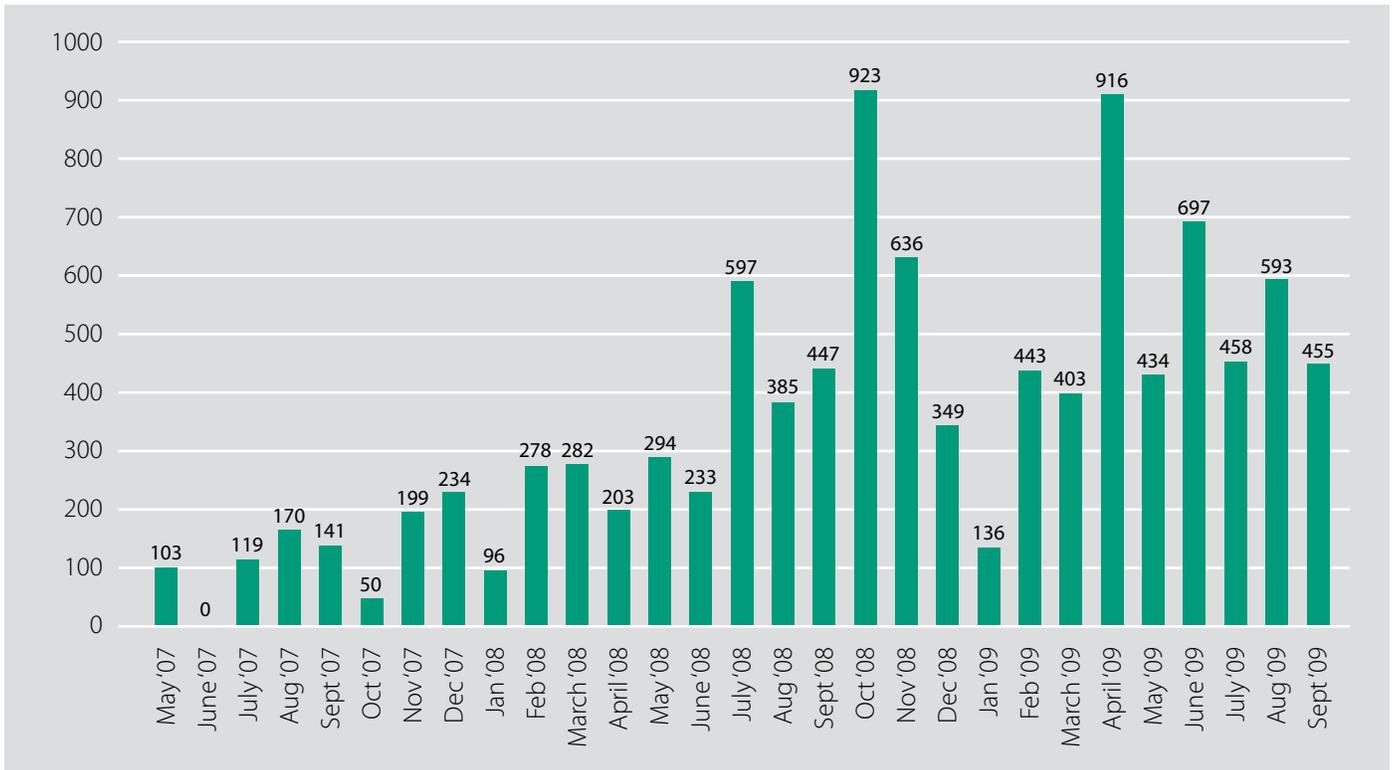
According to a letter released September 18, 2009 by the U.S. Department of Energy:

- Sales of CFLs have declined 25% from their peak in 2007. Sales in some regions, such as Vermont and parts of Massachusetts, have declined 35–50% from their peak. Shipments of CFLs are down 49% in 2009 over 2007 levels.
- Only one in four bulbs purchased is a CFL. 75% of medium screw-based sockets still contain incandescents in regions that historically had invested strongly in CFL promotions. Other regions have even higher saturation levels of incandescents. Two-thirds of these sockets require only general service CFLs.

**Efficiency Maine Residential Program Benefits vs. Costs 2004-2009**



**Efficiency Maine CFL Recycling Program: Total Bulbs Recycled by Month (May 2007–September 2009)**



## Residential Lighting Program (continued)

### Marketing and Public Relations

Marketing, advertising and public relations continue to take center stage in educating the consumer about technology, product variety, and the environmental benefits.

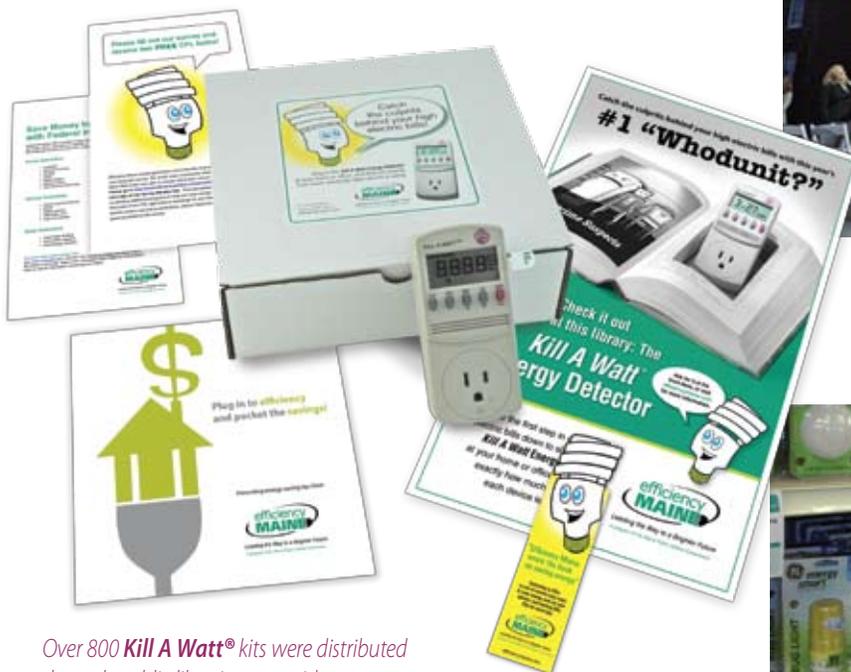
- Television advertising remains the most effective and cost-efficient way to reach Maine households. In 2009, commercials not only continued to deliver messages about the benefits of CFLs, but also offered tips on other ways households can reduce energy use and expenses.
- A major effort starting in January of 2009 was the “Kill A Watt®” campaign, a partnership between Efficiency Maine and the Maine Library Association. The campaign placed 800 energy-saving tool kits consisting of Kill A Watt® electricity usage monitors and Efficiency Maine energy tips brochures in all public libraries throughout the State. Consumers could borrow the kits just as they would a book. The campaign began with a media launch at the Scarborough Public Library, followed by a statewide radio and print advertising campaign featuring a “Whodunit?” detective theme. Letters were also sent to some 50,000 low-income Mainers notifying them of the initiative and providing energy-efficiency information.
- Another major public relations event was the ceremonial switching-on of over 200 Light-Emitting Diode (LED) streetlights by Governor John Baldacci in October at the campus of Pineland Farms in New Gloucester.

This event was covered by both local media and national trade publications, as it marked the first significant U.S. installation of the LED products engineered by Osram Sylvania. The pilot project was made possible with help from a \$41,000 incentive from Efficiency Maine and is predicted to save Pineland Farms an estimated 85% of its outdoor lighting costs, or about \$30,000 dollars a year, yielding a 2.5-year payback period on the purchase and installation costs of the retrofit. The new lights will also cut down on light pollution and were designed to deliver light only where needed, minimizing light trespass and disruption to Pineland Farm’s neighbors.

- A three-minute segment on WLBZ’s *Home Energy Show* in August featured Efficiency Maine managers explaining the benefits of CFLs and showing the range of shapes, sizes and styles now available.
- Efficiency Maine continues to attend many Home, Trade, and “Green” shows, where we have the opportunity to meet the general public, answer their questions, receive feedback on our programs, and hear suggestions for new programs.



October 20, 2008: The light-switching at Pineland Farms

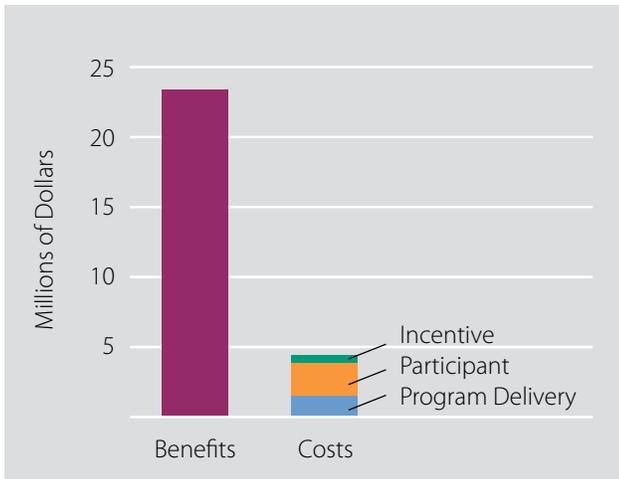


Over 800 **Kill A Watt®** kits were distributed through public libraries statewide.

*Efficiency Maine shelf-talkers guide consumers to the savings now available on a wide variety of CFLs—without the need to fill out forms, as was required in the past.*



## Efficiency Maine 2009 Residential Program Benefits vs. Costs



## Looking Ahead

Efficiency Maine still has a huge opportunity to help Maine households save money and cut electricity use by replacing more incandescent bulbs with CFLs.

It is estimated that Maine has over 23 million light sockets, of which more than 80% or 18 million could be filled with CFLs. Of these, we estimate that CFLs are used in only 5 million or 28%. Our goal is to see the remaining 13 million filled with CFLs. In early spring, Efficiency Maine is planning a "Socket Survey" to confirm the data on the existing penetration of and potential for CFLs. Analysis of these results will guide future marketing and sales strategies.

In the meantime, we are taking the following steps to reverse the downward trend in CFL sales:

- New TV advertising this fall focuses on the high cost of continuing to use incandescents, using the message, "each one costs \$10 a year more to use than a CFL...for the same light."
- A new radio campaign features experts talking about the benefits of the latest CFLs—more styles, better performance, costs savings and longevity—while overcoming concerns about mercury content by communicating that CFLs can be easily recycled.
- To boost CFL sales in supermarkets, the leading outlet for incandescents, Efficiency Maine has started to negotiate special promotions and merchandising agreements with the leading grocery chains, Hannaford and Shaw's, statewide. Both businesses have shown strong interest in participating. Special promotions in these stores are being planned for January 2010.
- We continue to monitor the rapid development of LED technology, and are preparing plans to promote LEDs at such time as they become a cost-effective alternative for residential lighting.

## Beyond Lighting

With funding from the Regional Greenhouse Gas Initiative and possible future ARRA dollars, Efficiency Maine has begun helping retailers promote energy-efficient appliances (washers, refrigerators, air conditioners and more) by offering rebates.

In 2010 and beyond, we will continue to assess the cost-effectiveness of subsidizing the cost of CFLs. As with most energy-efficiency programs, we will eventually decrease the reliance on rebates while maintaining strong public education efforts.



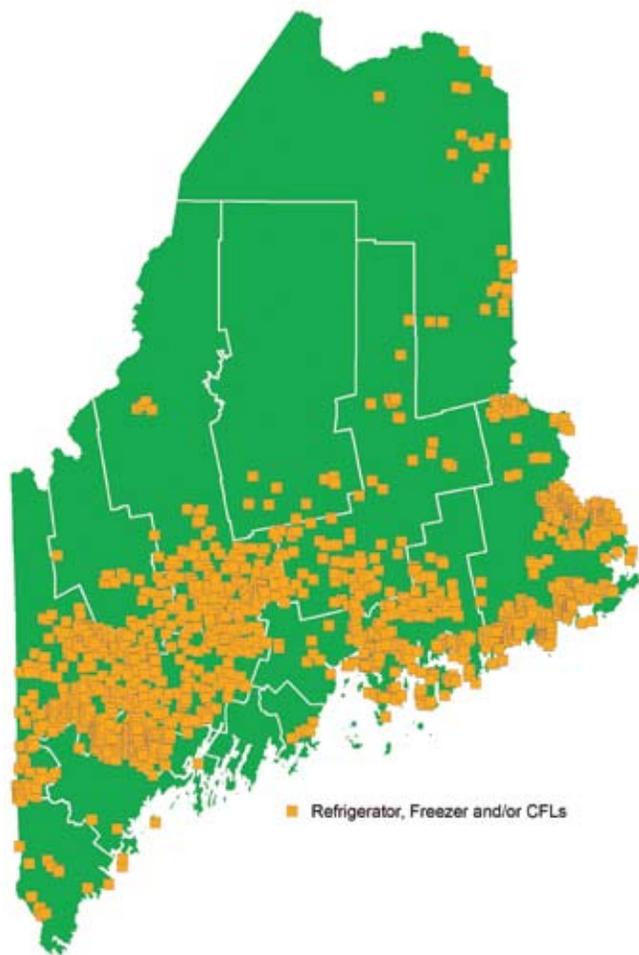
Three of the six 15-second "Efficiency Maine Tips" TV spots that ran in 2008-2009.



## Low-Income Programs

As required by statute, 20% of the Efficiency Maine budget is directed to low-income programs. In 2009, Efficiency Maine's Low-Income Programs helped more families than ever before reduce the financial burden of their electric bills by installing energy-efficient refrigerators, freezers and CFLs—which together can account for up to 20% of a home's electric use.

The Programs' benefit-to-cost ratio went from a record high of 2.02 to 1 in 2008 to 1 to 1. The decline can be attributed to a lower avoided energy cost and discontinuation of the highly effective mailing of nearly 100,000 CFLs to low-income households in 2008.



## 2009 Highlights

- The Low-Income Programs assisted thousands of qualifying households by providing energy-efficient refrigerators, freezers and CFLs, generating 3,911 MWh of annual savings and \$2.5 million in lifetime economic value, for a benefit-to-cost ratio of 1 to 1.



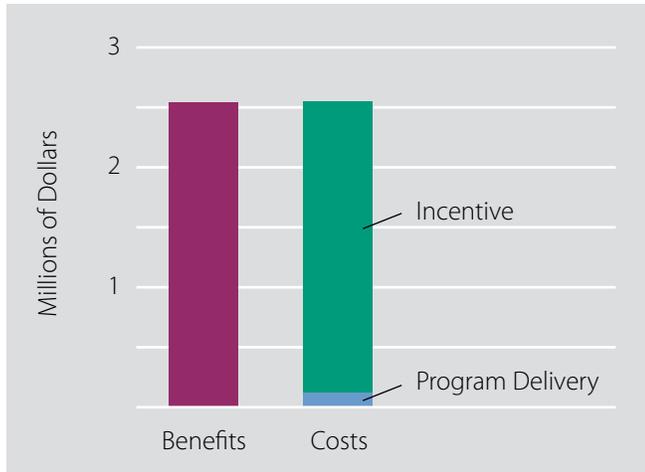
*Two of the 2,125 older refrigerators that were replaced with new, energy-efficient appliances.*

## Low-Income Appliance Program

The **Low-Income Appliance Replacement Program** is implemented through a Memorandum of Understanding with MaineHousing and through the State's Community Action Programs (CAPs) to reduce electric bills in low-income households by exchanging inefficient old refrigerators and freezers for new ones.

Efficiency Maine contracts with certified residential energy auditors to address electrical savings opportunities. When the auditors replace refrigerators and/or freezers, they also install CFLs in locations where they will provide the greatest energy savings. In FY 2009, the Program delivered 1,652 refrigerators, 525 freezers and 18,432 CFLs to 2,417 low-income households.

**Efficiency Maine 2009 Low-Income Appliance Replacement Program Benefits vs. Costs**



**Operation Keep ME Warm**

Efficiency Maine partnered with the Maine Office of Energy Independence and Security and MaineHousing to implement Operation Keep ME Warm. Efficiency Maine provided 5,897 CFLs to the homes that participated in the volunteer weatherization program. Efficiency Maine also contributed to the preparation of a *Basic Weatherization* booklet that was widely distributed in the fall of 2008, at a time when oil prices were at an all-time high in Maine.

**Library-Lending Program for Kill A Watt® Electricity Usage Monitors**

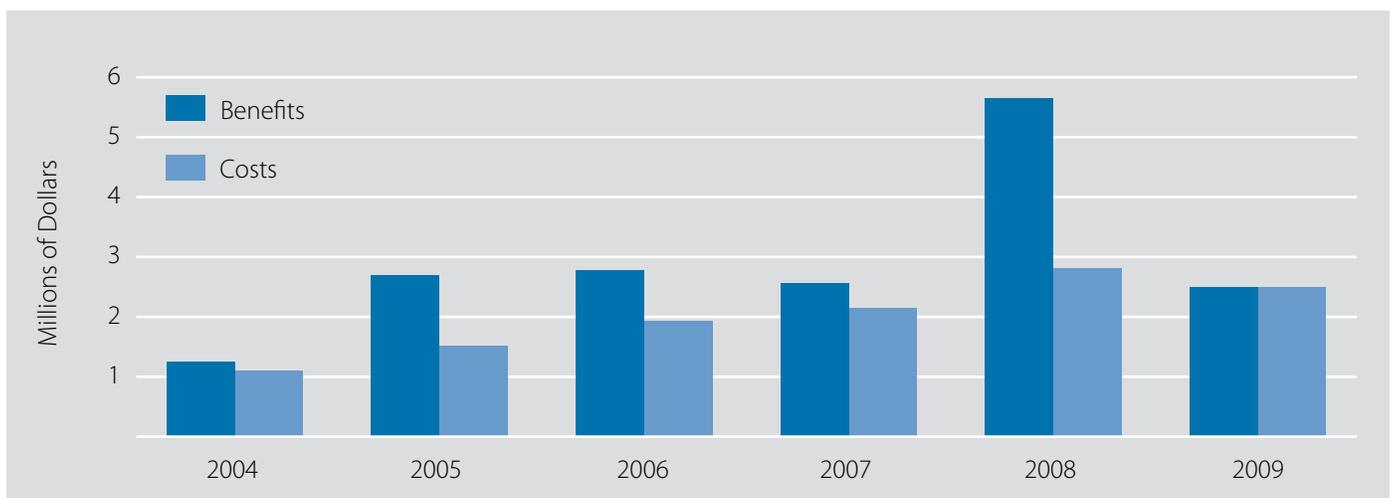
The Low-Income Program partnered with the Residential Program to market the Library-Lending Program for Kill A Watt® electricity usage monitors specifically to low-income households. (See the *Residential Lighting Program* on page 12 for more details.)

**Looking Ahead**

In 2010, Efficiency Maine’s Low-Income Programs will:

- Continue to partner with MaineHousing and the CAP agencies to ensure delivery of energy-efficient technologies to low-income families
- Participate more substantially in Operation Keep ME Warm by providing \$50,000 for the purchase of CFLs and LED nightlights for installation by volunteer weatherization teams
- Coordinate a special initiative for low-income families that includes mailing energy-saving tips literature and an LED nightlight

**Efficiency Maine Low-Income Program Benefits vs. Costs 2004-2009**





## Education and Training Programs

The Education and Training Programs have always been central to Efficiency Maine's mission of creating a more energy-efficient economy, and in 2009, they reached more children and professionals than ever. School programs introduced the issues of electricity production, consumption and efficiency to more 4th–12th graders than in any prior year, while professional training programs, including Building Operator Certification (BOC), served a record number of contractors and facility managers through specialized workshops about energy-efficient opportunities and Efficiency Maine incentives.

### 2009 Highlights

- 12,373 4th–12th grade students participated in energy education classes.
- 691 contractors and facility managers attended energy-efficiency classes, including introductory-to-advanced training as well as the BOC courses.
- The BOC courses in FY 2009 generated 41,072 MWh of lifetime savings and \$5.3 million in lifetime economic value, yielding a benefit-to-cost ratio of 1.30 to 1.

### School Energy Education Programs

Efficiency Maine provides financial support for two education programs serving 4th–12th grade teachers and students:

**Maine Energy Education Program (MEEP)**, a nonprofit



*Students from the Dr. Levesque School in Frenchville perform the energy conservation advertisement they created as part of the Energy Extravaganza Workshop sponsored by Maine Public Service Company.*

organization serving schools across Maine, teaches general energy awareness and practical skills that enable students to be more energy-efficient in their daily lives. Topics of classroom presentations include electricity generation, energy sources, climate change, energy conservation and transportation. In the 2008–2009 school year, MEEP reached more than 12,000 students across the state. MEEP's hands-on classroom activities are free of charge to Maine schools.

### Maine Public Service's (MPS) BE Energy-Wise Program (BEEP),



*Left: A student from Poland connects a solar panel to a small fan motor using alligator clips.*

*Right: A student tests out the miniature wind turbine that she assembled at Poland Community School.*

serving students in northern Maine, educates students about energy issues not only in schools but also in the broader society.

Energy Savings "Eagle Patrols" patrolled the corridors of their schools for lights left on. A team of students raised awareness of energy issues in schools by distributing information 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 amount of energy consumed by computers.

Numerous energy programs are offered to all schools in the MPS service territory. Among them are the "Three E's programs," which introduce basic concepts on energy, environment, and economics and the interaction among the three. These programs assist the participant to understand some of the challenges and problems related to energy use. Several energy-savings presentations were given throughout Aroostook County to senior groups and organizations.

Also, free home energy-savings workshops were presented in Island Falls, Fort Kent, Presque Isle, and Caribou to show residents how they can save energy in the home and reduce their electricity bills. Energy-saving kits were given to everyone who attended.



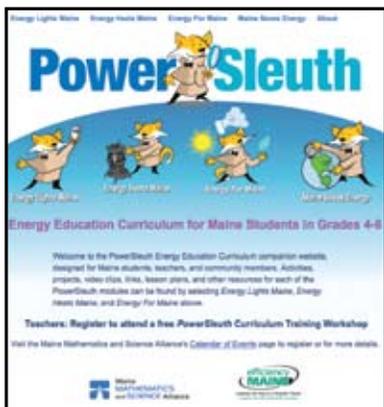
## PowerSleuth Maine Energy Education Curriculum Project for Grades 4–8

Teachers across Maine are helping their students solve energy mysteries using the “PowerSleuth” energy education curriculum. This three-year project, launched in 2007, has developed standards-based, hands-on energy education materials for students in grades 4–8. Three “PowerSleuth” units will be available at no cost to teachers:

- “Energy Lights Maine,” for students in grades 4–5, contains lessons on circuits and electric light, conductors and insulators, generation of electricity, energy-efficiency and conservation.
- “Energy Heats Maine,” for students in grades 6–7, develops students’ understanding of heat and thermal energy, including how heat moves, and explores the mechanisms of transfer and conservation.
- “Energy for Maine,” designed for students in grades 7–8, focuses on energy transfers and transformations.

Teachers can access the material and additional supporting resources by visiting [powersleuth.org](http://powersleuth.org).

The Maine Mathematics and Science Alliance (MMSA) is working closely with its content advisory committee and field test teachers to develop the curriculum. It is based on national standards, informed by research, and aligned with the new Maine Learning Results, including Maine-specific contexts and resources. Additional training workshops will be offered throughout the 2009–2010 school year.



The **PowerSleuth** website ([powersleuth.org](http://powersleuth.org)), beta-tested in 2009, provides teachers and students an extensive array of activities, projects, video clips, links, lesson plans, and other resources for each of the **PowerSleuth** modules, **Energy Lights Maine**, **Energy Heats Maine**, and **Energy For Maine**.

Yarmouth Elementary School students from Mrs. Moore’s 4th grade class working on one of the lessons from **Energy Lights Maine**.



## Energy Tips Contest

In coordination with the Maine Office of Energy Independence and Security, Efficiency Maine hosted a contest for Maine’s 4th, 5th and 6th grade students during October, Energy Awareness Month. The Governor awards prizes to students suggesting the best energy-saving ideas in two categories: 1) how to save energy in your own home; and, 2) how your school can save energy. Following are the winners of the Sixth Annual contest (October, 2009):

### 4th Grade

**School:** “Plant trees outside hot windows. In a few years, there will be shade and nice breezes instead of the sun’s hot, baking heat.”

— Olivia Verrill, Manchester School, Windham

**Home:** “Use a low-flow showerhead.”

— Alexander Raest, Madawaska Elementary School, Madawaska

### 5th Grade

**School:** “Ask if the janitors could install thermostats that you can program so that the temperature can be turned down at night and on weekends when nobody is in the building.”

— Samantha Richard, George E. Jack Elementary School, Standish

**Home:** “You could use a toaster oven instead of a normal oven to save energy.”

— Jake Patrick, Paris Elementary School, South Paris

### 6th Grade

**School:** “Be a fan of windmills.”

— Megan Seward, Presque Isle Middle School, Presque Isle

**Home:** “Don’t use an AC. Use a fan.”

— Matt Buck, Clinton Elementary School, Clinton

## Energy Rap Contest

Efficiency Maine hosted a contest for Maine’s 9th and 10th graders to put their rhyming skills to work in the Efficiency Raps! contest for best video raps on energy. The winning solo rapper, Ian Wright, received an ENERGY STAR laptop in May, 2009. To see his winning rap, visit the Efficiency Maine page on YouTube.

(continued)

## Education and Training Programs (continued)

### 2009 Professional Training Workshops

Efficiency Maine's professional training programs provided key stakeholders (including architects, engineers, facility managers, tradespeople, water and wastewater operators, and other technical professionals) with technical training in a variety of topics. In addition to providing advanced training, these workshops provide a venue for participants to network and share energy-efficiency success stories.

#### What Our Attendees are Saying:

##### **Energy Efficiency for Financial Managers**

*"I liked the 'energy conservation and facilities management... ' best."*  
— Kurt Benziger, Area Specialist/Lighting & Energy with Horizon Solutions

*"Excellent program with great information."*  
— Jim Reny, Facility Director with Waterville Public Schools

##### **Energy Smart Real Estate Specialist**

*"Great learning experience. Very informative and a good variety of speakers."*

*"This is an important course."*

*"Great resources! Glad you gave us a place to go for further info."*

*"Bill Childs was great!"*

*"Bill was excellent and provided a better understanding of what is involved in an audit."*

*"Best class I have taken in years!"*

*"To have the guests in was very important. They were extremely knowledgeable about their particular expertise. Candace was informative on so many levels and cleared up so many questions."*

— Anonymous comments from several real estate agents

##### **Facility Managers – How to Get Started Saving Energy:**

*"Excellent presentations and informative handouts."*  
— Dick Graves, Maintenance Foreman at Portland Water District

*"Surprised on the amount of wasted energy."*  
— Ray Masse, Plant Engineer at Central Maine Community College

##### **AEE Comprehensive 5-day Training for Energy Managers**

*"Great week."*  
— Kevin P. Flanagan, Project Engineer with Bath Iron Works

*"Very good course, good support."*  
— Alan J. Ballard, Consultant

**Commercial Energy Auditing** (22 participants; Brewer): Teaches students how to conduct a commercial facility energy audit, which covers the tools of the trade; lighting and controls; and heating, ventilating and air conditioning.

**Introduction to Solar Thermal** (358 participants; Fairfield): Certifies plumbers, oil burner technicians and HVAC technicians to properly install solar thermal systems.

**Facility Managers – How to Get Started Saving Energy** (78 participants; Springvale, Portland, Auburn, Bath, Farmington, Bangor, Fairfield, and Caribou): Designed for both technical and nontechnical personnel, focuses on low- or no-cost efficiency upgrades that can save money in their buildings.

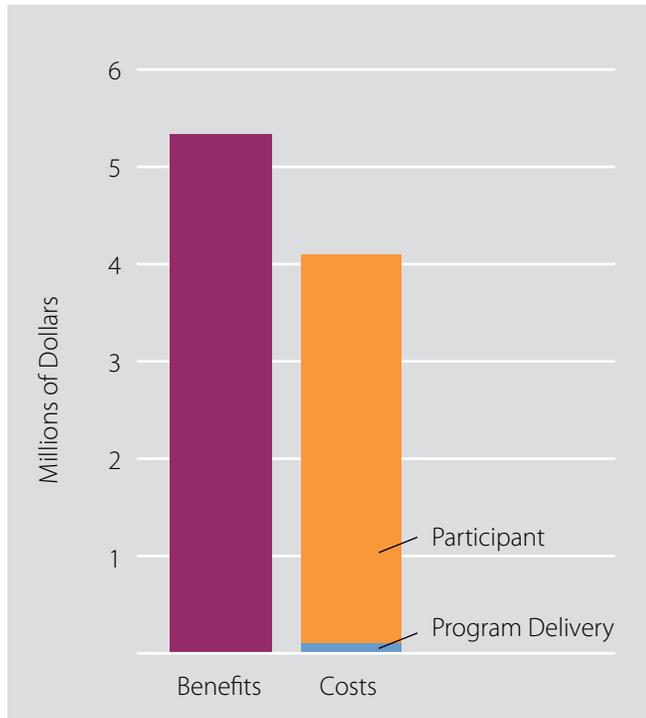
**Energy Efficiency for Financial Managers** (14 participants; Portland): Provides financial and business managers the information they need to make appropriate decisions regarding instituting energy-efficiency and management plans at their facilities. It discusses the advantages of purchasing materials and new technology using rebates and Federal tax incentives.

**Energy Smart Real Estate Specialist** (36 participants; South Portland): Inspires real estate agents to incorporate energy efficiency into their real estate business practices by demonstrating how energy efficiency and performance directly impact the real value of a property. The course provides information and guidelines on a number of energy-smart issues.



*Energy Smart Real Estate Specialist class at Husson College in South Portland on 11/19/08.*

**Efficiency Maine 2009 Building Operator Certification Program Benefits vs. Costs**



**Building Operator Certification (BOC)**

The BOC Program, offered in cooperation with the Northwest Energy Efficiency Council (NEEC), offers eight-day courses over two to four months that train facility managers to improve energy efficiency, reduce maintenance costs, and enhance building occupant comfort and safety.

While the courses instruct students in the use of advanced building equipment and controls, they also emphasize that huge savings at virtually no cost can be achieved by simple preventive maintenance and better management, such as turning down thermostats and shutting off lights when not needed.

BOC certification requires demonstrated competence in all of the following areas:

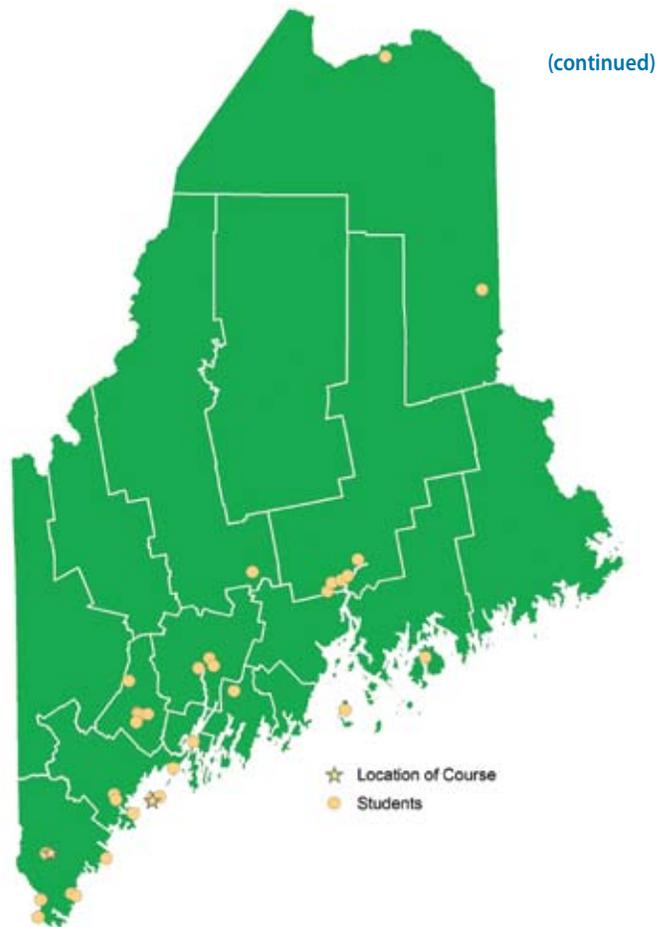
- Evaluating building energy consumption
- HVAC energy inspection
- Lighting surveys
- Indoor air pollutant sources and pathway locations
- Facility electrical distribution

In FY 2009, the BOC program trained 53 students via two BOC Level I courses and one BOC Level II course, a 35% reduction from the previous year that is attributable to the economic downturn.

**IES Illuminating Training Session** (56 participants; Lewiston): Provides presentations to students on the following topics related to lighting: programmable lighting panels using low voltage switches and occupancy sensors; automatic daylight control panels with local override switches and photo sensors; and commissioning of lighting control systems.

**BOC Recertification and “What’s New?” Seminar** (61 participants; Brewer): Teaches students how to become recertified; provides an ARRA update; covers “Being a Successful Energy Bean Counter” and “What’s New: Emerging Technologies for Maine facilities;” provides an overview of Efficiency Maine programs (including Maine Advanced Buildings), gas company programs, Energy Star, COMcheck, Motor Master and VSD calculators.

**AEE Comprehensive 5-day Training for Energy Managers** (22 participants; Augusta): Offers detailed instruction covering the technical, economic and regulatory aspects of effective energy management, including all six training areas specified for energy managers in the Energy Policy Act; and a comprehensive learning and problem-solving forum for those who want a broader understanding of the latest energy cost-reduction techniques and strategies.



**Efficiency Maine 2009 Building Operator Certification Courses**

## Building Operator Certification (continued)

Among the students, 20% are responsible for facility management of K–12 schools, 39% are from the private sector, 33% are from State and town municipalities, and the remaining 8% from the medical facilities. The benefit-to-cost ratio has declined because of a decrease in attendance due to limited resources. The savings estimates are based upon the New England Impact and Process Evaluation of the BOC Program completed in June of 2005.

### BOC Program Track Record at a Glance

Cumulative Results, FY 2002–2009:

- 483 students
- 23 courses in locations all over Maine:  
Auburn, Augusta, Bangor, Brewer, Calais, Old Town, Orono, Portland, Presque Isle/Houlton and Sanford

## Looking Ahead

### Education

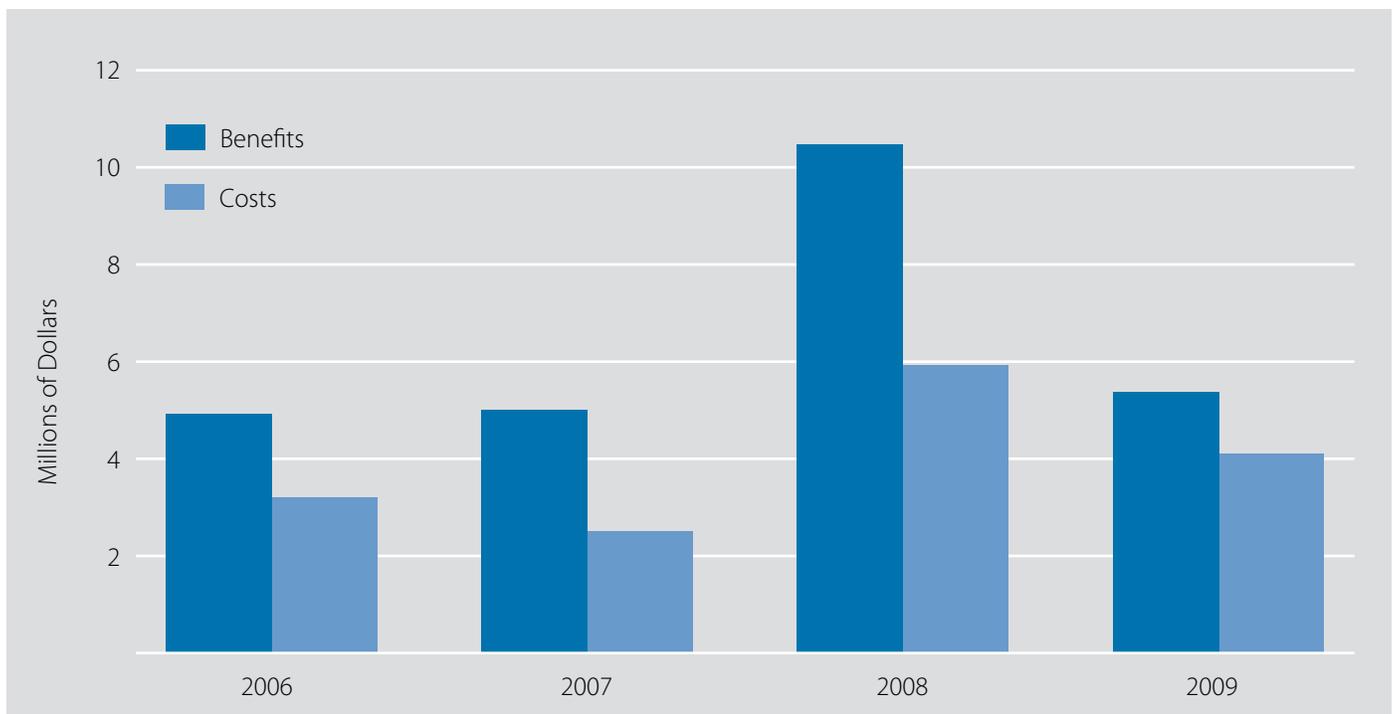
- Opportunities for grade 4–8 teachers to get involved with the PowerSleuth energy education curriculum materials continue through the 2009–2010 school year.
- Efficiency Maine and the Maine Math and Science Alliance are applying for a grant to help teachers and students utilize PowerSleuth in downeast and northern Maine areas.

- The Kill A Watt® Program will be expanded into 7th–12th grade school libraries. Along with the monitors, we will provide PowerSleuth and Energy Education lesson plans to complement the monitors. The monitors and lesson plans will be loaned out like books to teachers and/or students.

### Professional Training

- Efficiency Maine will continue offering professional training workshops while expanding opportunities to involve Qualified Partners.
- Three BOC Level I courses will be offered in East Millinocket, Portland, and Augusta, and one BOC Level II course in Brewer. Courses will continue to be offered at a reduced tuition for public-sector students.
- Efficiency Maine will collaborate with U.S. Environmental Protection Agency and other State agencies on developing two workshops for water and wastewater facility managers on available funding opportunities and other resources they can utilize, specifically energy audits.
- Working with the Maine Department of Environmental Protection, we will continue to spread the word about the Governor’s Carbon Challenge to businesses that have participated in Efficiency Maine programs.

*Efficiency Maine BOC End-User Facility Benefits vs. Costs as a Result of Training 2006–2009*



## High Performance Schools Program

From 2004 to 2009, the High Performance Schools (HPS) Program offered incentives that helped 34 school systems statewide save money by building more energy-efficient new schools. It was a highly successful combined effort of the Bureau of General Services, Department of Education, Maine School Management Association, Efficiency Maine, and Rebuild America.

Starting in FY 2010, Efficiency Maine will address all commercial new construction statewide, including school buildings, via its prescriptive Commercial New Construction (CNC) Program—which has been influenced by the input of architects and engineers who participated in HPS—and a new whole-building design and construction program, Maine Advanced Buildings.

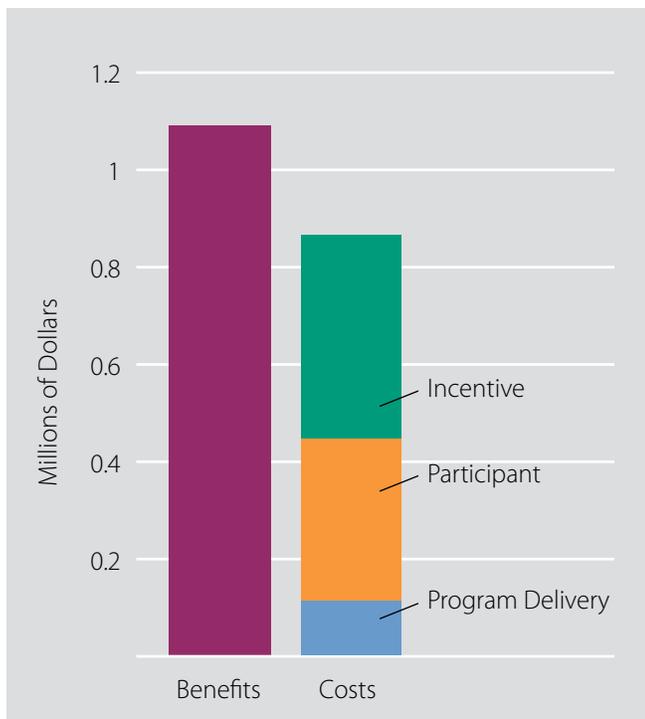
During FY 2009, nine schools or districts were involved with either the design or implementation phase of HPS, generating combined savings of 422,650 kWh, 4,162 therms of natural gas, and 12,744 gallons of oil. At very conservative energy prices, this represents over \$100,000 in savings each year during the life of these schools, which in some cases may extend beyond 50 years.

As of this writing, there are seven HPS schools in some stage of completion, and one additional school is still eligible. These are the remaining units from the 2006 Maine Department Of Education priority list, and although the HPS Program is ending, all commitments made to them under the current Program will be honored.



*These are three of the energy-efficient buildings completed in 2009 through the High Performance Schools Program. Pictured above, top to bottom: new elementary/middle school in Ellsworth, SAD #7 North Haven, and SAD #21 Peru.*

### Efficiency Maine 2009 High Performance Schools Program Benefits vs. Costs



## Looking Ahead

Early in FY 2010, Efficiency Maine started including schools in Maine Advanced Buildings, part of a comprehensive commercial new construction program that will adopt even higher energy-efficiency standards. Schools will be eligible for incentives under the same guidelines as all other nonresidential buildings. Based on past experience, Efficiency Maine fully expects the design community to meet this challenge to improve building efficiency standards once again.



## Related Programs Administered by Efficiency Maine

### State Energy Program (SEP) Grant

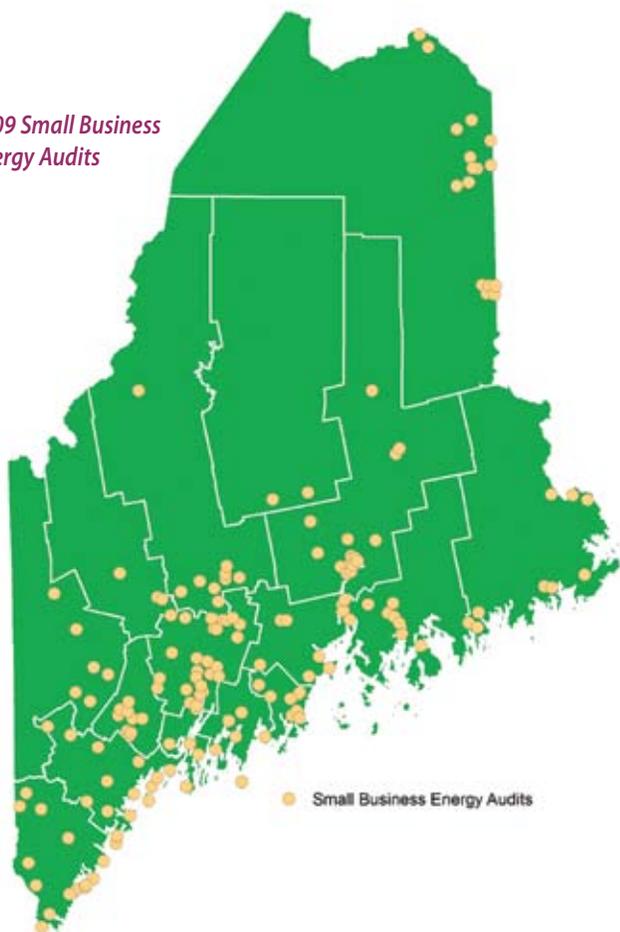
Efficiency Maine administers several programs funded by this annual grant from the U.S. Department of Energy, including most of Efficiency Maine's nonelectrical energy programs.

### Small Business Audit and Loan Program

**Free Energy Audits** of commercial, nonprofit, and manufacturing facilities with no residential components, and fewer than 50 full-time employees or less than \$5 million in annual revenue. After a walk-through audit (rather than an engineering assessment), clients receive a written report on changes they can make to improve energy efficiency and save money, as well as funding sources available to help implement the recommendations.

**Low-Interest Energy-Efficiency Loans** Loans up to \$35,000, (currently at 1% interest) fund energy-conservation measures for small businesses meeting the same criteria as the energy audit

2009 Small Business Energy Audits



program. To qualify, businesses must first receive an energy audit. Examples of eligible projects: insulation, windows, refrigeration, auxiliary power units (APUs) for truckers, and renewable energy (geothermal, wind and solar).

### Anemometer Loan Program

The Program lends two anemometers to communities to assess whether potential sites are suitable for wind production. Anemometers remain in place for one year. Staff and engineering students at the University of Maine's Orono campus oversee the commissioning of these anemometers; collect monthly wind data; provide the selected entities with a written report regarding wind suitability at their sites; and post the information on the Efficiency Maine wind web page.

### 2009 Highlights

- Conducted 237 energy audits, which, if recommendations are implemented, are projected to save an estimated 438 million kWh, 1.5 trillion BTUs and \$2.6 million in energy costs
- Approved ten small business loans in FY 2009, totaling \$276,954, saving 11,255,163 kWh, 38.4 billion BTUs and \$576,428 annually
- Equipment funded by these loans included 15 APUs, each of which will save \$12,000 per year at current diesel prices
- Anemometers were loaned to Auburn and Oakland to assess whether those sites are suitable for wind production

### Looking Ahead

**The Energy Audit Program** will receive \$900,000 in additional funding through ARRA. In FY 2010, an RFP was issued for a contractor to implement the enhanced program. It will provide not only the standard free walk-through energy audit, but also a fee-based scoping-level audit that will provide the specific information larger, more complex facilities need to decide what steps to take to improve their efficiency and to discuss financing of them. Clients can recover the cost of scoping-level audits if they implement the recommended energy-efficiency measures.

**The Low-Interest Loan Program** will receive \$1.3 million in additional funding through ARRA, allowing us to provide additional loans up to \$35,000 (currently at 1% interest) to Maine's small businesses.

In addition, we have a Memorandum of Understanding (MOU) in place through the Department of Environmental Protection which

## 2009 Voluntary Renewable Resources Fund Grants

Applicant	Resource Type	kWh per Year	Match	Grant Request	% Match	Exposure
MSAD #60 (Knowlton School, North Berwick)	Solar	6898	\$10,940	\$43,761	20	Students, parents and community
Pittsfield Recycling/Transfer Station	Wind	9238	\$12,551	\$50,000	20	Visible to 1,500 weekly users plus tours
Great Salt Bay Community School, Damariscotta	Solar	1024	\$1,334	\$5,334	20	Students, parents, community (at sporting events)

provides \$100,000 in Environmental Protection Agency funds to grant 1% loans to qualifying truckers to implement energy-efficiency measures such as auxiliary power units, bunk heaters, etc. These projects typically save truckers \$12,000 per year, and help them meet increasingly stringent regulation of emissions while idling.

**Anemometer Loan Program** Funding through a grant from the U.S. Department of Agriculture for \$30,000, plus \$150,000 in funding through ARRA, will allow us to buy six additional anemometers with accompanying equipment. These anemometer loans will be made through an RFP.

**Small Wind Working Group** Funding received from the U.S. Department of Agriculture, as well as ARRA, has allowed us to develop a web page on wind activities in Maine. This page will eventually include information on development of new wind sites; various funding mechanisms available; data gathered by the anemometer loan program; a schedule of upcoming Wind Working Group activities; and links to informational resources to assist Mainers with questions related to code requirements, studies on sound levels, flicker and more.

## The Renewable Resources Fund

Supported by voluntary contributions consumers make via electric bills, the fund supports small-scale demonstration projects designed to educate the community on the cost-effectiveness of harnessing natural resources for clean electricity. In 2009, the Fund awarded three grants totaling \$99,095 (see table above).

## Looking Ahead

Early in FY 2010, the Renewable Resources Fund will issue a Request for Demonstration Project Proposals, which will be funded with voluntary contributions made by utility users, and the statutory "Alternative Compliance Mechanism."<sup>1</sup>

Soon after, we expect to issue another Request for Proposals funded through ARRA Funds. Grant awards under these proposals will include feasibility studies for the installation and operation of cost-effective renewable energy projects. Eligible entities will remain the same.

- Efficiency Maine will again partner with the Department of Environmental Protection to use a \$14,000 grant from the Environmental Protection Agency to provide mini-grants up to \$1,400 each to preselected schools that have participated in DEP's Greenhouse Gas Survey. Grants may be used to obtain energy audits for the school, Building Operator Certification training for appropriate school staff, or to implement energy-efficiency measures in the school.
- Efficiency Maine will determine the best method for keeping the Biofuels web page and its accompanying electronic newsletter up to date. This page provides information on biofuels activities and issues, including a list of sources for Maine drivers and homeowners.
- In addition to 1% loans for APUs, a 25% rebate program has been added for additional energy-efficient equipment purchases.

## Carbon Free Homes (CFH)

Efficiency Maine manages this web-centered social awareness campaign ([carbonfreehomes.org](http://carbonfreehomes.org)), which has helped Maine households reduce or even eliminate their carbon footprint since April, 2007. Consumers can learn what it means to go "carbon-free;" receive help calculating their household's carbon emissions; learn simple steps to reduce their carbon footprint and energy costs; and go carbon-free by purchasing clean energy or renewable energy certificates (RECs). We will continue to work with Maine Partners for Cool Communities to promote Carbon-Free Homes at a local level.



Simple steps to a smaller footprint.

(continued)

<sup>1</sup>In 2008, the Maine Legislature required that electricity providers who did not meet Maine's renewable energy portfolio standards would have to pay into an alternative compliance fund. The MPUC was instructed to collect these payments and apply them toward renewable resource grants, which has increased the annual fund from approximately \$100,000 a year to \$800,000 a year. However, the language also requires that 35% of this funding be redirected to the Maine Technology Institute for similar grants. In addition, during 2009 and 2010, \$600,000 of Federal money from the American Recovery and Reinvestment Act will be made available for these grants.

## Related Programs Administered by Efficiency Maine (continued)

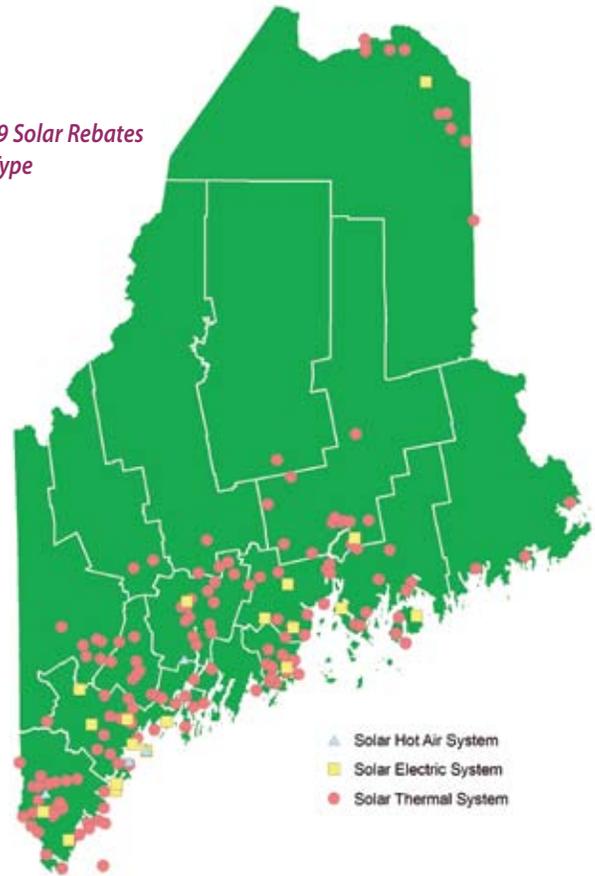
### Solar and Wind Energy Rebate Program

Funding for Solar Incentives was established by statute, with 25% allocated to photovoltaic (PV) and 75% to solar thermal systems. In 2008, the Legislature enacted a new law that expanded the Program to include qualified wind energy systems (P.L. 2007, Chapter 661). Chapter 661 also requires that Efficiency Maine determine the allocation of funds in each fiscal year between PV, solar thermal and wind systems, with at least 20% of the Program funds going to each.

By the end of FY 2008, with oil prices approaching \$5 a gallon, thermal systems became extremely cost-competitive and homeowner applications quickly exceeded available funds. These applicants were awarded a reservation for incentives in 2009, and were so numerous that they effectively closed the program for the 2009 funding year. (When some of these applicants elected not to proceed, new applications were accepted, and all remaining funds were quickly exhausted.)

Starting in January of 2009, wind incentives became available to properties installing turbines rated at 100 KW or less. Simultaneously, a pilot program was funded to encourage the installation of towers higher than the recommended 50-foot level. As of June 30, 2009, incentives have been paid for three turbines, two of which qualified for the pilot program money.

2009 Solar Rebates  
by Type



**Solar Thermal System** on houses in Rockport (top) and Lincolnville (bottom), both installed by ReVision Energy

### 2009 Highlights

- Efficiency Maine provided incentives for 22 PV, 212 thermal hot water, eight thermal hot air and three wind projects in 2009.
- Training class time increased from two days to three, providing added depth and substance to the sessions.
- Certification was awarded to 358 solar installers, including plumbers; boiler technicians; oil or LP/NG technicians; type II, III or Universal Refrigeration Technicians; architects and engineers.

### Looking Ahead

In spring of 2009, the Maine Legislature allowed Efficiency Maine to apply ARRA funds to the solar and wind energy rebate program. In FY 2010 and 2011, \$500,000 per year will be added to the rebate fund, greatly increasing the available resources for solar and wind projects in Maine. These rebates became available starting in July, 2009.

By late 2009, Efficiency Maine will modify the application form that will establish performance standards for solar energy systems, as well as provide a simple payback calculation to inform applicants about performance criteria and performance differences between solar and wind energy systems.



## Conclusions and Projections

Efficiency Maine has played an important role in transforming Maine's economy to be more energy-efficient, sustainable and affordable. In the short-term, Efficiency Maine's programs and services have helped businesses and residents save vast amounts of electricity. Efficiency Maine has also worked to build sustainable long-term changes in the marketplace that will ensure that these savings continue year after year.

The results in this Annual Report are made possible by carefully crafted programs conceived and delivered by dedicated employees and consistent with the best established practices nationwide. Efficiency Maine has delivered savings levels better than the projections of independent researchers.

The evidence shows that the public and media alike have responded favorably to these efforts. Smart energy usage has received unprecedented attention and acceptance. Common-sense efficiency measures are now becoming second nature. New efficient technologies are no longer exotic, but are accepted in all corners of the state. People and businesses are in the midst of a fundamental long-term transition in how they manage their energy consumption and in their willingness to invest in long-term savings.

In 2009, however, easing energy costs and economic uncertainty dampened investment in efficiency measures, especially CFLs. We believe this is an anomaly, and will make sure that we are prepared to provide the information, technical assistance and practical support we anticipate more and more Mainers will seek in 2010. We will not only continue to deliver the programs developed over previous years, but also add substantial new opportunities. Especially exciting, as described below, Efficiency Maine now has the mandate and resources to provide solutions for all fuel sources, not just electricity.

### Electricity Saving Programs Funded By The System Benefits Charge (SBC)

SBC revenues for FY 2010 are projected to be \$13,800,000. This will allow Efficiency Maine to continue to deliver our Residential and Business electricity programs, working with our new Qualified Partners to provide the reliability and quality that have been the hallmark of these programs for nearly six years.

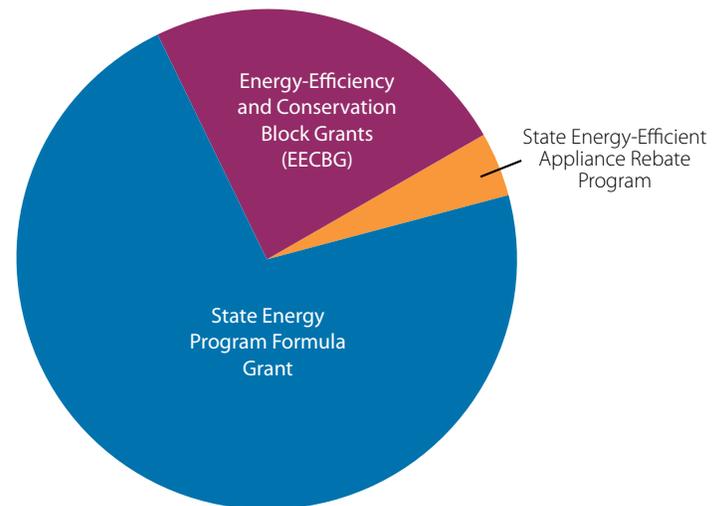
### American Recovery and Reinvestment Act Programs (ARRA)

By far the biggest change at Efficiency Maine in FY 2010 is the receipt of over \$38 million in ARRA funding. ARRA allotments for the State Energy Program (now part of Efficiency Maine) target economic development and job creation and retention, with a strong emphasis on transformation of our energy economy to a cleaner and more sustainable model.

The most important change is that while SBC funds were dedicated exclusively to electricity efficiency, this ARRA funding is "fuel-neutral," allowing Efficiency Maine for the first time to promote efficiency in the large and vital home heating fuel sector.

The funding will also allow for a major regrant program for the benefit of Maine municipalities and counties, supporting energy planning, renewables and innovative community-based energy-efficiency strategies.

Another exciting component of the ARRA-funded programs is the Impact Fund. This large project will be rolled out with added funding from the Energy and Carbon Savings Trust (ECST), making up to \$1 million grants to promising energy programs in Maine's crucial large industrial facilities. The entire portfolio of ARRA-funded programs is as follows:



**ARRA Funding for the State Energy Program and Energy-Efficiency and Conservation Block Grant Programs**

(continued)

## Conclusions & Projections (continued)

FY 2010–2011 ARRA-Funded Programs <sup>1</sup>	
<b>Residential</b>	
Residential Weatherization & Efficiency	\$9,100,000
Residential Weatherization Measurement & Verification	\$150,000
Residential New Construction/Building Energy Codes to SPO	\$502,400
Appliance Rebate Program	\$1,230,000
<b>Professional Training &amp; Development</b>	
Workforce Development (inc. scholarships)	\$1,300,000
Professional Trainings	\$400,000
<b>Business</b>	
Large Project Impact Fund	\$6,314,282
Commercial New Construction	\$1,500,000
Retro Commissioning	\$500,000
Industrial Process Assistance	\$1,250,000
Industrial and Commercial Measurement & Verification	\$300,000
Commercial Audits	\$900,000
Commercial Grants	\$2,000,000
Commercial Loans	\$1,300,000
<b>Other</b>	
ARRA Marketing	\$1,100,000
Grants Connector (with OEIS)	\$100,000
EECBG Re-Grants to Municipalities	\$5,775,000
Solar/Wind Rebates	\$1,000,000
Wind Anemometer Program	\$200,000
Renewable Resource Fund Supplement	\$600,000
Traffic Management (with DOT)	\$700,000
ARRA Administrative	\$1,788,604
<b>Total</b>	<b>\$38,010,286</b>
<sup>1</sup> ARRA Revenues and expenses may be multi-year depending on program design.	

### Expanded Programs Funded by The Energy and Carbon Savings Trust (ECST)

Beginning on July 1, 2009, Efficiency Maine began receiving funding from the ECST for residential and business electricity efficiency programs. As of October 1, 2009 the ECST has provided \$2,600,000 for the existing Business Program, and \$2,600,000 for the Residential Program. These new funds will greatly expand the offerings of Efficiency Maine in residential energy-efficient lighting and appliances. They also allow Efficiency Maine to increase its business incentives substantially, generating new levels of investment in efficient motors, variable speed drives, lighting, HVAC and other smart energy-saving applications.

### The Efficiency Maine Trust

Finally, the organizational structure of Efficiency Maine will change significantly in FY 2010. An "Act Regarding Maine's Energy Future" was signed into law on June 12, 2009. This landmark legislation established the Efficiency Maine Trust (EMT), a new semiautonomous State agency dedicated to delivering energy-efficiency programs in a unified, coordinated and well-planned fashion for all sectors and all fuels in Maine.

Efficiency Maine will leave the Public Utilities Commission to become part of the EMT on July 1, 2010. The EMT will also manage the funding stream generated by the Regional Greenhouse Gas Initiative (RGGI), and the ECST will cease to exist as a separate entity. In short, the new Efficiency Maine Trust is expected to provide the coordination of policy and programming that will bring our energy-efficiency efforts to an exciting new level in coming years.

These budget projections are likely to be modified through the course of 2010. Uncertainties about the economic environment and Maine's implementation of the RGGI are likely to have significant impacts on these forecasts.

FY 2010 Conservation Fund Budget Snapshot <sup>1</sup>			
	SBC/FCM	RGGI	Total
Low Income	\$3,130,408		\$3,130,408
Residential	\$2,300,000	\$4,055,000	\$6,355,000
Business (includes small business)	\$6,880,408	\$4,055,000	\$10,935,408
Education & Outreach	\$1,200,000		\$1,200,000
Administration/Other <sup>2</sup>	\$2,141,227		\$2,141,227
	<b>\$15,652,043</b>	<b>\$8,110,000</b>	<b>\$23,762,043</b>
<sup>1</sup> Conservation fund revenues for FY 2010 include projected income from the System Benefits Charge (\$13,802,043); the Forward Capacity Market (\$1,850,000) and the Regional Greenhouse Gas Initiative (\$8,110,000) for a total of \$23,762,043.			
<sup>2</sup> In FY 2010, three program evaluations will be conducted and have been added to the budget accordingly.			

## Appendix A: Business Program

**Table A1: Business Program: FY '09 Participation by Small and Large Businesses**

Program Type	No. of Participants <sup>1</sup>	No. of Projects	Savings at Customer Level		Savings at Generation Level		Incentive Amount	Percent of Incentive by Type
			MWh Savings	MW Savings	MWh Savings	MW Savings		
<b>Small Business (≤50 Employees)</b>	692	894	11,045	6.84	12,348	7.65	\$1,617,568	33%
<b>Large Business (&gt;50 Employees)</b>	237	544	23,022	2.97	25,738	3.32	\$3,255,198	67%
<b>Total</b>	<b>929</b>	<b>1438</b>	<b>34,066</b>	<b>9.81</b>	<b>38,086</b>	<b>10.97</b>	<b>\$4,872,766</b>	<b>100%</b>

<sup>1</sup> Number of participants differs from number of projects in that one participant can have more than one project in each fiscal year. For example, a business may have four projects counted in one fiscal year, but would only be counted once on the participant level.

**Table A2: Business Program: FY '09 Savings by Business Type**

Business Type	No. of Projects	Savings at Customer Level		Savings at Generation Level		Incentive Amount	Total Participant Costs <sup>1</sup>	Percent of MWh Savings by Business Type
		MWh Savings	MW Savings	MWh Savings	MW Savings			
<b>Business</b>	982	25,442	7.22	28,444	8.07	\$3,095,037	\$9,081,783	75%
<b>Government</b>	286	6,775	2.08	7,575	2.32	\$1,425,805	\$3,585,083	20%
<b>Nonprofit Organization</b>	170	1,849	0.52	2,067	0.58	\$351,925	\$805,370	5%
<b>Total</b>	<b>1438</b>	<b>34,066</b>	<b>9.81</b>	<b>38,086</b>	<b>10.97</b>	<b>\$4,872,766</b>	<b>\$13,472,237</b>	<b>100.00%</b>

<sup>1</sup> Participant costs are full costs on retrofit and incremental costs on new construction/replace on burnout.

**Table A3: Business Program: FY '09 Savings by Facility Type**

Business Type	No. of Projects	Savings at Customer Level		Savings at Generation Level		Incentive Amount	Total Participant Costs <sup>1</sup>	Percent of MWh Savings by Business Type
		MWh Savings	MW Savings	MWh Savings	MW Savings			
Agriculture	55	609	0.15	681	0.16	\$44,255	\$112,299	1.79%
College	33	1,048	0.28	1,171	0.32	\$149,109	\$417,208	3.08%
Convenience Store	24	111	0.02	124	0.02	\$18,731	\$45,18	0.32%
Elementary/ Secondary School	223	5,148	1.78	5,756	1.99	\$1,231,071	\$2,826,475	15.11%
Grocery Store	61	1,212	0.17	1,355	0.19	\$126,359	\$336,551	3.56%
Health	28	1,120	0.39	1,252	0.44	\$265,348	\$613,631	3.29%
Hospital	13	783	0.15	875	0.17	\$115,252	\$336,237	2.30%
Lodging	35	778	0.18	870	0.20	\$99,693	\$325,821	2.28%
Manufacturing	169	8,451	1.43	9,449	1.60	\$860,892	\$2,625,631	24.81%
Office	207	2,170	0.68	2,426	0.76	\$494,390	\$1,219,770	6.37%
Restaurant	28	160	0.04	179	0.04	\$15,214	\$49,582	0.47%
Retail	127	1,699	0.45	1,899	0.50	\$214,988	\$590,986	4.99%
Warehouse	115	4,531	0.92	5,065	1.03	\$370,537	\$1,180,482	13.30%
Other	320	6,247	3.18	6,984	3.56	\$866,928	\$2,792,374	18.34%
<b>Total</b>	<b>1438</b>	<b>34,066</b>	<b>9.81</b>	<b>38,086</b>	<b>10.97</b>	<b>\$4,872,766</b>	<b>\$13,472,237</b>	<b>100.00%</b>

<sup>1</sup> Participant costs are full costs on retrofit and incremental costs on new construction/replace on burnout.

**Table A4: Business Program: FY '09 Benefits and Costs by County**

County	Population by County <sup>1</sup>	Businesses by County <sup>2</sup>	No. of Projects	Savings at Customer Level		MWh Savings	Savings at Generation Level	Total Lifetime Economic Benefits	Total Participant Incentives	Total Participant Costs <sup>3</sup>	Percent of MWh Savings by County	Percent of Businesses by County	Percent of Population by County
				MWh Savings	MWh Savings								
<b>Androscoggin</b>	106,815	2,824	97	4,365	4,880	4,880	\$6,279,378	\$647,515	\$1,743,019	13%	7%	8%	
<b>Aroostook</b>	72,047	2,181	139	1,773	1,983	1,983	\$2,550,924	\$329,595	\$798,067	7%	5%	5%	
<b>Cumberland</b>	275,374	11,000	340	7,989	8,932	8,932	\$11,492,290	\$1,139,806	\$3,174,985	23%	27%	21%	
<b>Franklin</b>	29,927	867	29	1,631	1,823	1,823	\$2,346,050	\$251,785	\$548,071	5%	2%	2%	
<b>Hancock</b>	53,278	2,175	50	900	1,006	1,006	\$1,294,702	\$182,011	\$481,832	4%	5%	4%	
<b>Kennebec</b>	120,839	3,350	146	5,145	5,752	5,752	\$7,400,955	\$517,300	\$1,455,126	11%	8%	9%	
<b>Knox</b>	40,781	1,651	69	1,155	1,291	1,291	\$1,661,009	\$106,664	\$362,739	2%	4%	3%	
<b>Lincoln</b>	34,800	1,493	37	257	287	287	\$369,455	\$39,478	\$129,052	1%	4%	3%	
<b>Oxford</b>	56,734	1,427	28	1,119	1,251	1,251	\$1,610,011	\$102,685	\$585,696	2%	3%	4%	
<b>Penobscot</b>	148,784	4,215	215	3,194	3,571	3,571	\$4,594,954	\$478,432	\$1,424,767	10%	10%	11%	
<b>Piscataquis</b>	17,180	481	12	150	168	168	\$216,126	\$26,724	\$93,490	1%	1%	1%	
<b>Sagadahoc</b>	36,387	890	57	929	1,039	1,039	\$1,336,713	\$253,586	\$542,584	5%	2%	3%	
<b>Somerset</b>	51,658	1,181	45	1,221	1,365	1,365	\$1,756,674	\$155,813	\$322,043	3%	3%	4%	
<b>Waldo</b>	38,511	978	44	338	378	378	\$486,029	\$76,975	\$219,232	2%	2%	3%	
<b>Washington</b>	32,751	924	18	194	217	217	\$279,465	\$36,286	\$98,274	1%	2%	2%	
<b>York</b>	201,341	5,573	112	3,705	4,142	4,142	\$5,329,759	\$528,111	\$1,493,261	11%	14%	15%	
<b>Total</b>	<b>1,317,207</b>	<b>41,210</b>	<b>1438</b>	<b>34,066</b>	<b>38,086</b>	<b>38,086</b>	<b>\$49,004,495</b>	<b>\$4,872,766</b>	<b>\$13,472,237</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	

**Notes:**  
<sup>1</sup> Annual Estimates of the Population for Counties of Maine, 2007. Population Division, U.S. Census Bureau  
<sup>2</sup> County Business Patterns: Maine 2004. Table 4. U.S. Census. June 2006. pg.281  
<sup>3</sup> Participant costs are full costs on retrofit and incremental costs on new construction/replace on burnout.

**Table A5: Business Program: Growth in Approved Program Allies**

Program Ally Types	Prior to FY '04	FY '04	FY '05	FY '06	FY '07	FY '08	FY '09	Total	Percent by Ally Type
Lighting	2	2	4	-	1	1	-	10	1.90%
Electrical	1	16	31	3	-	5	1	57	10.86%
HVAC	-	3	6	2	2	-	2	15	2.86%
Consultant/Engineering/Architect	-	13	19	11	4	-	2	49	9.33%
Plumbing/Mechanical	-	-	-	-	-	-	-	-	0.00%
Contractor	-	31	71	28	1	1	2	134	25.52%
Retailer	2	-	1	-	-	-	-	3	0.57%
Wholesaler	1	-	-	-	-	-	-	1	0.19%
Manufacturer's Representative	2	4	1	-	2	-	1	10	1.90%
ESCO	-	1	2	4	-	-	1	8	1.52%
Finance Company	1	-	-	-	-	-	1	2	0.38%
Management Company	-	1	-	-	-	-	1	2	0.38%
Other	5	-	-	-	1	2	2	10	1.90%
Agriculture	-	1	-	-	-	-	-	1	0.19%
Agricultural Equipment	-	-	-	-	-	-	-	-	0.00%
Refrigeration	-	-	1	-	-	-	-	1	0.19%
Variable Frequency Drive	-	-	3	1	-	-	-	4	0.76%
More than One Type	46	29	39	17	26	30	31	218	41.52%
<b>Total Approved Each Year</b>	<b>60</b>	<b>101</b>	<b>178</b>	<b>66</b>	<b>37</b>	<b>39</b>	<b>44</b>	<b>525</b>	<b>100%</b>

**Table A6: Business Program: Financial Report**

Incentive Costs	Prior Year (FY '08)	Current Year (FY '09)
Incentives to Participants	\$3,168,576	\$4,872,766
Incentives to Trade Allies	\$0	\$0
<b>Subtotal Incentives</b>	<b>\$3,168,576</b>	<b>\$4,872,766</b>
<b>Program Delivery Costs</b>		
Implementation and Technical Assistance	\$2,807,851	\$2,884,804
Marketing	\$385,301	\$341,431
<b>Subtotal Program Delivery Costs</b>	<b>\$3,193,152</b>	<b>\$3,226,235</b>
<b>Administrative and Management Costs</b>	<b>\$120,187</b>	<b>\$161,678</b>
<b>Evaluation Costs</b>	<b>\$0</b>	<b>\$0</b>
<b>Total Efficiency Maine Costs</b>	<b>\$6,481,915</b>	<b>\$8,260,680</b>
<b>Annualized MWh Savings</b>	<b>38,141</b>	<b>34,066</b>
<b>Lifetime MWh Savings</b>	<b>450,217</b>	<b>447,879</b>
<b>Total Lifetime Economic Benefits</b>	<b>\$54,271,253</b>	<b>\$49,004,495</b>
<b>Business Program Benefit-to-Cost Ratio</b>	<b>4.29</b>	<b>2.91</b>

## Appendix B: Residential Program

**Table B1: Residential ENERGY STAR Lighting Program – FY '08 Benefits and Costs by County**

Geographic Savings	Population by County <sup>1</sup>	Total Lighting Products	Savings at Customer Level	Savings at Generation Level	Total Lifetime Economic Benefits	Total Participant Incentives	Total Participant Costs
			Total MWh Savings	Total MWh Savings			
Androscoggin	106,815	62,137	2,526	2,797	\$1,922,731	\$50,158	\$262,461
Aroostook	72,047	25,767	1,293	1,431	\$983,680	\$11,896	\$120,719
Cumberland	275,374	182,453	7,656	8,475	\$5,826,585	\$168,663	\$765,720
Franklin	29,927	13,200	623	690	\$474,139	\$6,532	\$59,776
Hancock	53,278	37,306	1,553	1,719	\$1,182,062	\$31,520	\$158,525
Kennebec	120,839	94,537	3,752	4,154	\$2,855,560	\$74,920	\$393,464
Knox	40,781	27,929	1,245	1,378	\$947,202	\$21,374	\$122,300
Lincoln	34,800	10,679	527	584	\$401,265	\$7,867	\$49,368
Oxford	56,734	16,812	787	871	\$599,099	\$10,298	\$75,917
Penobscot	148,784	103,078	4,276	4,734	\$3,254,699	\$83,586	\$437,524
Piscataquis	17,180	2,252	121	134	\$92,001	\$1,396	\$10,962
Sagadahoc	36,387	27,998	1,124	1,244	\$855,563	\$25,994	\$115,249
Somerset	51,658	16,338	759	841	\$577,963	\$7,784	\$72,831
Waldo	38,511	9,916	582	644	\$442,999	\$8,336	\$51,215
Washington	32,751	7,822	385	426	\$293,028	\$4,877	\$36,173
York	201,341	68,377	2,921	3,233	\$2,222,788	\$61,035	\$295,981
Unknown <sup>2</sup>	0	8,472	478	529	\$363,961	\$6,885	\$41,476
<b>Total</b>	<b>1,317,207</b>	<b>715,073</b>	<b>30,609</b>	<b>33,884</b>	<b>\$23,295,324</b>	<b>\$583,120</b>	<b>\$3,069,662</b>

<sup>1</sup> Annual Estimates of the Population for Counties of Maine, July 1, 2007. Population Division, U.S. Census Bureau

<sup>2</sup> Consists of bulbs dispersed through special promotions, giveaways, and/or an online retail store that cannot be attributed to one specific county.

**Table B2: Residential ENERGY STAR Lighting Program – Annual Growth in Program Allies**

Program Ally Types	FY '02	FY '03	FY '04	FY '05	FY '06	FY '07	FY '08	FY '09	Program to Date
Department	2	0	0	25	0	18	0	-10	35
DIY	8	2	2	2	1	2	0	-6	11
Grocery		0	0	54	1	4	2	73	134
Hardware (Independent)	96	13	0	18	1	-11	6	-3	120
Hardware (Chain)	27	9	5	18	1	-18	3	-2	43
Showroom	5	2	1	0	0	-2	2	2	10
Wholesale	0	0	0	0	1	4	0	-3	2
Other	0	0	0	7	1	-1	0	14	21
<b>Cumulative Total:</b>	<b>138</b>	<b>164</b>	<b>172</b>	<b>296</b>	<b>302</b>	<b>298</b>	<b>311</b>	<b>376</b>	

**Table B3: Residential ENERGY STAR Lighting Program – Products Rebated<sup>1</sup>**

Measure	FY '04	FY '05	FY '06	FY '07	FY '08	FY '09
CFL Bulbs	68,767	107,151	636,704	788,125	1,089,227	705,091
Ceiling Fans	169	118	107	59	0	2,213
External Fixtures	1,459	1,636	2,299	1,876	1,570	523
Internal Fixtures	4,403	4,259	6,260	6,840	6,512	2,440
Table/Floor Lamps	8	78	5	145	1,269	4,745
Torchieres	881	208	130	98	50	55
LED Holiday Lights	-	-	-	7,689	12,286	6
<b>Total</b>	<b>75,687</b>	<b>113,450</b>	<b>645,505</b>	<b>804,832</b>	<b>1,110,914</b>	<b>715,073</b>

<sup>1</sup> Does not include special promotions/giveaways

**Table B4: Residential ENERGY STAR Lighting Program – Financial Report**

Incentive Costs	Prior Year (FY '08)	Current year (FY '09)
Incentives to Participants	\$1,239,352	\$583,120
Incentives to Trade Allies	\$0	\$0
<b>Subtotal Incentives</b>	<b>\$1,239,352</b>	<b>\$583,120</b>
<b>Program Delivery Costs</b>		
Implementation and Technical Assistance	\$843,403	\$595,010
Marketing	\$586,266	\$618,057
<b>Subtotal Program Delivery Costs</b>	<b>\$1,429,669</b>	<b>\$1,213,067</b>
<b>Administrative and Management Costs</b>	<b>\$96,167</b>	<b>\$123,380</b>
<b>Evaluation Costs</b>	<b>\$74,895</b>	<b>\$0</b>
<b>Total Efficiency Maine Costs</b>	<b>\$2,840,083</b>	<b>\$1,919,567</b>
<b>Annualized MWh Savings</b>	<b>55,801</b>	<b>30,609</b>
<b>Lifetime MWh Savings</b>	<b>424,085</b>	<b>208,140</b>
<b>Total Lifetime Economic Benefits</b>	<b>\$51,092,076</b>	<b>\$23,295,324</b>
<b>Business Program Benefit-to-Cost Ratio</b>	<b>6.92</b>	<b>5.29</b>

## Appendix C: Low-Income Programs

**Table C1: Low-Income Programs: FY '09 Benefits and Costs by County**

County	Appliance Replacement Program			Operation Keep ME Warm	Savings at Customer Level			Savings at Generation Level			Total Lifetime Economic Benefits
	Community Action Agency	Qty Refrigerators	Qty CFLs	Qty CFLs	RF MWh Savings	CFL MWh Savings	Total MWh Savings	RF MWh Savings	CFL MWh Savings	Total MWh Savings	
Androscoggin	ACAP	5	361	N/A	7	20	27	7	23	30	\$19,682
Cumberland	CCI & MMCA	306	2,131	N/A	230	58	288	257	65	322	\$209,757
Franklin	CCI	304	2,131	N/A	228	58	286	255	65	319	\$208,087
Knox	KVCAP	139	820	N/A	129	44	173	144	49	193	\$125,932
Lincoln	KVCAP	139	820	N/A	129	44	173	144	49	193	\$125,932
Oxford	PCAP	50	76	N/A	43	5	48	48	5	53	\$34,820
Penobscot	PCAP	50	76	N/A	43	5	48	48	5	53	\$34,820
Sagadahoc	WCAP	28	212	N/A	27	17	44	30	19	49	\$31,849
Somerset	WHCA	563	5,786	N/A	720	201	921	805	225	1,030	\$671,262
Waldo	WHCA	563	5,786	N/A	720	201	921	805	225	1,030	\$671,262
Washington	WMCA	38	238	N/A	31	11	42	34	12	47	\$30,492
Other	N/A	0	0	5,897	0	212	212	0	237	237	\$154,743
<b>Total</b>		<b>2,182</b>	<b>18,437</b>	<b>5,897</b>	<b>2,305</b>	<b>876</b>	<b>3,181</b>	<b>2,577</b>	<b>979</b>	<b>3,557</b>	<b>\$2,318,638</b>

**Table C2: Low-Income Programs: Financial Report**

Incentive Costs	Prior Year (FY '08)	Current Year (FY '09)
Incentives to Participants	\$2,649,975	\$2,410,902
Incentives to Trade Allies		\$0
<b>Subtotal Incentives</b>	<b>\$2,649,975</b>	<b>\$2,410,902</b>
<b>Program Delivery Costs</b>		
Implementation and Technical Assistance	\$0	\$0
Marketing	\$19,897	\$10,412
<b>Subtotal Program Delivery Costs</b>	<b>\$19,897</b>	<b>\$10,412</b>
<b>Administrative and Management Costs</b>	<b>\$109,320</b>	<b>\$120,851</b>
<b>Evaluation Costs</b>	<b>\$18,735</b>	<b>\$0</b>
<b>Total Efficiency Maine Costs</b>	<b>\$2,797,927</b>	<b>\$2,542,165</b>
<b>Annualized MWh Savings</b>	<b>6,186</b>	<b>3,911</b>
<b>Lifetime MWh Savings</b>	<b>37,019</b>	<b>22,890</b>
<b>Total Lifetime Economic Benefits</b>	<b>\$5,675,588</b>	<b>\$2,535,595</b>
<b>Program Benefit-Cost Ratio</b>	<b>2.03</b>	<b>1.00</b>

## Appendix D: Building Operator Certification Program

**Table D1: Building Operator Certification: FY '09 Benefits and Costs by County**

County	Total Participants	Savings at Customer Level	Savings at Generation Level	Total Participant Costs	Total Lifetime Economic Benefits
		Total MWh Savings	Total MWh Savings		
Androscoggin	6	1,027	1,149	496,992	\$666,991
Aroostook	2	271	303	134,147	\$175,762
Cumberland	17	2,552	2,853	1,250,559	\$1,656,967
Hancock	1	171	191	82,832	\$111,165
Kennebec	3	514	574	248,496	\$333,496
Knox	1	100	111	51,315	\$64,597
Lincoln	1	171	191	82,832	\$111,165
Penobscot	5	856	957	414,160	\$555,826
Sagadahoc	2	199	222	102,630	\$129,194
Somerset	1	171	191	82,832	\$111,165
York	8	1,226	1,371	599,622	\$796,185
Other	6	956	1,068	465,475	\$620,423
<b>Total</b>	<b>47</b>	<b>8,214</b>	<b>8,115</b>	<b>4,011,892</b>	<b>\$5,332,935</b>

**Table D2: Building Operator Certification: Financial Report**

	Prior Year (FY '08)	Current Year (FY '09)
<b>Number of Classes</b>	<b>4</b>	<b>3</b>
<b>Number of Participants</b>	<b>80</b>	<b>53</b>
<b>Incentive Costs</b>		
Incentives to Participants	\$0	\$0
Incentives to Trade Allies	\$0	\$0
<b>Subtotal Incentives</b>	<b>\$0</b>	<b>\$0</b>
<b>Program Delivery Costs</b>		
Implementation and Technical Assistance	\$135,667	\$62,597
Marketing	\$0	\$0
<b>Subtotal Program Delivery Costs</b>	<b>\$135,667</b>	<b>\$62,597</b>
<b>Administrative and Management Costs</b>	<b>\$20,845</b>	<b>\$27,573</b>
<b>Evaluation Costs</b>	<b>\$0</b>	<b>\$0</b>
<b>Total Efficiency Maine Costs</b>	<b>\$156,512</b>	<b>\$90,171</b>
<b>Annualized MWh Savings</b>	<b>13,310</b>	<b>8,115</b>
<b>Lifetime MWh Savings</b>	<b>59,526</b>	<b>41,072</b>
<b>Total Lifetime Economic Benefits</b>	<b>\$10,478,944</b>	<b>\$5,332,935</b>
<b>Business Program Benefit-Cost Ratio</b>	<b>1.75</b>	<b>1.30</b>

## Appendix E: High Performance Schools Program

Table E1: High Performance Schools: Financial Report

Incentive Costs	Prior Year (FY '08)	Current Year (FY '09)
Incentives to Participants	\$425,751	\$427,483
Incentives to Trade Allies	\$0	\$0
<b>Subtotal Incentives</b>	\$425,751	\$427,483
<b>Program Delivery Costs</b>		
Implementation and Technical Assistance	\$21,493	\$25,658
Marketing	\$10,563	\$2,598
<b>Subtotal Program Delivery Costs</b>	\$32,056	\$28,256
<b>Administrative and Management Costs</b>	\$33,942	\$80,434
<b>Evaluation Costs</b>	\$0	\$0
<b>Total Efficiency Maine Costs</b>	\$491,749	\$536,173
<b>Annualized MWh Savings</b>	636	423
<b>Lifetime MWh Savings</b>	7,613	5,812
<b>Total Lifetime Economic Benefits</b>	\$1,304,906	\$1,089,236
<b>Business Program Benefit-to-Cost Ratio</b>	1.92	1.25

## Appendix F: Education and Training Programs

Table F1: Education and Training Programs: Financial Report

Incentive Costs	Prior Year (FY '08)	Current Year (FY '09)
Incentives to Participants	\$0.00	\$0.00
Incentives to Trade Allies	\$0.00	\$0.00
<b>Subtotal Incentives</b>	\$0.00	\$0.00
<b>Program Delivery Costs</b>		
Implementation and Technical Assistance	\$275,128.00	\$305,620.21
Marketing	\$34,319.00	\$69,161.58
<b>Subtotal Program Delivery Costs</b>	\$309,447.00	\$374,781.79
<b>Administrative and Management Costs</b>	\$47,692.00	\$76,340.24
<b>Evaluation Costs</b>	\$0.00	\$0.00
<b>Total Efficiency Maine Costs</b>	\$357,139.00	\$451,122.03
<b>Annualized MWh Savings</b>	n/a	n/a
<b>Lifetime MWh Savings</b>	n/a	n/a
<b>Total Lifetime Economic Benefits</b>	n/a	n/a
<b>Business Program Benefit-to-Cost Ratio</b>	n/a	n/a

## Appendix G: Emission Reductions

**Table G1: Efficiency Maine Lifetime Emission Reductions (Metric Tons)**

Emission	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	TOTAL
CO <sub>2</sub>	90,053	162,659	320,849	497,491	559,072	338,106	1,968,231
SO <sub>2</sub>	56	101	200	829	932	516	2,634
NOx	21	38	75	426	479	201	1,240

**Source:** Emission estimates per MWh prior to 2007 are based on Maine-specific marginal emission rates reported in the "2004 New England Marginal Emission Rate Analysis." ISO New England, Inc. May, 2006. Table 5.7-5.9, Page 16. Estimates for 2007 and 2008 are from the Avoided Energy Supply Costs: 2007 Final Report August 10, 2007 Synapse Energy Economics. Estimates for 2009 are from the Avoided Energy Supply Costs: 2009 Final Report August 21, 2009.

FY 2008	FY 2009
CO <sub>2</sub> (lbs/MWh): 1,260	CO <sub>2</sub> (lbs/MWh): 1,027
SO <sub>2</sub> (lbs/MWh): 2.10	SO <sub>2</sub> (lbs/MWh): 1.568
NOx (lbs/MWh): 1.08	NOx (lbs/MWh): 0.61

## Appendix H: Utility Conservation Fund Assessments for Efficiency Maine

**Table H1: Utility Assessments for Efficiency Maine (Actual and Projected)**

Utility	FY '06 (Actual)	FY '07 (Actual)	FY '08 (Actual)	FY '09 (Actual)	FY '10 (Projected)	FY '11 (Projected)
Central Maine Power Co.	\$7,339,093	\$6,290,032	\$11,869,583	\$9,542,836	\$10,814,419	\$10,922,569
Bangor Hydro-Electric Co.	\$1,508,735	\$1,288,409	\$1,503,206	\$2,033,698	\$1,974,928	\$1,975,900
Maine Public Service Co.	\$431,840	\$517,664	\$574,007	\$460,394	\$574,079	\$585,200
Kennebunk Light & Power Co.	\$110,891	\$131,624	\$126,114	\$144,237	\$137,034	\$137,034
Eastern Maine Electric Coop	\$89,926	\$108,796	\$127,688	\$132,858	\$131,337	\$131,337
Houlton Water Co.	\$55,654	\$136,995	\$154,768	\$95,805	\$92,819	\$92,819
Van Buren Light & Power Co.	\$12,782	\$10,866	\$22,847	\$19,830	\$19,837	\$19,830
Fox Island Electric Coop	\$10,107	\$5,446	\$11,135	\$13,352	\$13,100	\$13,100
Swans Island Coop	\$2,125	\$1,467	\$2,601	\$3,075	\$2,924	\$3,000
Madison Electric Works	\$5,960	\$8,213	\$15,636	\$45,617	\$41,566	\$41,566
<b>Total</b>	<b>\$9,567,113</b>	<b>\$8,499,512</b>	<b>\$14,407,585</b>	<b>\$12,491,702</b>	<b>\$13,802,043</b>	<b>\$13,922,355</b>

## Notes



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