2002 Public Utilities Commission

Conservation Report

(Condensed Version)

presented to the Utilities and Energy Committee

December 1, 2002

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Condensed Report

This is a condensed version of the Maine Public Utilities Commission's 2002 Conservation Report submitted on December 1, 2002 to the Utilities and Energy Committee of the Maine Legislature. Unlike the full report, the Condensed Report does not include Commission Orders and Rules issued during 2002, which contain background on issues, interested persons' comments, Commission decisions, and the reasons for our decisions. By removing these Orders and Rule from the report, we allow readers with printing constraints to print and read the summary portions of the 2002 Report while avoiding the extensive printing necessitated by the 180-page full report.

Both reports, and copies of the various Commission Orders and Rules, may be found on the Commission's web page (www.state.me.us/mpuc) in the Electric Conservation Activities section.

BACKGROUND

I. Brief History Of Energy Efficiency Programs In Maine

- **Mid 1970s through March 1, 2000**

  - During the 1970's, growth in electrical use made it necessary to build new electric generating facilities in Maine. Because of rising costs, these plants were sometimes costly and controversial.
  - The Electric Rate Reform Act of 1977 set the stage for improved efficiency of electrical use.
  - In the 1980's, the Maine Public Utilities Commission (Commission) established procedures and criteria that governed energy efficiency programs run by electric utilities. Programs were considered a cost effective means of avoiding costly generation.
  - Utilities implemented a wide array of programs. Annual statewide spending exceeded $20M. Maine became a national leader in efficiency programs.

- **March 1, 2000 through March 2002**

  - The Electric Restructuring Act of 1999 set the stage for separation of electric generation from electric delivery.
  - On March 1, 2000, restructuring began. Electric utilities became "transmission and distribution" utilities that delivered, but did not generate, electricity.
  - The Restructuring Act invested the State Planning Office (SPO) with responsibility for developing a statewide energy efficiency plan. Utilities would implement the programs.
  - Utilities continued to implement a reduced number of efficiency programs. After restructuring, utilities no longer had the same incentive to cause a reduction in electricity use as they had when conservation could offset generation production costs.
  - SPO completed its energy efficiency plan in early 2002, but the Plan was not implemented.

- **April 2002 and beyond**

  - The Conservation Act, enacted in April 2002, vested the Public Utilities Commission with responsibility for developing the statewide electric energy efficiency plan and for implementing efficiency programs. The Act establishes broad goals for the programs.
  - To facilitate quick introduction of new programs, the Act allows the Commission to implement "interim programs" that need not accomplish all the Act's goals. On June 13, 2002, the Commission

approved eleven interim programs (later expanded to twelve), which are currently in various stages of implementation.

- The Act requires the Commission to establish goals and objectives and cost effectiveness criteria for efficiency programs. On September 24, 2002, the Commission established program goals and objectives. On November 5, the Commission established cost effectiveness criteria.
- The Act requires the Commission to establish an "ongoing" (as opposed to interim) statewide plan to begin no later than 2004. The Commission is currently gathering input to establish this plan.
- The Act requires the Commission to establish the level of funding that each utility will contribute toward the statewide plan. The Commission will establish the funding levels at the same time it establishes the ongoing statewide plan.

II. Commission Procedures

- We have sought and received extensive public input on all our decisions. Our general approach has been to issue a proposal regarding a single topic or a related group of topics, solicit written input, and hold a public hearing. When we reach a conclusion, we issue a Commission order that describes our proposal, the issues surrounding the topic, the input we received, our decisions, and the reason for our decisions. We have requested comments on ten topics, we have held nine public hearings and technical conferences, and we have had numerous meetings with individuals and groups with expertise on energy efficiency.

- We have established an energy efficiency web page (www.state.me.us/mpuc/electric_conservation.electricconservation.htm). We place orders, meetings, requests for input, bid solicitations, monthly status reports, and all other related material on the web page.

- We have established a broad email distribution list, to whom we send all material of general interest.

III. Report

- The Act requires that, no later than December 1 of each year, the Commission submit to the Utilities and Energy Committee a report that describes various components of the year's energy efficiency activities.

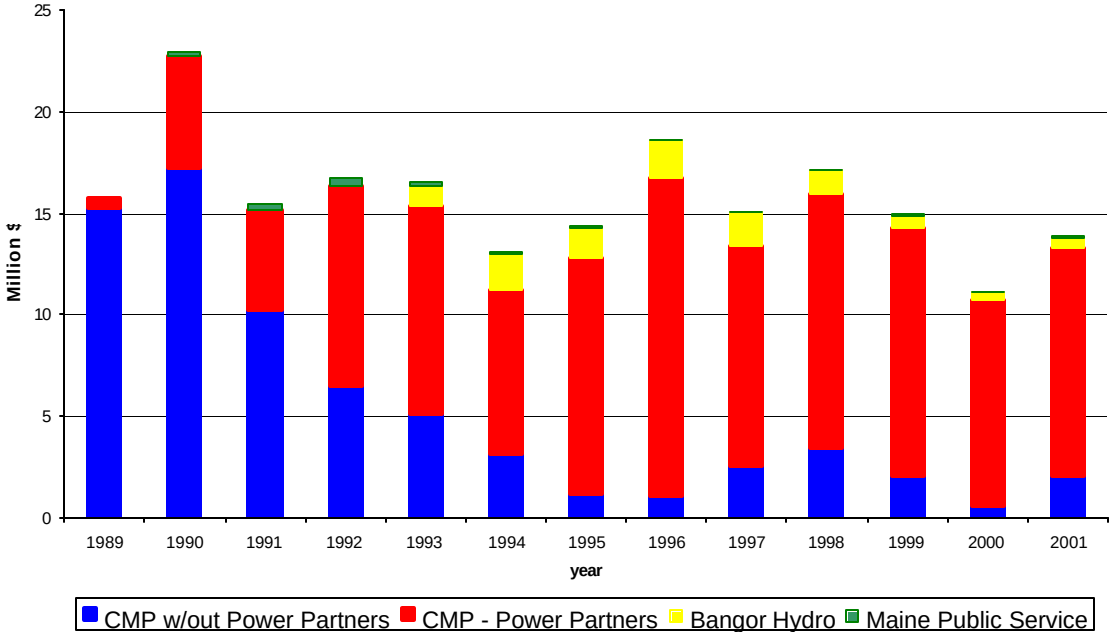
- This first issue of the annual report is organized by topics that have required Commission action pursuant to the Act. Our activity can be divided into two discrete areas. First, we developed and began implementing interim programs. These activities are described in the early sections of the report. Second, we made decisions required by the Act to

govern ongoing programs. This second step requires considerably more time and will continue during 2003. Activities are described in the later sections of the report.

- For each topic, we include two types of material. First, we include a quick overview – usually in the form of bullet points and tables. A reader may wish to read these sections first, to obtain an overview of all topics. For readers who wish more information on background, interested persons' comments, our decisions, and the reasoning behind our decisions, we include Commission orders containing that information.

IV. Historical Conservation Spending

Energy Efficiency Spending in CMP, BHE, and MPS Since the Late 1980s



BHE unavailable before 1993
MPS unavailable before 1990
Consumer-Owned Utility spending not shown

V. The Conservation Act

This section has been removed from the Condensed Report. It may be found on the Commission's web page (www.state.me.us/mpuc) under the Electric Conservation Activities section, or in the full report.

SELECTION CRITERIA FOR INTERIM PROGRAMS

I. Background

- The Legislature recognized that developing a statewide conservation plan that fulfilled all the requirements of the Conservation Act could take many months. To avoid delay, the Act authorizes the Commission to implement interim programs that need not satisfy the requirements of the Act. Interim programs must terminate by the end of 2003.

- We investigated programs in Maine and other states and obtained public input through written comments and a public hearing. From these sources, we established the cost effectiveness tests and other criteria by which we would choose interim programs. We approved 11 programs in June, 2002 and a twelfth in November 2002.

II. Criteria For Interim Programs

The Commission established criteria to govern the choice of interim energy efficiency programs. These criteria balanced the goals of the Act with the objective of implementing the programs quickly. Program criteria are:

- Likely to be cost effective
- Attains a goal stated in the Act
- Is (preferably) a primary effects program (i.e., funding directly causes kWh savings) as opposed to a secondary effects program (where funding causes actions that in turn cause kWh savings)
- Has an established delivery system, so implementation can begin quickly
- Potential as a pilot
- Proven successful elsewhere

III. Cost Effective Tests For Interim Programs

- The Conservation Act directs the Commission to determine the definition of cost effectiveness.

- Since the mid-1970s, cost effectiveness tests have been used to screen efficiency programs. The established test in Maine has been the All Ratepayers Test, which generally compares the cost of the program to the savings caused by avoiding generation and delivery of the electricity saved by the program. Features of commonly used cost effectiveness tests are displayed in a later section of this report.

- We approved cost effectiveness tests for interim programs that mirror the tests currently established in Commission rules and used to choose the programs run by utilities today.

    - All Ratepayers Test (ART) – The ART is the primary screen for cost effectiveness.
    - Rate Impact Test (RIT) – We will consider whether the programs will cause a significant increase in rates.
    - Other Programs – We may implement a program that cannot be shown to pass the ART if it accomplishes other goals of the Act or if it lays the foundation for offering an ongoing cost effective program.

FUNDING FOR INTERIM PROGRAMS

I. Background

- Immediately before Maine's restructured electricity market became operational on March 1, 2000, utility funding for energy efficiency programs varied. Central Maine Power Company (CMP) spent approximately $0.0015 per kWh, while most other utilities spent $0.0003 per kWh or less. A significant portion of CMP's spending was for their Power Partners program, under which payments to customers who installed efficiency measures will continue for a number of years into the future.

- The Restructuring Act established a spending cap of $0.0015 per kWh (CMP's existing level) and a floor of 0.5% of revenue (Bangor Hydro-Electric Company's and Maine Public Service Company's existing level). Utilities collected these amounts in their rates pending completion of the State Planning Office Plan. Most utilities spent less on programs than the amounts they collected.

- The Conservation Act maintains this cap and floor, and directs the Commission to determine the appropriate funding level for each utility.

- The Conservation Act directs the Commission to assess each utility to collect funds for the efficiency programs the Commission implements.

II. Assessment and Collection For Interim Programs

- Currently, we assess utilities based on the level contained in their rates, except that the assessment will not fall above the statutory cap or below the statutory floor. We are collecting the following amounts for the months beginning March 1, 2000.

    - CMP: approximately $0.0015 per kWh
    - BHE, MPS, and most consumer-owned utilities: approximately 0.5% of revenues, which is approximately $0.0003 per kWh for most utilities

- To fund Commission-sponsored efficiency programs, we collect from utilities the assessed amount (at the rate shown above) less the amounts that utilities spend on utility-run programs.

III. Assessments And Collections For Each Utility

Assessments and Collections
3/1/2000 – 12/31/2002

Utility	Assessment	Spent on Utility-Run Programs		Amount Collected for Commission-Run Programs (includes interest)
Central Maine Power	$38,844,183	$34,149,179		$ 4,984,145
Bangor Hydro-Electric	1,526,609	828,995		740,824
Maine Public Service	433,413	168,061		279,986
Eastern Maine Electric Coop	124,378	10,785		119,906
Van Buren Light & Power	4,384	0		4,401
Houlton Water Co.	31,693	26,475		5,250
Madison Electric Works	13,009	0		13,009
Fox Islands Coop	12,206	0		12,533
Swans Island Coop	4,126	0		4,221
Kennebunk Light & Power	93,811	100,958		0
State Total	**$41,087,812**	**$35,284,453**		**$6,164,275**

Estimated Assessments and Collections
2003

Utility	Estimated Assessment	Spending on Utility-Run Programs		Amount to Collect for Commission-Run Programs
Central Maine Power	$12,844,255	$8,088,000		$ 4,756,255
Bangor Hydro-Electric	571,352	222,663		348,689
Maine Public Service	157,705	50,361		107,344
Eastern Maine Electric Coop	30,888	6,810		24,078
Van Buren Light & Power	1,748	0		1,748
Houlton Water Co.	11,095	0		11,095
Madison Electric Works	4,837	0		4,837
Fox Islands Coop	4,934	0		4,934
Swans Island Coop	1,500	0		1,500
Kennebunk Light & Power	U/K	matches assessment		0
State Total	**$13,628,314**	**$8,367,834**		**$5,260,480**

IV. Order On Interim Funding

This section has been removed from the Condensed Report. It may be found on the Commission's web page (www.state.me.us/mpuc) under the Electric Conservation Activities section, or in the full report.

Approved Interim Programs

I. Approved Interim Programs

In June 2002, we approved 11 interim programs. In November, we approved a twelfth program. In the following pages, we include a table that summarizes the characteristics of the programs and a more complete description of each program.

- Low-income refrigerator replacement program
- Building Operator Certification (BOC) program
- State building program
- Department of Economic and Community Development (DECD) Small Business Conservation Loan Fund re-capitalization
- Maine Energy Education Program (MEEP) funding
- Maine energy curriculum investigation
- Residential lighting incentive
- New school construction program
- Small business incentive program
- Low-income no-charge lighting program
- Large commercial/industrial (C/I) program
- Traffic signal replacement program

We also became a sponsor of the Northeast Energy Efficiency Partnership (NEEP).

II. Interim Program Characteristics

Program	Description	Customer Group	Delivery	Status	Estimated Cost Effectiveness *	2002-2003 Budget
Refrigerator Replacement	Replace inefficient refrigerators	Low-income	MSHA CAPs	MSHA and CAP agencies have installed 15 refrigerators	B/C ratio 1.3	$300,000
BOC	Efficiency training for facilities mgrs	Public schools	NEEP	Class begun in Portland, Bangor, and Northern Maine. Heavily enrolled.	B/C ratio 5.9 in Northwest	$168,000
State Buildings	Efficiency measures in State buildings	Public	DAFS	DHS HETL building in Augusta tentatively identified for renovation. Survey of all buildings under consideration.	Projects chosen to ensure cost effectiveness – 1st project B/C ratio 1.8	Up to $1,500,000
DECD Loan Re-capitalization	Add to fund for small business loans	Small business	DECD	Funds transferred to DECD. Auditor tools developed.	Projects chosen to ensure cost effectiveness	$200,000
MEEP Funding	Conservation education through schools	Schools	MEEP	Funds transferred. MEEP able to continue its educational programs when the school year began.	Non-quantifiable	$50,000
Curriculum Development	Fund ME school curriculum development	Schools	Math Science Alliance	Math Science Alliance currently investigating curriculum options. Report due 1st quarter 2003.	Non-quantifiable	$10,000
Residential Lighting Incentive	Increase adoption of compact fluorescents through in-store incentives	Residential	Contractor, Retail Stores	Program design complete. Program implementer chosen through bid process. Program available to consumers Jan. 2003.	B/C ratio 2.5	$2.5M shared, residential lighting & new school construction
New School Construction	Improve efficiency of public schools at time of construction	Schools	Contractor, State Agencies	Meetings held with school and state entities to determine approach. Consultant sought for technical details. Final program design under way. Program available to schools in mid-2003.	Projects chosen to ensure cost effectiveness	
Small Business Incentive	Improve efficiency of small businesses through local vendors	Small business	Contractor, In-state Vendors	Program design complete. Bid process conducted and bids received. Program available to consumers 1st quarter 2003.	B/C ratio 1.4	$3M shared, small business incentive, low-income lighting & large C/I

Low-Income Lighting	Provide compact fluorescents	Low-income	MSHA CAPS	No action taken yet – Benefits and costs to be investigated before implementation	Many cost effective lighting programs nationwide	
Large C/I	Approach not yet determined	Large and medium-sized businesses		No action taken yet – Benefits and costs to be investigated before implementation	Many cost effective programs nationwide	
Traffic Signal Replacement	Replace incandescent traffic lights with LEDs	Public, through municipalities	MDOT	Program design complete. Implementation to begin first quarter 2003	B/C Ratio 2.9	$200,000

* A program is cost effective if the net present value of its quantifiable benefits exceeds the net present value of its costs. "B/C" is the benefit-to-cost ratio. A program is cost effectiveness if the B/C ratio exceeds 1.

III. Descriptions Of Interim Programs

Low Income Refrigerator Replacement Program

Market Situation

The target market for the interim Low Income Refrigerator Replacement program is the residential low-income market. Refrigerator running costs comprise a significant and unavoidable expense for most low-income households, but the high replacement cost discourages most households from purchasing a more efficient model. The program goal is to replace the most inefficient of low-income households' refrigerators.

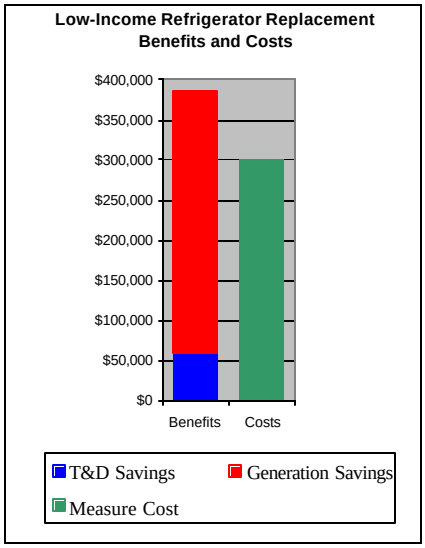
Program Description

The Maine State Housing Authority (MSHA) will deliver the program through the Community Action Program (CAP) Agencies in the same manner used in previous years under programs governed by the Department of Energy (DOE). CAP agencies will examine refrigerators at the same time they audit homes to deliver weatherization, using a combination of metering and estimations to identify inefficient appliances. Under MSHA management, CAP agencies will purchase efficient models from local vendors and will contract locally to perform the replacement and disposal of inefficient models.

Advantages

- *Existing delivery mechanism* – CAP agencies routinely audit low-income households and arrange for weatherization and other aid. CAP agencies also replaced inefficient refrigerators until federal funding was discontinued. CAP agencies retain trained individuals and vendors.
- *Cost effective and easily measured savings* – CAP agencies have established means for determining the energy usage of existing refrigerators and manufacturers publish usage of new refrigerators, so savings will be pre-determined and measurable. We have estimated the benefit-to-cost ratio of the Maine's interim program to be 1.3.
- *Reaches low-income people* – This program will help fulfill the Act's mandate to target 20% of funding to low-income customers.

Benefits and Costs



Benefit-to-Cost Ratio: 1.3

Building Operator Certification Training

Market Situation

The target market for the interim Building Operator Certification (BOC) program consists of personnel who operate and maintain public school buildings in Maine. Many plant operators receive little formal training in the complex operation of their buildings' electrical systems. The program goal is to enable these individuals to improve the efficiency of these systems through their daily decisions.

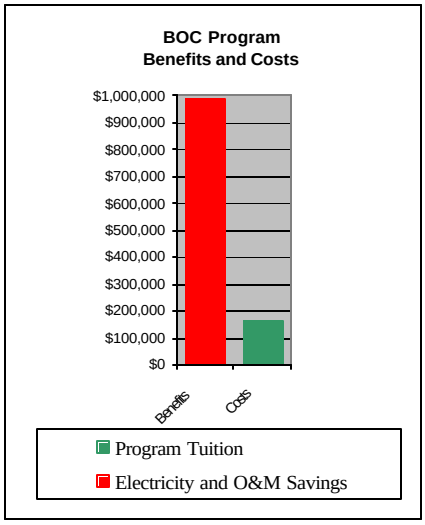
Program Description

The BOC program is an established 8-day course being offered throughout New England, the Northwest and mid-Atlantic states. In New England, BOC is offered by the Northeast Energy Efficiency Partnership (NEEP). NEEP uses experts in areas such as lighting, HVAC and indoor air quality, and requires hands-on projects to reinforce efficiency concepts. The program is being offered in Portland, Bangor, and Northern Maine. To ensure adequate enrollment in Northern Maine, the course has been extended to larger hospitals and publicly funded colleges and universities.

Advantages

- *Existing delivery mechanism* – NEEP teaches this course throughout New England.
- *Cost effective* – The cost effectiveness of education programs has traditionally been difficult to quantify. However, the BOC program was evaluated in the Pacific Northwest and found to have a benefit-to-cost ratio of 5.9.
- *Benefits many citizens* – Cost savings will extend to all taxpayers who support Maine's public schools.
- *Promotes sustainable improvements* – Education is permanent. Plant managers will continue to make improved efficiency decisions for many years.

Benefits and Costs



Benefit-to-Cost Ratio: 5.9

State Buildings

Market Situation

Many state buildings could lower their electrical use or use electricity more efficiently. However, efficiency improvements require a significant level of upfront capital spending, which may inhibit implementation. The goal of the State Buildings program is to provide funding for electrical efficiency improvements in State buildings that the State would be unable to fund otherwise.

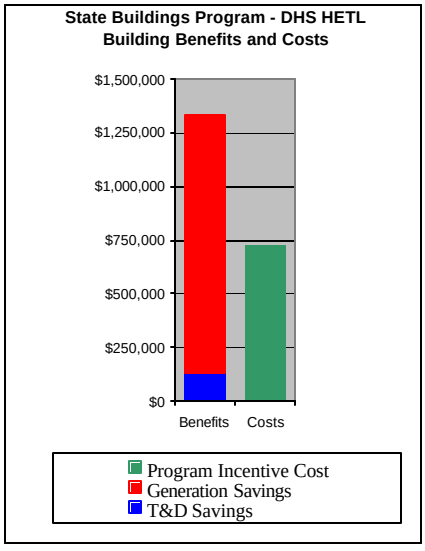
Program Description

The program provides funding to the Department of Financial and Administrative Services to capitalize efficiency improvements in one or more State buildings. The Commission and DAFS will identify measures or renovations to fund based on engineering estimates that ensure the project will be cost effective.

Advantages

- *Existing delivery mechanism* – DAFS routinely identifies and carries out renovation projects.
- *Cost effective using engineering estimates, and easily measured savings* – Each efficiency improvement will be approved based on established engineering estimates of energy savings. Savings generally will be easily measured through bills, engineering estimates, or metering. We have estimated the benefit-to-cost ratio of the first project carried out under this program to be 1.8.
- *Benefits all citizens* – Cost savings will extend to all taxpayers who support Maine's public buildings.
- *Good pilot* – This program will fund a small number of building renovation projects which will indicate whether the program should be expanded to additional public or private building renovations.

Benefits and Costs – DHS HETL Building



Benefit-to-Cost Ratio: 1.8

DECD Small Business Loan Fund Re-Capitalization

Market Situation

The target market for the interim DECD Small Business Loan Fund Re-capitalization program is the small business market. Many small businesses could reduce their electrical use or improve their business operations through more efficient use of electricity, but are unable to commit the high upfront cost of carrying out efficiency improvements. The program goal is to allow small businesses to implement electric efficiency measures that they are would otherwise not make because of high capital costs.

Program Description

The program provides one-time funding to the Department of Economic and Community Development (DECD) to re-capitalize its small business revolving loan fund. DECD currently provides loans from this fund for small business efficiency investment opportunities that DECD identifies through energy audits. DECD will use Commission-approved funds for electric energy efficiency measures that it pre-determines to be cost effective.

Advantages

- *Existing delivery mechanism* – DECD currently identifies, approves, and delivers loans using its revolving loan fund.
- *Cost effective using engineering estimates, and easily measured savings* – Each efficiency improvement is approved based on established engineering estimates of energy savings. Savings are generally easily measured through bills, engineering estimates, or metering.
- *Promotes sustainable economic development* – Efficiency measures financed through loans will be long-term and will improve the economic position of each business, thereby satisfying this goal established in the Act.
- *Reaches small businesses* – This program will help fulfill the Act's mandate to target 20% of funding to small business customers.

Benefits and Costs

- Benefits – Each project will be chosen based on a cost effectiveness estimate.
- Costs – $200,000
- Cost effectiveness – Will be calculated for each project

Maine Energy Education Program (MEEP) Funding

Market Situation

MEEP is an organization that provides in-school energy education programs to K-12 students across Maine. MEEP is funded entirely through donations and faced a funding crisis in 2002. The goal of the program is to allow MEEP to continue offering programs during this school year.

Program Description

The program provides funding to support the operational expenses of MEEP for one school year. MEEP will continue to offer electric energy education demonstrations, special programs, and building audit assistance to school children throughout Maine.

Advantages

- *Existing delivery mechanism* – MEEP has been operating in Maine for many years. Its programs are established and well-known.
- *Benefits many citizens through their children* – Improved knowledge of electric efficiency will extend to the families of children who participate..
- *Increases consumer awareness* – This program will help fulfill the Act's mandate to increase consumer awareness.

Benefits and Costs

- Benefits – While benefits are unquantifiable, teachers throughout Maine testify to the value of the MEEP programs to their students and their curriculum.

- Costs **-** $50,000

- Cost effectiveness – Unquantifiable

Curriculum Development

Market Situation

Schools throughout Maine take varying approaches to electricity education. Nationally, electrical curricula including facts, issues, and efficiency concepts have been developed that could improve the effectiveness and consistency of energy education in Maine's schools. The goal of the program is to allow an education task force to develop a recommendation for an effective approach to statewide energy education in Maine.

Program Description

The program provides funding to allow a group of professional educators to examine curriculum approaches, including ways to measure energy saved as a result of the curriculum. Under the auspices of the Maine Mathematics and Science Alliance, the group will submit its recommendations to the Commission in April 2003. The recommendations will allow us to make the most effective use of future education funding.

Advantages

- *Benefits many citizens through their children* – Improved knowledge will extend to the families of children who participate.
- *Increases consumer awareness* – Program results will help us develop programs that fulfill the Act's mandate to increase consumer awareness.

Benefits and Costs

- Benefits – The recommendations from this study will allow us to fund effective curricula and will improve our ability to determine cost effectiveness.
- Costs - $10,000
- Cost effectiveness - Unquantifiable

Residential Lighting Incentive

Market Situation

The target market for the interim Residential Lighting Incentive is the entire residential market. Residential consumers typically purchase incandescent light bulbs that are far less efficient than compact fluorescent lights (CFLs) because of the lower upfront cost and lack of familiarity with CFLs. The program goal is to make CFLs a purchase-of-choice for residential consumers and a stock item on retail shelves.

Program Description

The program encourages the public's adoption of the following lighting products:

- Compact fluorescent lights (as opposed to incandescent lights)
- Interior fixtures
- Exterior fixtures
- Torchieres
- Ceiling fans with integral lighting

Promotion and incentives will take place in retail stores where residential customers purchase lighting products and through media that reach residential customers. The program incentive will be available to any person who purchases a light bulb or lighting fixture in a retail store. Some small businesses are also likely to benefit from the program.

The program will be delivered through a network of participating Maine retailers (hardware stores, national retail merchandisers, grocery stores, lighting stores). The retailer will display rebate coupons in the store, and customers will submit the coupon and receive the rebate at the point of purchase. The retailer will also display informational material and will be prepared to discuss the efficient products with shoppers. Newspaper and radio will be done through the program and, ideally, by the retail stores.

The Commission has hired a program administrator who will develop promotional material, prepare the coupons and store displays, recruit and train Maine retailers, process coupons, and track results.

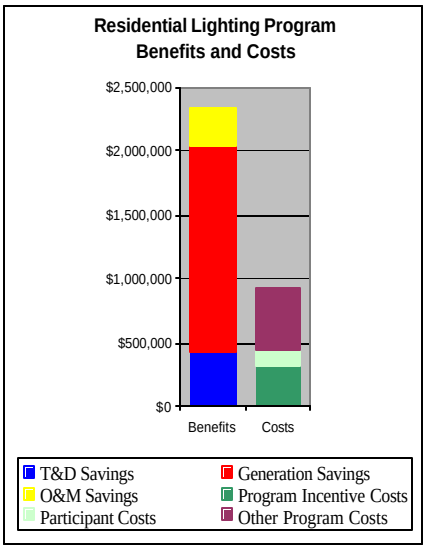
The program administrator and the Commission have not yet decided upon the rebate level for each measure.

Advantages

- *Cost effective* -- Point-of-purchase lighting programs are well established nationally and have been evaluated as cost effective in many states. We have estimated the benefit-to-cost ratio of Maine's interim program to be 2.5.

- *Reaches a large number of people* – All households purchase light bulbs, so every person in the state has an opportunity to participate in the program to the extent made available by program funding.
- *Increases consumer awareness* – Informational material displayed in retail stores and media advertisements will reach a large number of people.
- *Creates favorable market conditions* – The program will increase lighting stock in retail stores and establish customer acceptance of CFLs, thereby transforming the market so that customer incentives are no longer needed.

Benefits and Costs



Benefit-to-Cost Ratio: 2.5

New School Construction Program

Market Situation

Each year, a modest number of towns in Maine receive Maine Board of Education approval for state funding to begin the process of constructing a new public school. The State typically provides a major share of the funding, with the remainder provided through local bonding. The new school construction process typically takes a number of years to complete, and throughout this period, affected towns interact extensively with State agencies regarding funding, siting, architectural design, and construction practices. In an effort to hold initial capital costs down, many towns make design decisions that may not be the most energy efficient option available and thus build facilities that require higher than necessary energy and operating costs over their lifetimes. The program goal is to motivate and encourage school districts to adopt efficient designs and install efficient energy systems that they would otherwise forego because of high capital costs.

Program Description

Detailed design of this program is still in progress as this report is being written. In general, we plan to provide information and education on energy efficient new school designs and technologies to both local school boards and educators, and the architect/engineer community that supports school construction. The program will begin with the following features, and expand as we learn the needs of decision makers and citizens:

- Program funding will support additional technical design services for school boards and their architects/engineers, to evaluate more cost effective school design options.
- Program funding will support an architect/engineering firm that will provide technical expertise in energy efficient school design to the Maine Department of Education and Bureau of General Services.
- Under a DOE grant, Maine School Management Association (MSMA) will provide a “circuit rider” to work with local school authorities and explain the benefits of energy efficient design.
- We will fund (with USDOE and other outside assistance where available) a series of workshops on high performance school design, for local school authorities and the school design community.

The assistance will be offered to the schools that, in recent years, have been approved by the Board of Education for construction funding.

Advantages

- *Benefits many citizens* - Cost savings will extend to all taxpayers who support Maine’s public schools.

- *Promotes sustainable improvements* - A superior design will improve the operating costs of a school building for scores of years and will provide an example for all decision makers in the new school community. The program will also demonstrate to MDOE which energy efficient design features and technologies should be incorporated into new school construction standards.
- *Increases consumer awareness* - A wide range of citizens will observe the improved building practices used in a public school
- *Good pilot* - This program will fund a few school projects, but will also serve to demonstrate whether this approach should be expanded to additional public or private building construction and renovations.

Benefits and Costs

- Benefits – Each school project will be chosen based on a cost effectiveness estimate.

- Costs – up to $2.5M shared with Residential Lighting Incentive

- Cost effectiveness – Will be calculated for each school project

Small Business Incentive

Market Situation

Small business customers are one of two "hard to reach" markets specifically targeted by the Conservation Act. Small business owners face significant barriers to implementing energy efficiency. There is intense competition for their time and attention, small business owners often lack knowledge regarding unfamiliar energy efficient technologies, and they lack significant capital to invest in new technologies. Many efficiency investments require a large upfront investment that, over time, will be more than offset by reduced operating costs. The goals of this program are to improve the efficiency of energy use by business owners, increase the number of Maine suppliers selling efficient products and services to small businesses, and to increase awareness of efficient products and business practices.

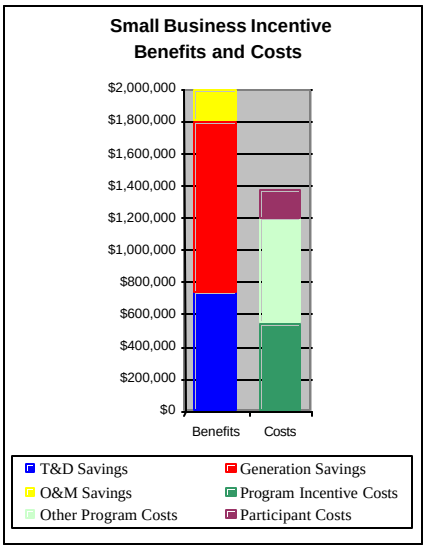
Program Description

The program will offer a financial incentive to small businesses that retrofit their electric equipment with more efficient measures. A single entity will oversee the program, but measures will be introduced, sold, and installed by in-State vendors, stores, and service providers who already deal with small business customers. The program manager will help this network of program allies to integrate energy efficiency into the measures and services they already provide. The program will include an education component meant to improve vendors' knowledge, thereby allowing that knowledge to be passed along to small business customers.

Advantages

- *Cost effective* – Programs that promote purchase and installation of efficient products are cost effective in other locations. We have estimated the benefit-to-cost ratio of Maine's interim program to be 1.4.
- *Promotes sustainable economic development* – Improvements in electrical equipment and in business practices are long-term changes that will lower operating costs (or provide business benefits) for many years. Such actions improve the economic position of the companies, thereby encouraging economic growth.
- *Creates favorable market conditions* – By using in-State suppliers and vendors to provide measures and information, the program will improve the infrastructure delivering efficiency measures, thereby transforming the market such that customer incentives will be less necessary in the future.
- *Increases consumer awareness* – Vendors throughout Maine will become more knowledgeable and will offer more efficient products, and will pass that knowledge on to their small business customers in the course of normal business interactions.
- *Reaches Small Businesses* – This program will help fulfill the Act's mandate to target 20% of funding to small business customers.

Benefits And Costs



Benefit-to-Cost Ratio: 1.4

Low-Income Lighting

Market Situation

As do many residential consumers, low-income consumers typically purchase incandescent light bulbs that are far less efficient than compact fluorescent lights (CFLs) because of the lower upfront cost and lack of familiarity with CFLs. The program goal is to overcome the barrier of higher upfront cost by installing CFLs in low-income consumers' homes at no cost to the consumer, thereby lowering the consumers' electrical use and electric bills.

Program Description

While program details have not been developed, the general approach will be for CAP agencies to dispense energy efficient light bulbs as part of the CAP weatherization programs. CAP agencies will supplement the information they now provide to low-income consumers with information on the energy efficient light bulbs.

Advantages

- *Existing delivery mechanism* – CAP agencies routinely audit low-income households and could easily dispense CFLs.
- *Cost effective* – Residential lighting programs have been found cost effective in many states. The incremental cost of dispensing light bulbs during an audit visit will be small, making cost effectiveness even more likely.
- *Reaches low-income people* – This program will help fulfill the Act's mandate to target 20% of funding to low-income customers.

Benefits and Costs – Unknown until design complete

Large Commercial/Industrial Program

Market Situation

Large commercial and industrial customers often employ industrial processes and building controls that use or influence large quantities of electricity. Some large customers possess sophisticated electrical knowledge but face investment hurdles. Other customers would benefit from improved knowledge of electrical systems. We have not yet determined the goal of the program.

Program Description

This program is not yet designed.

Advantages

- *Cost effective using engineering estimates and easily measured savings* – Many types of large C/I programs result in savings that are easily estimated and measured.
- *Promotes sustainable economic improvements* – Improvements in industrial processes, building controls, and other efficiencies gained from electric-intensive processes are long-term changes that will lower operating costs (or provide business benefits) for many years. Such measures improve the economic position of the companies, thereby encouraging economic growth.
- *Good pilot* – This program is likely to fund a small number of projects that will indicate whether the approach should be expanded to additional, similar projects.

Benefits and Costs – Unknown until design complete

Traffic Signal Replacement

Market Situation

Most of the 662 traffic signals in Maine are owned by the Maine Department of Transportation (MDOT) and maintained by municipalities, which pay for the energy consumed and replace bulbs when needed. Light Emitting Diode (LED) traffic signal bulbs consume one tenth the energy and last seven to 15 times as long as incandescent bulbs. MDOT has identified LED retrofits as a sustainability strategy under Maine's Clean Government Initiative, and the New England Governors and Eastern Canadian Premiers have identified this type of retrofit as providing environmental benefits. MDOT installs LED bulbs in traffic signals under its jurisdiction. However, because of high upfront costs and lack of familiarity with LED options, many municipalities continue to replace existing incandescent bulbs with new incandescent bulbs. The program goals are to reduce energy consumption and greenhouse gasses produced by traffic signals as well as increase municipalities' awareness of the benefits of these LED bulbs.

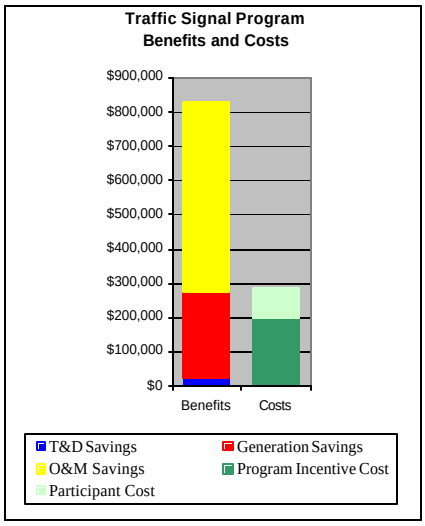
Program Description

This program will fund 2/3 of the cost of LED traffic lights purchased by municipalities during 2003. MDOT will deliver the program by notifying municipalities of the program and determining the locations that will receive funding. MDOT will provide a retrofit kit, arrange for installation, and supervise the installation. In addition, MDOT will continue to provide education to municipalities regarding the advantages of LED bulbs.

Advantages

- *Benefits many citizens* – Most traffic signals are maintained by municipalities. Thus, electricity cost savings and ongoing replacement costs will extend to all taxpayers in participating municipalities.
- *Existing delivery system* – MDOT will manage program delivery to municipalities throughout Maine.
- *Cost effective* – Similar programs have been found to be cost effective elsewhere. We have estimated the benefit-to-cost ratio of Maine's interim program be 2.9.
- *Increases consumer awareness* – The program will increase awareness among all municipalities of the cost savings attainable through LED traffic light replacement.
- *Improves safety* – With longer lives, LED lights will increase the reliability of intersection signals.

Benefits and Costs



Benefit-to-Cost Ratio: 2.9

Northeast Energy Efficiency Partnership (NEEP) Sponsorship

The Conservation Act allows the Commission to coordinate its activites with similar efforts in other states and to enter into agreements with other entities otutside of Maine, for joint or cooperative planning or program delivery, when such activity will benefit Maine.

NEEP is an organization that coordinates program design, development, monitoring, evaluation, research, and communication activities among utilities and other state agencies that offer energy efficiency activities. NEEP's mission is to increase energy efficiency in homes, businesses, and industry in the northeast region of the United States. NEEP's activities are determined by the needs of its funding sponsors, who determine how funding will be directed. A small staff provides support to sponsors.

Sponsorship of NEEP allows the Commission to make use of programs, outreach material and research developed through NEEP and allows us to contribute to decisions regarding future regional efficiency activities. With this in mind, we became NEEP sponsors in 2002. The sponsorship funding level is determined by the size of the service territories that the sponsor represents and by the number of programs that the sponsor supports. We are sponsoring support for the residential lighting initiative and the building operation and maintenance initiative. Two of the interim programs implemented in Maine rely heavily on NEEP activities associated with those initiatives. Thus, sponsorship of NEEP accomplishes a goal of the Act and directly supports development of our interim programs.

IV. Emissions Savings by Interim Programs

Annual Emissions Avoided by Interim Conservation

Program	Annual MWh	Lbs. SO2	Lbs. NOx	Tons CO2
Low-Income Refrigerator Replacement	342	2,464	684	270
Traffic Signal Replacement Program	908	6,538	1,816	716
State Buildings Program	2,427	17,474	4,854	1,915
Residential Lighting Incentive	4,105	29,556	8,210	3,239
Small Business Incentive	1,776	12,787	3,552	1,401
Total Program	9,558	68,819	19,116	7,541

Assumptions:
Emission savings from "1999 Nepool Marginal Emission Rate Analysis" April 2002 Table 2 p.6
SO2 = 7.2 lbs./MWh
Nox = 2 lbs./MWh
CO2 = 1578 lbs./MWh

V. Order Establishing Interim Conservation Programs

This section has been removed from the Condensed Report. It may be found on the Commission's web page (www.state.me.us/mpuc) under the Electric Conservation Activities section, or in the full report.

VI. Building Operator Certification Course Description

This section has been removed from the Condensed Report. It may be found on the Commission's web page (www.state.me.us/mpuc) under the Electric Conservation Activities section, or in the full report.

VII. Order Establishing Interim Conservation Program – Small Business Program

This section has been removed from the Condensed Report. It may be found on the Commission's web page (www.state.me.us/mpuc) under the Electric Conservation Activities section, or in the full report.

VIII. Order Establishing Interim Conservation Program – Traffic Signal Replacement Program

This section has been removed from the Condensed Report. It may be found on the Commission's web page (www.state.me.us/mpuc) under the Electric Conservation Activities section, or in the full report.

BACKGROUND - ONGOING PROGRAMS

- Because the Conservation Act requires interim programs to be discontinued by the end of 2003, the Commission must develop its final statewide Energy Efficiency Plan of ongoing programs no later than 2003.

- As discussed earlier in this report, we have expended considerable effort to inform the public of all our activities and to obtain public input on all topics. We have received written comments on a variety of topics and have conducted nine public hearings. We have established a web page containing all documents, opportunities for input, and solicitations, we publish a monthly status report, and we maintain a broad e-mail distribution list for material of general interest.

- We are developing the statewide Plan through proceedings on a series of topics. We have reached decisions on the following issues, and describe them in subsequent sections of this report:

    - Goals, objectives and strategies for ongoing programs – decision issued in September 2002
    - Cost effectiveness tests for ongoing programs – order approving rule issued in November 2002
    - Definitions of low-income consumer and small business consumer – order approving rule issued in November 2002
    - Branding – we have chosen a "brand name." Legal and graphic activities necessary for adoption are underway.

- The significant remaining decisions are: what ongoing programs will be implemented and how much funding will be collected from each utility? We will make these two related decisions at the same time, before the legislative session ends in 2003. We have undergone the following activities related to these issues:

    - We issued our order establishing procedures in July 2002.
    - The Office of the Public Advocate conducted studies of the technical and economic potential of efficiency programs in Maine. The studies were completed in October 2002. Extensive public examination of the results occurred in October and November.
    - The public submitted written comments and oral presentations on potential ongoing programs in October and November 2002.
    - Interested persons submitted legal briefs on appropriate utility assessment levels in November 2002.

GOALS, OBJECTIVES, AND STRATEGIES FOR ONGOING PROGRAMS

I. Background

- The Conservation Act contains a number of goals and directives that we must achieve through the statewide energy efficiency program:

  - Increase consumer awareness of cost effective options for conserving energy
  - Create more favorable market conditions for the increased use of efficient products and services
  - Promote sustainable economic development
  - Promote reduced environmental damage
  - Target at least 20% of available funds to programs for low-income residential consumers
  - Target at least 20% of available funds to programs for small business consumers
  - To the greatest extent practicable, apportion the remaining available funds among customer groups and geographic areas in a manner that allows all other customers to have a reasonable opportunity to participate in one or more conservation programs
  - Implement programs that are cost effective

- The Act requires the Commission to balance these goals as we develop a portfolio of programs.

II. Basic Portfolio Principles

- The Commission determined that cost effectiveness (discussed later in this report) would be a threshold requirement for all programs.

- We also established the basic principle that the portfolio should create sustainable improvements in energy efficiency.

III. Program Goals

The Commission determined that the goals of Maine's energy efficiency programs shall be to:

- Improve the efficiency of electric energy use by Maine residential consumers, businesses and other organizations
- Increase consumer awareness of cost effective options for conserving energy
- Create more favorable, sustainable market conditions for the increased use of efficient products and services
- Promote sustainable economic development
- Reduce environmental damage associated with energy use

IV. Program Objectives

The Commission established the following observable or measurable program objectives:

- Implement a portfolio of conservation programs pursuant to a Maine energy conservation plan
- Implement an organizational model for administration and management of energy conservation programs
- Review existing utility programs and implement a transition plan by the end of 2003
- Create an awareness of the conservation programs and the value of energy efficiency among the general public
- Increase the availability of energy efficient products and services through Maine businesses
- Save a pre-defined number of kWhs through program implementation by December 2003

V. Program Strategies

The Commission established the following strategic activities to ensure that the portfolio of programs meets our goals and objectives.

- Market assessment

    - Conduct market assessment studies as needed to expand our knowledge and understanding of the markets for energy efficient products and services in Maine. Coordinate our market assessment efforts with others in the region where possible.
    - Develop market baseline measurements for efficient products and services as needed to support program design and evaluation.

- Program design and implementation

  - Implement a portfolio of programs that allows all major customer groups a reasonable opportunity to participate in one or more programs.
  - Implement programs targeted at traditionally "hard-to-reach" markets. Target 20% of funds to programs for low-income customers, and 20% of funds to programs for small business customers.
  - Design programs that balance immediate primary results (cost effective kW and kWh savings) with longer-term secondary results (self-sustaining markets, economic development, environmental benefits).
  - Encourage the development of an energy efficiency infrastructure, resources, and skills in Maine. Use existing market channels for program delivery, where possible.
  - Assess current utility programs and their fit with our program plan, phase out those no longer needed, and re-design those to be carried forward.
  - Integrate customer educational efforts into all programs to promote changes in buying habits and energy usage behaviors.
  - Implement an overall marketing effort that develops a clear brand image for our programs, supports program implementation, and increases public awareness of the benefits of energy efficiency.
  - Adopt or adapt regional or national programs or programs from other states, if they will provide benefits to Maine's citizens and are consistent with these goals, objectives, and strategies.

- Monitoring and evaluation

  - Develop tracking and evaluation criteria and procedures for each program. Coordinate our tracking and evaluation efforts with others in the region where possible.
  - Evaluate programs to a level sufficient for business decision-making.

- Funding

  - Implement an accounting and reporting system to track revenues by source and expenditures by program and category, in sufficient detail to support evaluation and reporting needs.
  - Leverage ratepayer funds with funds from other sources where possible. Seek additional sources of funding from state, federal, and private sources, where such funding would enhance and support this plan.
  - Set incentive levels at the minimum needed to accomplish program objectives.

- Communication, coordination, and reporting

  - Implement a process for ongoing public stakeholder communication.

- Coordinate our efforts with other state agencies with energy-related responsibilities.
- Monitor national and regional activities and participate in such activities when beneficial.
- Report to the Legislature by December 1, 2003, describing the Commission's activities, programs implemented or planned, the likely cost effectiveness of programs, the financial condition of the conservation funds, and any recommended changes to the Conservation Act.

VI. Commission Order Establishing Goals, Objectives, And Strategies

This section has been removed from the Condensed Report. It may be found on the Commission's web page (www.state.me.us/mpuc) under the Electric Conservation Activities section, or in the full report.

COST EFFECTIVENESS FOR ONGOING PROGRAMS

I. Background

- The Conservation Act requires that the Commission implement programs that are cost effective, but directs the Commission to determine the definition of cost effectiveness.

- Since the mid-1970s, cost effectiveness tests have been used to screen efficiency programs. The established test in Maine has been the All Ratepayers Test, which generally compares the cost of the program to the savings caused by avoiding generation and delivery of the electricity saved by the program.

- In November 2002, we completed a rulemaking that revised the Commission's Chapter 380, which (among other things) establishes the cost effectiveness tests to be used for ongoing efficiency programs.

II. Cost Effectiveness Criteria for Ongoing Programs

- Modified Societal Test (MST) – The MST will be the primary screen for cost effectiveness of ongoing programs. The MST considers costs and benefits from a wider perspective than does the All Ratepayers Test, to reflect the broader goals of the Act. A program is cost effective if the net present value of its benefits exceeds the net present value of its costs.

  Program benefits include:

  - Avoided electric generation costs
  - Avoided transmission and distribution costs
  - Avoided fossil fuel costs such as lower oil or gas use
  - Other resource benefits such as reduced water and sewer costs
  - Non-resource benefits such as reduced O&M costs, productivity improvements, and environmental benefits

  Program costs include:

  - Direct program costs such as administration, marketing and evaluation
  - Measure costs such as the incremental cost of a high efficiency appliance
  - Ongoing customer costs such as increased O&M costs

- Non-quantifiable Cost Effectiveness Test – Some of the Act's goals – e.g., increasing consumer awareness and reducing environmental damage -- may require actions whose benefits are difficult to quantify. To ensure that all goals

are met, we concluded that a program that cannot be quantifiably evaluated using the MST may be implemented if:

- Benefits exist but cannot be quantified; and
- The program meets a statutory or Commission goal; and
- The entire portfolio is cost effective.

III. Comparison Of Commonly Used Cost Effectiveness Tests

Test	Participants	Utility Cost	All Ratepayer	Total Resource	Societal	Modified Societal(4)
Measures						
Participants	y	y	y	y	y	y
Spillover (a)			y	y	y	y
Free Riders (b)		y	y	y	y	y
Post Program Adopters (c)				y	y	y
Benefits						
Avoided electricity						
Energy	(1)	y	y	y	y	y
Capacity		y	y	y	y	y
T&D		y	y	y	y	y
Avoided resources						
Gas & oil	(1)			y	y	y
Water & other	(1)			y	y	y
Customer benefits	y		y	y	y	y
Other benefits						
quantified					y	y
non-quant. Adder (d)				(2)	(2)	n
Costs						
Program costs		y	y	y	y	y
Customer Costs	y		y	y	y	y
Performance incentives (e)				(3)	(3)	n

Notes

1 At retail rates
2 Adders included in some states
3 Incentives included in some states
4 In all categories, only quantifiable costs and benefits are included

Definitions

a Those measures installed as a result of, but outside a program
b Those measures that receive an incentive, but would have been installed even without the program
c Those measures that are installed, outside of a program, after the program has ended
d A percentage added to benefits, to account for enviornmental benefits that have not been measured or quantified
e Some states allow utilities to earn an incentive, based on their performance relative to a set of energy efficiecny program metrics

IV. Chapter 380, Electric Energy Conservation Programs

This section has been removed from the Condensed Report. It may be found on the Commission's web page (www.state.me.us/mpuc) under the Electric Conservation Activities section, or in the full report.

V. Commission Order Adopting Rule

This section has been removed from the Condensed Report. It may be found on the Commission's web page (www.state.me.us/mpuc) under the Electric Conservation Activities section, or in the full report.

DEFINITIONS OF LOW-INCOME AND SMALL BUSINESS CONSUMERS

I. Background

- The Conservation Act requires that the Commission target at least 20% of available funds to programs for low-income consumers and at least 20% to programs for small business consumers. The Act requires that the Commission define low-income consumer and small business consumer by rule.

- Other State agencies provide services to persons considered to be "low-income" or "small businesses". In addition, utilities' rates are differentiated by level of electric use, including a "small" non-residential group.

- The Commission's revised rule, Chapter 380, establishes these definitions. The rule and our order approving the rule may be found in the Cost Effectiveness section of this report.

II. Definition of Low-Income Consumer

- In the Commission's Chapter 380, we established that a low-income residential consumer is "a customer of a transmission and distribution utility living in a household that would qualify to receive assistance through the Low Income Home Energy Assistance Program (LIHEAP), as those qualifications are established in Rule by Maine State Housing Authority from time to time. If a customer has not applied for authorization to receive LIHEAP benefits but conforms to the criteria established by Maine State Housing Authority, he or she shall be considered a low-income consumer for the purpose of this Chapter."

- We expect our low-income programs to complement and coordinate with existing State programs. Using a consistent definition will produce administrative savings and will eliminate potential confusion.

III. Definition of Small Business Consumer

- In the Commission's Chapter 380, we established that a small business is "a business customer of a transmission and distribution utility that employs 50 or fewer full-time equivalent employees. A company with multiple locations shall be considered one company, and employees at all its locations shall be counted when determining whether the company is a small business. If the number of employees of a company varies over a calendar year, the number of employees at the time when the company participates in a program shall apply. When determining whether a customer is a "small business consumer," the Commission may consider the average number of employees that the business employs annually."

- We expect to coordinate our small business programs with other State initiatives offering services to small businesses. Thus, we chose a definition that is consistent in most respects with that used by other State agencies and we chose an expansive definition of small business that would allow the 20% funding targeted by the Act to reach as many small businesses as possible.

PROGRAM ADMINISTRATION AND TOTAL SPENDING

I. Background

- The Conservation Act establishes an administration fund that will be used to defray administrative costs of the statewide program. The fund may not exceed $1.3M annually, and will be funded with a portion of the money collected from utilities.

- The Conservation Act authorizes the Commission to hire up to 3 additional people to support the energy efficiency program.

II. Commission Activities Funded From The Administration Fund

- In June 2002, we hired a new employee to direct the development and implementation of the Commission's energy efficiency programs.

- In November 2002, we hired two additional employees as energy efficiency program administrators, to oversee the implementation of efficiency programs.

- A number of Commission staff people work on efficiency programs while carrying out other Commission duties.

- During 2002, we contracted with technical consultants to improve our knowledge of technical matters and current issues and to assist in program design.

- During 2003, we expect to obtain consulting assistance in developing program evaluation plans and to assist in program design.

III. Commission Spending On Administration And Programs

Commission Spending
April 2002 – October 2002

	Spent Apr – Oct 2002	2002 Pending
Administration		
Salary*	$ 146,023	
Consultant	$ 3,489	
Newspaper Ads	$ 10,606	
Supplies	$ 174	
Telephone	$ 227	
Travel	$ 224	
Literature	**$** 29	
Transcription	$ 490	
Sta-Cap	$ 1,023	
Total Admin Spending	**$ 162,285**	
Programs		
MEEP	$ 25,000	
MSHA	$ 200,000	
DECD	$ 200,000	
Newspaper – RFPs	$ 1,672	
Room	$ 338	
Mail	$ 44	
Sta-Cap	$ 80	
BOC		$ 126,000
Curriculum Task Force		$ 10,000
NEEP		$ 10,657
Total Program Spending	**$ 427,134**	**$ 146,657**

* Salary includes new staff and portions of existing staffs' time spent on energy efficiency activity

IV. Statewide Spending On Energy Efficiency

Statewide Spending on Energy Efficiency

	3/1/2000-2002	2003	3/1/2000-2003
Utility-Run Programs /1,2	$35,284,453		
CMP Power Partners		$7,096,000	
All utilities' (except Power Ptnrs)		$1,271,834	$43,652,287
Available for Commission-Sponsored Programs /3	$6,164,275	$5,260,480	$11,424,755
Commission Administration /4	$146,657	$1,300,000	$2,200,000
Budget for Approved Interim Programs /5			$7,986,735

Notes:

1/ Utility-run programs in 2003 are estimates based on current activity. Some utilities did not estimate, pending Commission decision.

2/ Before 2003, 80%-90% of spending on utility-run programs was for CMP Power Partners contracts. In 2003, Power Partners spending decreases significantly because of contract expiration.

3/ At current assessment level

4/ $1.3M is the statutory maximum for annual administrative spending. 2.1M represents maximum spending during 2002-2003. The Commission will spend far less.

5/ Includes the approved maximum for each program, plus a 10% contingency.

ISSUES

I. Background

The Conservation Act requires that the Commission include in its annual report any recommendations for changes to the law. *We have no recommendations for change to the law,* and indeed are inclined to think that at least an additional year should pass under the current law before policy makers judge which provisions should be changed. However, we discuss below four policy issues that have arisen during our program planning and development, for the Committee's information and consideration.

II. Funding Levels

The Conservation Act sets a cap and a floor for the funding that each utility will contribute to the state's energy efficiency program. Recently, CMP has funded programs at the cap and most other utilities have funded at approximately the floor, resulting in considerable inequity among utilities. However, a significant portion of CMP's current funding pays for efficiency measures implemented many years ago through its Power Partners program. CMP's contribution to all other programs (approximately $0.0004 per kWh in 2002 and $0.0007 in 2003) exceeds that of other utilities (approximately $0.0003 per kWh).

The Act directs the Commission to assess each utility within the specified range, but leaves to the Commission how much to assess within that range based on the particular circumstances (without additional specification) of each utility's territory. In light of the various objectives of the current law (including increased consumer awareness, sustainable economic development, reduced environmental impact, a 20% funding target for low-income and small business consumers, and geographic diversity), and the fact that, for many and perhaps most programs, the distribution of benefits among customers is unlikely to match the assessment of costs, the legislature may wish to consider whether additional guidance concerning both the amount to be assessed and the weight to be given each objective should be provided.

III. Environmental Benefits

Achieving meaningful environmental benefits through energy efficiency programs presents unique challenges. To date, the Commission has not received proposals for programs specifically targeted at reducing the more environmentally harmful forms of generation. We recently issued a request for interested persons to submit proposals for such programs. While achieving greater energy efficiency in general should help the environment to some extent (although making appliances more efficient and thus cheaper to operate can theoretically increase their usage and thus the level of energy consumption), it is not clear that this is the most effective way to secure environmental gains. This raises the question of whether money raised from

ratepayers or taxpayers for environmental improvement might be focused on other programs than the energy efficiency programs implemented under the Act.

IV. Renewable Resources

A variety of stakeholders have suggested that funds collected pursuant to the Act be used to support installation and operation of renewable electricity generation by technologies such as solar panels. We have not funded these projects, and we are not inclined to consider them eligible for funding under the Conservation Act. If the Legislature wishes to fund renewable generation sources under the Act, it may wish to say so explicitly in the law.

V. The Role of Judgment in Choosing Conservation Programs

The Conservation Act directs the Commission to consider a number of other items (environmental benefits, economic development, targeting of programs to low income residential customers and small businesses, and equalizing the offerings geographically throughout the state) when choosing which energy efficiency programs to implement. Each is a worthy goal but balancing these separate and occasionally competing goals is more art than science, requiring the Commission to achieve a reasonable balance. We hope to use these periodic reports as a tool to communicate our decisions and to make sure that our judgment is, and remains, consistent with the Legislature's intent.

ADDITIONAL COMMENTS OF COMMISSIONER STEPHEN DIAMOND

While I fully agree with the contents of this report, I would add the observation that at some point the Legislature may wish to clarify its priorities under the Conservation Act and determine whether conservation is always the best means of achieving them.

The Conservation Act sets forth various goals for the programs it authorizes. While that potentially broadens the benefits of, and support for, the programs, it can also make it more difficult to know the Legislature's priorities and to evaluate the Commission's success in achieving them.

The Act's primary objective, embodied in the cost effectiveness requirement, would appear to be to ensure that ratepayers save money in some verifiable way by purchasing less electricity or paying less for that which they purchase. As explained in this report, the Commission has adopted a cost effectiveness test that requires that in the aggregate the savings from conservation programs exceed their costs, but has concluded that it is not feasible to require that all ratepayers individually come out ahead. As a result, there will almost certainly be some transfer of wealth from the "losers" to the "winners."[1]

Given the fact that some, and perhaps many, ratepayers will pay in the conservation assessment more than they receive in program benefits, there is a threshold question of whether aggregate savings under the Commission's cost effectiveness test alone suffice to justify the conservation assessment.[2] This becomes an issue, in part, because in similar situations government does not intervene in the market to levy a cost on all so that some may benefit. For example, we do not impose a tax on heating oil or gasoline to enable some consumes to save money through the purchase of more efficient furnaces or vehicles or by better maintaining those that they have, even though this might allow us as a society to spend less on those fuels. Indeed, if we are not concerned about the distribution of the savings, but only that they exceed the costs,

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[1] Ironically, as explained in the report, maximizing kilowatt-hour savings and maximizing the distribution of benefits may be conflicting goals.

[2] This might not be the case if all of the savings were directed at groups deemed to need them for articulable policy reasons. For example, programs aimed at low-income consumers are consistent with an already established government objective of assisting those in need. In addition, since virtually all ratepayers contribute to the utilities' low-income assistance programs, reducing the consumption of those who receive that aid may benefit everyone.

one could envision this kind of government program for a vast array of products; yet, it is not a common role for government to play. There is, of course, no reason why the approach cannot be limited to electricity, especially given the existence of a regulatory agency to implement it, but it does raise the question of whether achieving collectively measured net savings, regardless of how distributed, is enough by itself to justify our conservation programs.

The conclusion that aggregate net savings, while a reasonable test for cost effectiveness, may not suffice as a standalone rationale for conservation programs suggests that a higher priority should be placed on the Act's other, albeit less measurable, objectives, such as protecting the environment. This presents some challenges for the Commission. While all conservation should help the environment, the objective should be to maximize the benefits. Unfortunately, as noted in the Commission's report, we have not received any proposals specifically aimed at environmental improvements, and unless they materialize, we will have to rely on the rather vague proposition that all conservation should do some good. A related issue for the Legislature, if we are to meet our obligation to make the best use of ratepayer money, is whether conservation is necessarily the most effective way to maximize environmental gains or whether the State should be able to use the ratepayer assessment to fund other measures.

Similar questions exist with respect to the goal of promoting economic development. Is the Commission the best-qualified entity for determining how best to promote Maine's economy? If it is to play this role, how can it best secure input, particularly of a disinterested nature? Would we be more effective in promoting economic development if we did not limit our options to conservation measures? Again, the objective here is to make the best use of ratepayer money.

Let me emphasize that my comments reflect neither a hostility toward conservation programs nor a view that urgent action is required on these issues. Rather, government programs tend to follow their own version of Newton's law – those in existence tend to remain in existence – and it strikes me that that periodically revisiting our objectives and the means for achieving them is something we owe to those who pay the bills.