

# MAINE STATE LEGISLATURE

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# ACTIVITY SHEET

COMMITTEE: Utilities and Energy Committee

L.D. #: 233

TITLE: An Act To Promote Energy Conservation

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HEARING DATE: 4-10-03

WORK SESSION DATES: 4-14-03, 4-17-03  
4-28-03

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REPORTED OUT DATE: 5-13-03

COMMITTEE REPORT: \_\_OTP-AM Majority/ ONTP Minority\_\_



# 121st MAINE LEGISLATURE

## FIRST REGULAR SESSION-2003

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Legislative Document

No. 233

S.P. 92

In Senate, January 23, 2003

### An Act To Promote Energy Conservation

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Reference to the Committee on Utilities and Energy suggested and ordered printed.

A handwritten signature in cursive script that reads "Joy J. O'Brien".

JOY J. O'BRIEN  
Secretary of the Senate

Presented by Senator STRIMLING of Cumberland.

2 **Be it enacted by the People of the State of Maine as follows:**

4 **Sec. 1. 35-A MRSA §3211-A, sub-§4,** as enacted by PL 2001, c.  
624, §4, is repealed.

6 **Sec. 2. 35-A MRSA §3211-A, sub-§4-A** is enacted to read:

8 **4-A. Funding level.** The commission shall assess  
10 transmission and distribution utilities to collect funds for  
12 conservation programs and associated administrative costs in the  
14 amount of \$.0015 per kilowatt hour of electricity delivered to  
16 retail customers.

14 **SUMMARY**

16 This bill establishes an assessment on all electricity  
18 delivered by Maine's transmission and distribution utilities in  
20 the amount of \$.0015 per kilowatt hour for the purposes of  
funding energy conservation.

STATE OF MAINE  
121ST LEGISLATURE

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LEGISLATIVE NOTICES

JOINT STANDING COMMITTEE ON UTILITIES AND ENERGY

Sen. Christopher Hall, Senate Chair  
Rep. Lawrence Bliss, House Chair

PUBLIC HEARING: Thursday, April 10, 2003, 1:00 pm, Room 209 Cross Building

- (L.D. 231) Bill "An Act To Strengthen Delivery of Electricity Conservation Programs" (S.P.0090) (Presented by Senator HALL of Lincoln)
- (L.D. 233) Bill "An Act To Promote Energy Conservation" (S.P.0092) (Presented by Senator STRIMLING of Cumberland)
- (L.D. 352) Bill "An Act To Encourage Energy Efficiency and Security" (S.P.0128) (Presented by Senator HALL of Lincoln) (Cosponsored by Representative BERRY, SR. of Belmont, Representative BLISS of South Portland, Representative GOODWIN of Pembroke)
- (L.D. 540) Bill "Resolve, To Ensure Optimal Energy Efficiency in State-funded Construction" (S.P.0180) (Presented by Senator HALL of Lincoln) (Cosponsored by Senator BROMLEY of Cumberland, Representative BLISS of South Portland, Representative ADAMS of Portland, Representative GOODWIN of Pembroke, Representative RICHARDSON of Skowhegan)
- (L.D. 547) Bill "An Act To Increase Bill Reductions for Electricity Customers in Maine" (S.P.0187) (Presented by Senator HALL of Lincoln) (Cosponsored by Representative ADAMS of Portland)
- (L.D. 799) Bill "Resolve, To Improve Energy Efficiency in New School Buildings" (S.P.0278) (Presented by Senator HALL of Lincoln) (Cosponsored by Representative MCLAUGHLIN of Cape Elizabeth)
- (L.D. 1321) Bill "An Act Regarding Energy Efficiency Standards" (H.P.0975) (Presented by Representative ADAMS of Portland) (Cosponsored by Senator HALL of Lincoln, Representative BERRY, SR. of Belmont, Representative BLISS of South Portland, Representative EDER of Portland, Representative LUNDEEN of Mars Hill, Representative RINES of Wiscasset, Representative SHIELDS of Auburn)
- (L.D. 1187) Bill "An Act To Establish Minimum Energy Efficiency Standards for Products Sold in the State" (S.P.0391) (Presented by Senator HALL of Lincoln) (Cosponsored by Representative O'NEIL of Saco, Representative BLISS of South Portland, Representative PELLON of Machias, Representative RICHARDSON of Brunswick, Representative THOMPSON of China)

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CONTACT PERSON: Kristen Druffner  
100 State House Station  
Augusta, ME 04333-0100  
287-4143

## WORK SESSION AGENDA

### Utilities and Energy Committee

April 14, 2003

1pm Room 209 Cross Building

- (L.D. 1261) Bill "An Act To Support Clean and Efficient Energy for the Future of Maine's Economy and Environment" (S.P. 407) \*(Presented by Senator TREAT of Kennebec) (Cosponsored by Representative BLISS of South Portland and Senators: BRENNAN of Cumberland, BROMLEY of Cumberland, DAMON of Hancock, HALL of Lincoln, STRIMLING of Cumberland, Representatives: BERRY of Belmont, LUNDEEN of Mars Hill)
  
- (L.D. 1157) Bill "An Act To Promote Clean and Efficient Energy" (S.P. 377) \*(Presented by Senator BRENNAN of Cumberland) (Cosponsored by Senators: DAGGETT of Kennebec, HALL of Lincoln, STRIMLING of Cumberland, TREAT of Kennebec, Representatives: COWGER of Hallowell, DUDLEY of Portland, KANE of Saco, McKEE of Wayne)
  
- (L.D. 231) Bill "An Act To Strengthen Delivery of Electricity Conservation Programs" (S.P. 90) \*(Presented by Senator HALL of Lincoln)
  
- (L.D. 233) Bill "An Act To Promote Energy Conservation" (S.P. 92) \*(Presented by Senator STRIMLING of Cumberland)
  
- (L.D. 352) Bill "An Act To Encourage Energy Efficiency and Security" (S.P. 128) \*(Presented by Senator HALL of Lincoln) (Cosponsored by Representative BERRY of Belmont and Representatives: BLISS of South Portland, GOODWIN of Pembroke)
  
- (L.D. 540) Resolve, To Ensure Optimal Energy Efficiency in State-funded Construction (S.P. 180) \*(Presented by Senator HALL of Lincoln) (Cosponsored by Representative BLISS of South Portland and Senator BROMLEY of Cumberland, Representatives: ADAMS of Portland, GOODWIN of Pembroke, RICHARDSON of Skowhegan)
  
- (L.D. 547) Bill "An Act To Increase Bill Reductions for Electricity Customers in Maine" (S.P. 187) \*(Presented by Senator HALL of Lincoln) (Cosponsored by Representative: ADAMS of Portland)
  
- (L.D. 799) Resolve, To Improve Energy Efficiency in New School Buildings (S.P. 278) \*(Presented by Senator HALL of Lincoln) (Cosponsored by Representative: McLAUGHLIN of Cape Elizabeth)

- (L.D. 1321) Bill "An Act Regarding Energy Efficiency Standards" (S.P. 975)  
\*(Presented by Representative ADAMS of Portland) (Cosponsored by Senator HALL of Lincoln and Representatives: BERRY of Belmont, BLISS of South Portland, EDER of Portland, LUNDEEN of Mars Hill, RINES of Wiscasset, SHIELDS of Auburn)
- (L.D. 1187) Bill "An Act To Establish Minimum Energy Efficiency Standards for Products Sold in the State" (S.P. 391) \*(Presented by Senator HALL of Lincoln) (Cosponsored by Representative O'NEIL of Saco and Representatives: BLISS of South Portland, PELLON of Machias, RICHARDSON of Brunswick, THOMPSON of China)

# WEEKLY SCHEDULE

## UTILITIES AND ENERGY COMMITTEE

Week of April 14th, 2003  
Room 209, Cross Office Building

**Monday, April 14, 2003**

Session 10:00 am

1:00 pm Work Session

- L.D. 1261 clean/eff. Energy
- L.D. 1157 clean/eff. Energy concept
- L.D. 231 strengthen DSM
- L.D. 233 promote DSM
- L.D. 352 promote energy efficiency (DSM)
- L.D. 540 optimal effic.-state building (DSM)
- L.D. 547 conservation assessment (DSM)
- L.D. 799 eng. eff. schools
- L.D. 1321 energy eff. Standards
- L.D. 1187 min. eff. Standards products

**Tuesday, April 15, 2003**

Session 10:30 am

**Wednesday, April 16, 2003**

Session 10:00 am

1:00 pm Public Hearing

- L.D. 1483 PUC penalties
- L.D. 1494 MS Rule- Labeling
- L.D. 1495 MS Rule-RPS

**Thursday, April 17, 2003**

9:30 am Public Hearing

- L.D. 1201 Casino utilities
- L.D. 1317 Do-Not-Call list
- L.D. 1360 Spam/Do-Not-Call
- L.D. 1359 Locally gov. WD
- L.D. 1423 E-911 Funding
- L.D. 1444 E-911 Private lines
- LD 233 Work session

**Friday, April 18, 2003**

Enjoy the weekend!☺

## WORK SESSION AGENDA

Utilities and Energy Committee

Monday, April 28, 2003

1pm Room 209 Cross Building

- (L.D. 233) Bill "An Act To Promote Energy Conservation" (S.P. 92) \*(Presented by Senator STRIMLING of Cumberland)
  
- (L.D. 1187) Bill "An Act To Establish Minimum Energy Efficiency Standards for Products Sold in the State" (S.P. 391) \*(Presented by Senator HALL of Lincoln) (Cosponsored by Representative O'NEIL of Saco and Representatives: BLISS of South Portland, PELLON of Machias, RICHARDSON of Brunswick, THOMPSON of China)
  
- (L.D. 1261) Bill "An Act To Support Clean and Efficient Energy for the Future of Maine's Economy and Environment" (S.P. 407) \*(Presented by Senator TREAT of Kennebec) (Cosponsored by Representative BLISS of South Portland and Senators: BRENNAN of Cumberland, BROMLEY of Cumberland, DAMON of Hancock, HALL of Lincoln, STRIMLING of Cumberland, Representatives: BERRY of Belmont, LUNDEEN of Mars Hill)
  
- (L.D. 1373) Resolve, To Establish the Commission on Comprehensive Energy Planning (S.P. 1008) \*(Presented by Representative ADAMS of Portland) (Cosponsored by Senator HALL of Lincoln, Representatives: BLISS of South Portland, DUPLESSIE of Westbrook, EDER of Portland)
  
- (L.D. 805) Bill "An Act To Create a Sustainable Energy Trust Fund" (S.P. 284) \*(Presented by Senator HALL of Lincoln)
  
- (L.D. 302) Bill "An Act To Make Adjustments to the Renewable Energy Portfolio" (S.P. 245) \*(Presented by Representative BERRY of Belmont) (Cosponsored by Representatives: GOODWIN of Pembroke, JOY of Crystal, RINES of Wiscasset, ROSEN of Bucksport)
  
- (L.D. 1053) Bill "An Act To Enhance Renewable Power" (S.P. 770) \*(Presented by Representative MILLS of Cornville) (Cosponsored by Representatives: SAVIELLO of Wilton, SUSLOVIC of Portland)
  
- (L.D. 1184) Resolve, To Encourage Use of Alternative Energy Sources (S.P. 388) \*(Presented by Senator HALL of Lincoln) (Cosponsored by Representatives: BUNKER of Kossuth Township, EARLE of Damariscotta, GROSE of Woolwich, SAMPSON of Auburn, SUSLOVIC

of Portland)

- (L.D. 1312) Bill "An Act To Ensure and Encourage the Generation of Electricity from Renewable Resources" (S.P. 966) \*(Presented by Speaker COLWELL of Gardiner) (Cosponsored by Senator WESTON of Waldo and Senators: BLAIS of Kennebec, HALL of Lincoln, KNEELAND of Aroostook, Representatives: BLISS of South Portland, COWGER of Hallowell, FLETCHER of Winslow, KOFFMAN of Bar Harbor, MILLS of Cornville)
- (L.D. 669) Bill "An Act To Strengthen the Energy Resources Council" (S.P. 233) \*(Presented by Senator HALL of Lincoln)

TESTIMONY SIGN IN SHEET

Joint Standing Committee on Utilities and Energy

L.D.'s 231, 233, 352, 540, 547, 799, 1321, 1187

Date: ~~4-9-03~~ 4-10-03

| L.D #<br><i>Or</i><br>ALL L.D.'s             | Name             | Town/<br>Affiliation                                 | Proponent | Opponent | Neither |
|----------------------------------------------|------------------|------------------------------------------------------|-----------|----------|---------|
| 1187                                         | Michael Stoddard | Environ. Northeast<br>Portland                       | X         |          |         |
| 1187                                         | Isaac Elnecave   | Northeast Energy<br>Eff. Boston                      | X         |          |         |
| 1187                                         | Andrew de Laski  | Appliance<br>Standard<br>Awareness<br>Project/Boston | X         |          |         |
| 231                                          | Senator Hall     | Sponsor/ Senate 16                                   | X         |          |         |
| 352                                          | Senator Hall     | Sponsor/Senate 16                                    | X         |          |         |
| 540                                          | Senator Hall     | Sponsor/ Senate 16                                   | X         |          |         |
| 547                                          | Senator Hall     | Sponsor/ Senate 16                                   | X         |          |         |
| 799                                          | Senator Hall     | Sponsor/ Senate 16                                   | X         |          |         |
| 1187                                         | Senator Hall     | Sponsor/ Senate 16                                   | X         |          |         |
| 231, 233,<br>540, 547,<br>799, 1321,<br>1187 | Phil Hastings    | PUC                                                  | X         |          |         |
| 1321                                         | Rep. Adams       | Sponsor/Portland                                     | X         |          |         |
| All                                          | Steve Ward       | Public Advocate                                      | X         |          |         |
| 540 & 799                                    | Doug Baston      |                                                      | X         |          |         |

|                                          |                 |                                 |   |   |   |
|------------------------------------------|-----------------|---------------------------------|---|---|---|
| 1187                                     | Kenneth Nelson  | Nelson & Small/Portland         |   | X |   |
| 352                                      | Tom Welch       | PUC                             |   | X |   |
| 1187, 1261, 1157                         | Jim McGregor    | Maine Merchants Assoc           |   | X |   |
| 1187                                     | Suzanne Goucher | ME Assoc. Broadcasters          |   | X |   |
| 799                                      | Scott Brown     | Dept. of Edu./School Facilities |   | X |   |
| 231,233,547                              | Jim Cohen       | Maine Public Service            |   | X |   |
| 352                                      | Jim Cohen       | Maine Public Service            |   |   | X |
| 1321                                     | David Allen     | CMP                             | X |   |   |
| 231,233 352 540                          | David Allen     | CMP                             |   | X |   |
| 1321                                     | Christy Crocker | ME Indoor Air Quality Council   | X |   |   |
| 1321                                     | Don Thayer      | MIAQC/Ashton                    | X |   |   |
| 233, 540, 799, 1261, 1321                | Gunner Hubbard  | Green Buildings                 | X |   |   |
| 231, 233, 352, 540, 547, 799, 1321, 1187 | Sue Jones       | Natural Resources of ME         | X |   |   |
| 352, 540, 547, 799,233                   | Tom Federle     | Bangor Hydro                    | X |   |   |
|                                          |                 |                                 |   |   |   |



STATE OF MAINE  
PUBLIC UTILITIES COMMISSION  
242 STATE STREET  
18 STATE HOUSE STATION  
AUGUSTA, MAINE  
04333-0018

THOMAS L. WELCH  
CHAIRMAN

WILLIAM M. NUGENT  
STEPHEN L. DIAMOND  
COMMISSIONERS

April 10, 2003

Honorable Christopher Hall, Senate Chair  
Honorable Lawrence Bliss, House Chair  
Joint Standing Committee on Utilities and Energy  
100 State House Station  
Augusta, ME 04333

Re: LDs Related to Energy Efficiency Funding (LDs 231, 233, 547, 1157, 1261)

Dear Senator Hall and Representative Bliss:

The Commission will testify in qualified support of the LDs listed above. Through these bills, the Committee has the opportunity to re-examine the funding established in the Conservation Act (35-A M.R.S.A. §3211-A). Currently, the law contains a floor of 0.5% of annual revenues and a cap of 1.5 mils per kWh.

As we discussed in our over-arching testimony on Monday, we will not comment on the appropriate level of energy efficiency funding. We stated that we have received reasonable evidence that the potential for cost effective efficiency activity in Maine far exceeds the current funding level of approximately \$14 million annually.

LDs 233, 547, 1157, and 1261 would establish funding levels that equal or exceed the current funding level. The bills remove Commission discretion to determine funding between a cap and floor and to differ the assessment level among utilities. LD 231 retains a cap and floor but eliminates a potential impediment to raising current assessments, and LD 547 retains discretion to assess consumer-owned utilities at a different rate than investor-owned utilities.

We support bills through which the Legislature establishes a funding level, rather than delegating this authority to the Commission, because the funding level must necessarily balance competing policy goals of attaining an effective efficiency program and retaining the lowest possible electricity rates. We also support these bills' intent to establish a fixed, consistent assessment for all utilities (we do not object to LD 547's differentiation of consumer-owned utilities; COUs follow different procedures under many circumstances because of their unique ownership structure and size). As we said in our Order Establishing Funding in Docket No. 2002-162 (attached to this testimony), we have been given no



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evidence that would lead us to apply assessments that differ among utilities (although we have sought further input on this question).

We call the Committee's attention to a minor issue - LD 231 would base the assessment on revenues rather than kWhs. Basing the assessment on revenues would raise more money from customers of utilities that have higher cost structures, while basing the assessment on kWhs would treat all customers equally, regardless of service territory. On the other hand, an assessment on kWhs would be higher for a utility with large customers (whose rates are likely to be low) than for a utility with smaller customers. While we have no preference for kWhs or revenues, kWhs is a more commonly used approach.

To assist the Committee in its consideration of funding levels, we have attached two graphs. The first shows the estimated funds available for the Energy Efficiency Fund, by year, resulting from funding at various proposed levels. These values do not include commitments to programs implemented before 2002, like Power Partners, and therefore show funds available to spend on new programs.

The second graph shows a forecast of the statewide demand for electricity over the next decade, in millions of kWhs, and the estimated cumulative annual kWh savings resulting from programs that could be implemented at various funding levels. For comparison purposes, the estimated cumulative annual kWh savings are also shown at the maximum achievable efficiency program level, as developed by the Public Advocate's consultant, Optimal Energy.

Finally, we have attached a summary of the programs currently being run by the Commission under the Conservation Act. We will be present to assist the Committee as it considers these bills.

Sincerely,

A handwritten signature in black ink, appearing to read "Philip C. Hastings", with a long horizontal line extending to the right.

Philip C. Hastings  
Director of Energy Efficiency Programs

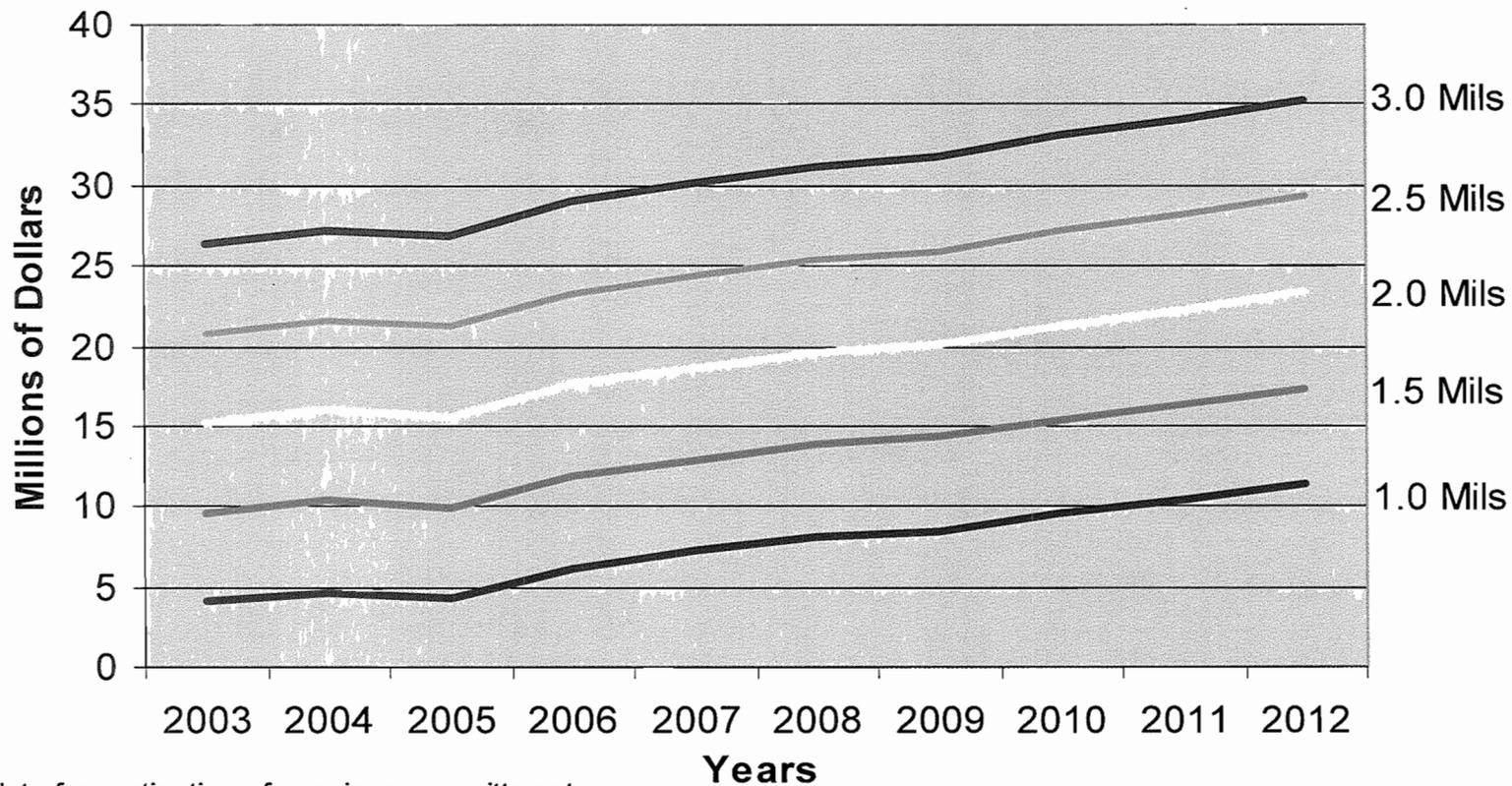
**Efficiency Maine**  
**Program Status – March 31, 2003**  
Presented by the MPUC for Consideration with Energy Efficiency Funding Bills

| <i>Market / Program</i>             | <i>Description</i>                                                                                                                                                                                                                                                                                    | <i>Status</i>                                                                                                                                                                                                                                            |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Residential</b>                  |                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                          |
| Residential Energy Star Lighting    | This program offers instant incentives for CFL's and efficient fixtures, through participating retailers across the State.                                                                                                                                                                            | To date, 116 retailers have joined the program. Incentive forms are being processed for about 3600 bulb and 110 fixture incentive payments, as a result of the first month's activity.                                                                   |
| Low Income Refrigerators & Lighting | We are working with MSHA and local CAP agencies to replace inefficient refrigerators and install efficient lighting in qualifying low income homes.                                                                                                                                                   | The program is currently being expanded to include efficient lighting and other appliances.                                                                                                                                                              |
| <b>Public Agencies and Schools</b>  |                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                          |
| Maine High Performance Schools      | This program promotes energy efficient design and construction of new public schools, in a collaborative effort with MDOE and MSMA. Incentives are being offered for design assistance and implementation. In addition, workshops are being held for local school officials and design professionals. | The program was launched at a High Performance Schools seminar on March 21 <sup>st</sup> . School participation being solicited by MSMA. An RFP has been issued for a program technical advisor.                                                         |
| Building Operator Certification     | This program offers energy efficiency training for building operators of public schools and state facilities. Currently 3 courses (Portland, Bangor, No. Maine) are being offered to 84 facilities operators at public schools.                                                                       | The Portland class concluded March 20 <sup>th</sup> . The Bangor Class will end on April 14 <sup>th</sup> . A new class for people who operate State facilities will start on May 8 <sup>th</sup> . 35 people are currently enrolled for the May course. |

|                                 |                                                                                                                                                                                                                                          |                                                                                                                                                                               |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| State Buildings                 | We are working with DAFS to identify and implement energy efficiency improvements in State facilities.                                                                                                                                   | The preliminary survey of all State facilities is underway. Improvements at the HETL building have passed cost effectiveness screening. Additional measures are being sought. |
| Traffic Light Replacement       | This is a joint effort with MDOT to assist municipalities to replace incandescent traffic light bulbs with LED's, by funding 2/3 of the cost of the replacement bulb.                                                                    | MDOT has sent out a solicitation letter to municipalities. So far 30 have asked to participate.                                                                               |
| <b>Business &amp; Industry</b>  |                                                                                                                                                                                                                                          |                                                                                                                                                                               |
| DECD Loan Program               | DECD operates a revolving loan fund for energy efficiency improvements by small businesses. The load fund has been re-capitalized with \$200,000 from the Energy Efficiency Proram Fund.                                                 | Loans are available from DECD. To date, one loan has been made.                                                                                                               |
| Small Business Program          | The small business program will work through local contractors, dealers, distributors and business associations to promote energy efficiency in small businesses. Incentives will be offered on a variety of energy efficient equipment. | A contractor has been selected and the contract signed. The program is currently starting and should be in full operation by mid-April.                                       |
| Commercial & Industrial Program | This program will offer a business practice assistance, implementation assistance and education and outreach to C&I customers across the state.                                                                                          | This program was approved by the Commission on Feb. 25 <sup>th</sup> . We are currently planning compressed air system training for June, and a CEM course for the Fall.      |

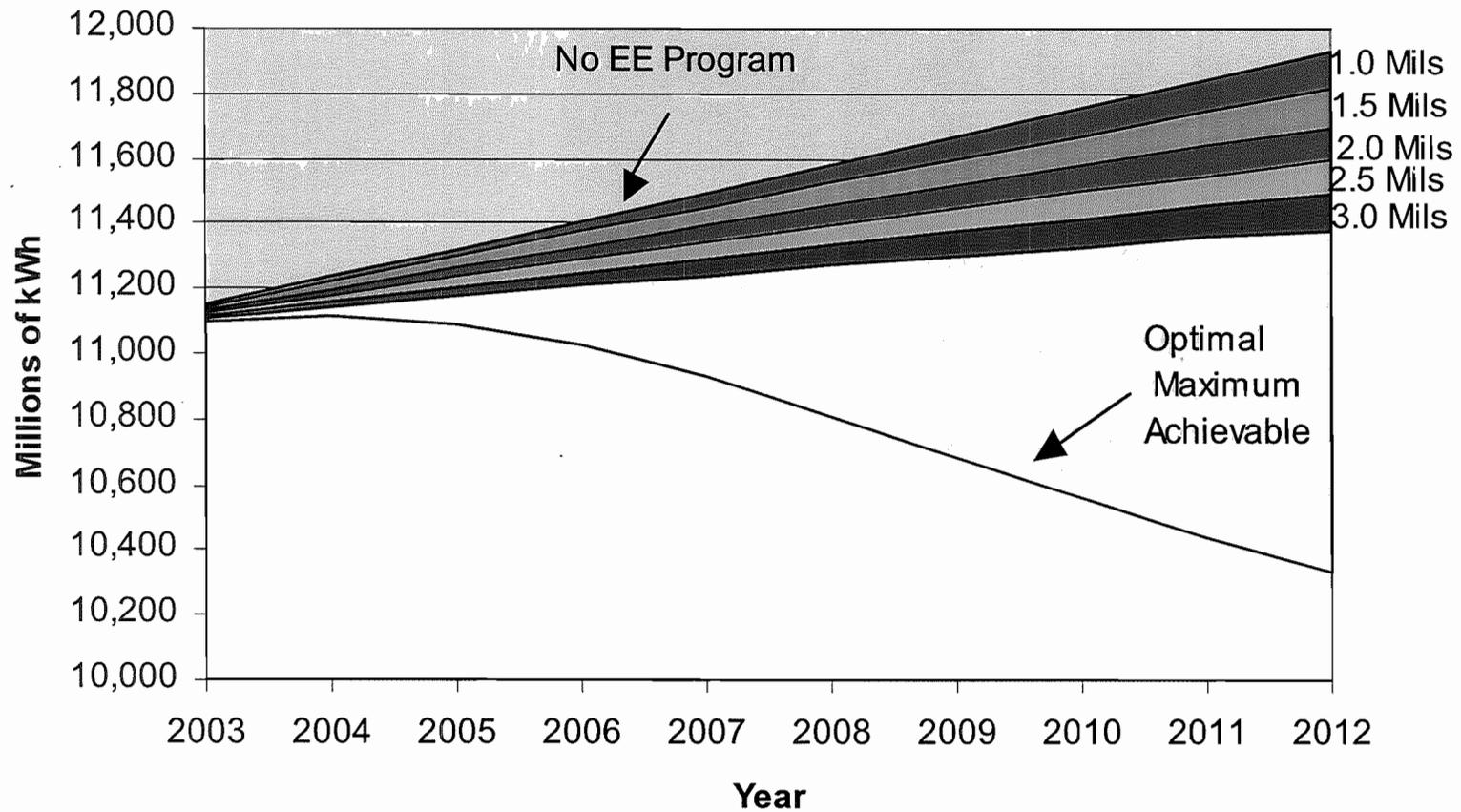
|                                 |                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                      |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Education &amp; Outreach</b> |                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                      |
| MEEP                            | The Maine Energy Education Project provides energy efficiency training and support to school teachers and students. We are funding the Maine Energy Education Program to continue providing their services to schools throughout the state through the 2002-03 school year. | MEEP filed a report in December, indicating it has completed the first half of their work, including 6 Energy Education Leadership Workshops, 15 classroom presentations, and the establishment of 4 Energy Patrols. |
| Curriculum Development          | The Maine Math and Science Alliance was contracted to assess the availability of school curricula on energy efficiency and make recommendations on curriculum development.                                                                                                  | MMSA has completed their report and the staff is considering next steps. Copies of both the MMSA and MEEP reports are available by e-mail; contact Tom Austin.                                                       |

## Estimated Energy Efficiency Funding Options Presented by the MPUC April 2003



Net of amortization of previous commitments

# Estimated Electricity Load at Various Energy Efficiency Funding Levels Presented by the MPUC April 2003



STATE OF MAINE  
PUBLIC UTILITIES COMMISSION

*Submitted by the MPUC  
for Consideration with  
Energy Efficiency Funding  
Bills - April 2003*

Docket No. 2002-162

April 4, 2003

MAINE PUBLIC UTILITIES COMMISSION  
Procedures for Conservation Program  
Planning

ORDER ON  
CONSERVATION  
PROGRAM FUNDING

WELCH, Chairman; NUGENT and DIAMOND, Commissioners

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## I. SUMMARY

We decide that the Commission will continue to assess Central Maine Power Company (CMP) for conservation programs at the statutory maximum rate of 1.5 mils/kWh. The other transmission and distribution (T&D) utilities have been assessed for conservation programs at the statutory minimum rate, or 0.5% of total revenue. The statutory minimum rate produces a per kWh rate that varies from about .02 to .73 mils per kWh. While we find that, in general, all T&D utilities should be assessed at the statutory maximum, for rate stability reasons we will gradually increase the assessments for the T&D utilities other than CMP over a number of years. The Commission will assess the other T&D utilities beginning July 1, 2003, for the next 12 months, at 0.6 mils/kWh or the current assessment rate, whichever is higher. In each subsequent year, we will increase the assessment by 0.2 mils/year until the statutory maximum is reached.

We also decide to open investigations into two matters. First, we will open a proceeding to permit an additional opportunity for the consumer-owned T&D utilities (COUs) to submit facts demonstrating that the specific characteristics of their service territories justify an assessment at less than the statutory maximum. Second, we will investigate whether some CMP customer classes and special contract customers do not pay for conservation assessments in their rates, and if not, whether the Commission should design rates so that all customers pay for conservation costs. If the Commission decides that it cannot or should not impose such costs on particular categories of customers, we will also investigate whether such customers should be permitted to participate in conservation programs.

## II. BACKGROUND

Section 4 of P.L. 2002, ch. 624 (the Conservation Act or the Act) (codified at 35-A M.R.S.A. § 3211-A), directs the Commission to develop and implement energy conservation programs. Subsection 4 of § 3211-A provides that:

4. Funding Level. The Commission shall assess transmission and distribution utilities to collect funds for conservation programs and administrative costs in accordance with this subsection. The amount of all assessments by the Commission under this subsection plus expenditures

of a transmission and distribution utility associated with prior conservation efforts must result in total conservation expenditures by each transmission and distribution utility that:

- A. Are based on the relevant characteristics of the transmission and distribution utility's service territory, including the needs of customers;
- B. Do not exceed 0.15 cents per kilowatt-hour;
- C. Are no less than 0.5% of the total transmission and distribution revenues of the transmission and distribution utility; and
- D. Are proportionally equivalent to the total conservation expenditures of other transmission and distribution utilities, unless the Commission finds that a different amount is justified; however, any increase in an assessment on a transmission and distribution utility by the Commission must be based on factors other than the achievement of proportional equivalency.

On July 23, 2002, the Commission issued an Order Establishing Procedure and Schedule for Conservation Programs Implemented Pursuant to P.L. 2002, ch 624. In that Order, the Commission established the process to develop the program plan and to set the funding level. As part of that process, the Commission requested the Public Advocate and any other interested person wishing to do so, to file studies on the economic potential for energy efficiency in Maine. The Public Advocate filed two studies:

- "The Technical Potential for Electric Energy Conservation in Maine" by Exeter Associates, Inc. ("Exeter Study")
- "The Achievable Potential for Electric Efficiency Savings in Maine" by Optimal Energy, Inc. and Vermont Energy Investment Corp. ("Optimal Study")

Interested persons were provided the opportunity to perform discovery related to these two studies, through written and oral data requests and two technical conferences. In a Procedural Order issued October 22, 2002, the Presiding Officer directed that formal comments in response to the two studies be filed by November 18, 2002. In addition, the Presiding Officer also directed that any person wishing to file comments on the issue of the proper funding level for the Commission's ongoing<sup>1</sup> electric energy efficiency program plan also do so by that date.

Comments on the proper funding level were filed by Central Maine Power Company (CMP), Bangor Hydro-Electric Company (BHE), Maine Public Service Company (MPS), Madison Electric Works (MEW), Madison Paper Industries (MPI), and

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<sup>1</sup> The term "ongoing" program is meant to distinguish programs implemented pursuant to Section 3211-A(2) from interim programs implemented pursuant to Section 7 of the Act. The Commission devised and funded an interim conservation program plan in Docket No. 2002-161.

the Office of the Public Advocate (OPA) on behalf of the Maine Energy Efficiency Coalition (MECC). CMP, BHE and MPS also filed comments on the two studies addressing conservation potential.

On February 11, 2003, the Commission's Energy Efficiency Staff (Staff) filed a Report on the Potential for Energy Efficiency in Maine and Recommendations for Conservation Program Funding. In the Report, Staff compared the technical and achievable potential as estimated by the OPA consultants with the OPA's technical and achievable potential adjusted to reflect CMP's criticisms of and different assumptions from the OPA studies. The Staff concluded that, although CMP's analysis would result in a lower estimate of technical and achievable efficiency potential, even the CMP-adjusted estimate was many times greater than the savings that could be achieved if programs were funded at the statutory maximum level. Accordingly, the Staff concluded there was no need to decide between the OPA's or CMP's assumptions as to efficiency potential.

The Staff noted some variations among T&D utilities in the energy efficiency potential in specific end uses or sectors. The Exeter and Optimal analyses identified some differences primarily due to different load growth rates or different saturations in air conditioning. The Staff found that overall, however, each utility's energy efficiency potential as a proportion of overall State potential reasonably matches the utility's share of kWh sales levels. Despite the variations, the Staff concluded that all utility service territories across Maine possessed substantial potential for savings.

As the efficiency potential in the State was sufficient to justify assessment levels at the statutory maximum, the Staff recommended that assessment levels be set at the statutory maximum. The Staff recommended, however, that a multi-year approach be used to attain the statutory maximum for utilities that are currently assessed at a lower level. Because CMP is already at the maximum funding level, a phase-in is not needed for CMP. And because CMP represents such a large percentage of the electricity consumption in the State, the multi-year approach would still provide most of the benefits of a maximum funding approach, while achieving a degree of rate stability for utilities at the minimum level. Specifically, the Staff recommended that the funding level for the T&D utilities other than CMP be set at the higher of 0.6 mils/kWh or the current amount in rates and be increased by 0.2 to 0.3 mils/kWh per year until all T&D utilities are at the statutory maximum.

Comments in response to the Staff Report and Recommendations were filed by Houlton Water Company (Houlton), MPS, MPI, BHE, Eastern Maine Electric Cooperative (EMEC) and CMP.

CMP disagrees with the Staff recommendation to set the funding level for all utilities at 1.5 mils/kWh. CMP states that 1.0 mil/kWh is proper. According to CMP, the OPA studies are imprecise and unreliable. Moreover, the studies fail to recognize the considerable conservation efforts made by CMP prior to the Electric Restructuring. The prudent approach, in CMP's view, is to start out assessing at less than the maximum

amount, and then work up to the maximum when the Commission finds it in the public interest to spend more on programs. CMP also argues that the statutory requirement of equivalent funding levels for all T&D utilities, coupled with a desire for phasing in the increased funding levels for other T&D utilities, makes a funding level of 1.0 mil "most appropriate."

BHE also advocates a go-slow approach for the beginning of the ongoing plan. BHE asserts that the OPA studies demonstrate that the returns available for conservation programs are very low. This is especially the case for BHE, because its benefit/cost ratio, while greater than one, is still lower than the ratio for other T&D utilities. BHE recommends maintaining its assessment at the minimum level. MPS also asks for the status quo minimum level, although it states that a higher assessment would be considered if MPS customers get a proportionate benefit.

EMEC and Houlton also seek continuation of the minimum assessment, because of low or even negative load growth in their service territories and the magnitude of rate increases if the assessment is increased. EMEC also requests that if its assessment is increased, one of its customers, the Domtar paper mill in Woodland, be exempted from the increase. EMEC states that Domtar already has installed conservation measures and therefore will not benefit from any programs. Moreover, EMEC fears that any rate increase may result in Domtar's closing the facility in Woodland.

MPI strongly objects to the Staff Report. MPI states that the Staff misconstrued its and MEW's prior comments, leading Staff to fail to comply with the Act. The Staff Report states that MEW and MPI seek to exclude the revenue or kWhs of the Madison Paper facility from MEW's funding assessment. MPI asserts that Staff is mistaken, and that MPI did not ask to be excluded from assessments. Rather, MPI sought to limit MEW's assessment to the statutory floor. By misconstruing MPI's request, MPI states that Staff failed to consider the facts about the MEW service territory, such as the extensive conservation measures already installed at Madison Paper, and the fact that MPI represents 95% of the kWhs sold by MEW, which facts justify the lower assessment. The Act requires the Commission to consider the relevant characteristics of the T&D service territory, and MPI asserts that the Staff failed to consider whether these special characteristics of MPI and MEW warrant the minimum assessment. When the Commission does properly consider MEW's circumstances, MPI argues that the Commission will conclude that MEW should continue to be assessed at the statutory floor.

### III. DECISION

The Conservation Act directs the Commission to implement cost effective conservation programs. 35-A M.R.S.A. § 3211-A(2). Our programs are paid for by funds collected from the T&D utilities in the State. 35-A M.R.S.A. § 3211-A(4). The Act establishes minimum (0.5% of T&D revenue) and maximum (1.5 mils.kWh) levels, but provides only limited guidance on how the Commission should decide on a specific assessment within the authorized range. We must equalize the level of funding among

T&D utilities to achieve the so-called "proportional equivalence," unless we justify different treatment. 35-A M.R.S.A. § 3211-A(4)(D). Our obligation to equalize is further qualified by the admonition that we cannot use equalizing contribution levels as the sole reason to increase any one utility's funding level. *Id.* In addition, we are to choose a funding level that is based on the relevant characteristics of the T&D service territory, including the needs of customers. 35-A M.R.S.A. § 3211-A(4)(A).

We agree with Staff's conclusion that overall, the potential for energy efficiency is relatively proportional across T&D service territories in Maine. The MECC and CMP generally agreed with this conclusion. BHE, MPS, MPI, Houlton, and EMEC object to this conclusion. We will discuss the MEW and EMEC potential and achievable conservation separately, as both claim their service territory is different because of a dominant, but already efficient, large customer.

BHE, MPS, and Houlton argue that the potential for energy efficiency is lower in their respective service territories because load is growing at a slower rate than the state average, or not at all. We disagree. While growth rates can impact the potential for energy efficiency for new construction programs, considerable potential will still exist for energy savings at existing homes and businesses. Moreover, improving energy efficiency in the slower-growth areas of the state should help improve their economic vitality.

In general, then, we conclude that there are not sufficient differences in electric energy efficiency potential among the T&D utility service territories to guide us in choosing between the minimum and maximum funding. The Staff reasoned that, as the achievable potential energy savings are several times that which can be achieved at the maximum funding level, considerable energy savings will be foregone by any funding decision at less than the maximum level. Therefore, the Staff recommended funding at the statutory maximum (with a suggested phase-in for the T&D utilities other than CMP for rate stability reasons).

Setting aside for the moment consideration of a phase-in, we accept the Staff's recommendation. Without further statutory guidance, we begin with the premise that the Legislature authorized the Commission to implement cost-effective conservation programs because such programs will benefit the State as a whole. A logical corollary of such an interpretation is that, as a general matter, more conservation is better than less conservation, provided it is cost effective. We believe this statutory interpretation is implicit in Staff's recommendation that funding at 1 mil/kWh or the statutory minimum foregoes too much energy efficiency. To be consistent with what we see as the Legislature's intent, we think that as long as achievable cost effective energy efficiency appears to be greater than the amount achievable at the maximum funding, the Commission should fund at the maximum level, absent a persuasive showing that the relevant characteristics of a utility's service territory warrant a lower assessment.

CMP argues that funding should not be set at the maximum because the OPA studies are not reliable enough to demonstrate that the achievable cost effective

conservation is greater than the efficiency that will be achieved at the maximum funding level. There may be merit in some of CMP's criticisms of the OPA studies. In addition, because the studies require assumptions about the future, they do not carry scientific precision. However, we reject CMP's argument because the studies indicate a maximum achievable conservation potential that is so far above the level we can fund at the assessment ceiling that we are left with huge room for error.<sup>2</sup> We agree with Staff that the OPA's studies are sufficiently reliable to withstand CMP's criticisms and provide reasonable assurance that achievable conservation is greater than the conservation that can be achieved at maximum funding.

In addition, the possibility that the studies may overstate the savings potential does not pose a significant risk. In this Order, we decide only how much to assess the T&D utilities. Before any money is expended, we must decide that each conservation program is cost effective and satisfies the other statutory criteria. If, as we gain more experience with programs, we find that we cannot achieve sufficient cost effective conservation to justify the amount being assessed, a surplus in the conservation fund will develop, and we can lower future assessments. Thus, we rely on the studies only to provide a reasonable starting point for conservation funding. Today's decision does not lock us into spending an amount that cannot be adjusted in the future.

In order to ensure rate stability, the increase from the minimum assessment to the maximum assessment should be gradual. Therefore, we decide to phase in the increase to 1.5 mils/kWh for those utilities currently assessed at the minimum level (all but CMP). We find that a phase-in of 0.2 mils/kWh per year is reasonable, as is the starting point for this year (effective July 1, 2003) of 0.6 mils/kWh, or the current assessment level, whichever is higher.

We mentioned above that MEW and EMEC assert that their service territories' conservation potential is less than that of the other service territories. The phase-in approach also will allow MEW, EMEC and any other COU more time to convince the Commission that unique characteristics of their service territories warrant a lower assessment. Madison Paper asserts that the level of achievable conservation in the MEW service territory is lower than elsewhere because Madison Paper represents 95% of its electricity consumption and the paper facility has already implemented most, if not all, cost effective conservation measures. EMEC argues that it serves a no-growth rural area, with less potential for savings. EMEC also asserts that its service territory includes a large, already efficient paper mill customer. EMEC concludes that these facts justify treating its service territory differently and that the Commission should maintain its assessment at the statutory minimum.

The COUs will be assessed this year at the greater of 0.6 mils/kWh or their current level, which will represent either a small increase to the statutory minimum or the statutory minimum. The COUs' comments, however, have not provided us facts

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<sup>2</sup> Indeed, BHE stated in its comments: "The conclusion that a lot of electrical energy efficiency potential exists within the state, Bangor Hydro agrees."

that justify an assessment at less than the statutory minimum. However, due to the nature of this proceeding, there has been no detailed, individualized examination of the COU service territories. Accordingly, we will open an investigation and invite all of the COUs to demonstrate the facts that justify treating their service territories differently. The investigation will be concluded in time to allow adjustment to next year's step increase, if warranted.

The investigation will enable the COUs to demonstrate that there are fewer cost-effective opportunities in their service territories. The COUs may also attempt to show that the magnitude of the rate increases, or the initial level of rates, justify different treatment. For instance, Fox Island Electric Cooperative (FIEC) and Swans Island Electric Cooperative (SIEC) already have rates higher than the three large investor-owned utilities (IOUs). FIEC and SIEC may be justified in seeking lower assessments because any increase to their already high rates may exacerbate the economic difficulties of customers in those service territories relative to other areas in the state.

Before opening the investigation, however, we wish to address the COU claims that the 1.5 mil assessment level should be reduced because it will harm the already stagnant local economy and result in burdensome price increases for customers. To the extent that the Commission fulfills its mandate to ensure that customers in all service territories benefit, it is the nature of cost-effective conservation programs that the money spent on electricity for a given level of output will decline. Thus, the assessment will not harm the local economies. Rather, it should enhance economic development. In addition, some of the COUs that argue against large percentage increases in their service territories fail to note their initial level of rates. For some, the percentage increases are higher because rates are low. Asking a 1000 kWh customer in Houlton to pay \$1.50 more on his monthly \$76 electric bill is no more burdensome than asking the 1000 kWh customer in Bangor to pay \$1.50 more on his monthly \$127 electric bill.

We wish to address another issue raised by some COUs related to increased conservation assessments. They are concerned that, to the extent that current revenues do not cover existing expenses and the new assessment, the costs of a rate case to recover the increased assessment may be as much as the increase itself. This would obviously be an unreasonable result. With respect to COUs, the Commission can be extremely flexible with regard to how we permit the increased assessments to be passed along to customers. A COU may simply file a new rate surcharge, or increased rates, to cover the amount of the increase, pursuant to 35-A M.R.S.A. § 307. The Commission would not need to suspend any such new or increased rate, assuming that it is calculated correctly. Such rates can be effective in only 30 days, with little administrative burden.

The Staff Report also discussed an issue raised during the proceeding by BHE about the eligibility of non-core, special contract customers, and whether their sales should be included in calculating the assessments. A similar issue was discussed regarding CMP's largest customers, those served at transmission or sub-transmission

voltages. When CMP's rates were unbundled into separate transmission, distribution and stranded cost rates, all conservation related costs were allocated as a distribution cost.

The Staff recommended that all customers, including non-core and CMP transmission and sub-transmission customers, should be eligible to participate in any appropriate conservation program. The Staff interpreted 35-A M.R.S.A. § 3211-A(2)(B)(3) as requiring such a result. The Staff recommended that the Commission defer to a rate proceeding or an ARP annual review any cost allocation issues raised by the manner in which CMP's transmission and distribution rates were unbundled.

As a general matter, we agree with the Staff that all core customers should be eligible to participate in any appropriate conservation program although we express no opinion as to whether this result is mandated by the Conservation Act. The cost allocation issue regarding CMP's transmission and sub-transmission customers should be addressed promptly, however. We will issue a Notice of Investigation in the near future so that the Commission can decide whether CMP's rates should be redesigned to reallocate conservation costs among customer classes.

By their nature, conservation-related costs raise equity issues because not all customers benefit equally from the programs. These equity concerns are mitigated by implementing a portfolio of programs in which all customers are able to participate in at least one program. Equity concerns are also addressed by ensuring that all customers, or at least the broadest base possible, contribute to the conservation assessment. With the current cost allocation, CMP's distribution customers are effectively paying more than 1.5 mils/kWh for conservation. We will use the investigation to consider changing rates so that all CMP's customers will pay their pro rata share of CMP's assessment.

We will also investigate whether, by law or policy, non-core, or special contract, customers should pay a share of the conservation assessment. If we conclude that non-core customers will not contribute to the assessment, we also will consider the extent to which non-core customers should be allowed to participate in conservation programs.<sup>3</sup>

Accordingly, we agree with the principal elements of analysis in the Staff Report, attached to this Order for reference. Based upon that analysis and for the reasons described above, we adopt the Staff recommendation and order conservation assessments to be made at the statutory maximum, with a phase-in as described in this Order. We will also conduct the two further investigations described in this Order.

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<sup>3</sup> Although this issue was discussed in this proceeding, it was not addressed by many participants and we do not believe we have a sufficient record to resolve the issue in this Order.



## NOTICE OF RIGHTS TO REVIEW OR APPEAL

5 M.R.S.A. § 9061 requires the Public Utilities Commission to give each party to an adjudicatory proceeding written notice of the party's rights to review or appeal of its decision made at the conclusion of the adjudicatory proceeding. The methods of review or appeal of PUC decisions at the conclusion of an adjudicatory proceeding are as follows:

1. Reconsideration of the Commission's Order may be requested under Section 1004 of the Commission's Rules of Practice and Procedure (65-407 C.M.R.110) within 20 days of the date of the Order by filing a petition with the Commission stating the grounds upon which reconsideration is sought.
2. Appeal of a final decision of the Commission may be taken to the Law Court by filing, within **21 days** of the date of the Order, a Notice of Appeal with the Administrative Director of the Commission, pursuant to 35-A M.R.S.A. § 1320(1)-(4) and the Maine Rules of Appellate Procedure.
3. Additional court review of constitutional issues or issues involving the justness or reasonableness of rates may be had by the filing of an appeal with the Law Court, pursuant to 35-A M.R.S.A. § 1320(5).

Note: The attachment of this Notice to a document does not indicate the Commission's view that the particular document may be subject to review or appeal. Similarly, the failure of the Commission to attach a copy of this Notice to a document does not indicate the Commission's view that the document is not subject to review or appeal.

February 11, 2003

MAINE PUBLIC UTILITIES COMMISSION  
Procedures for Conservation Program  
Planning

COMMISSION STAFF  
REPORT ON THE  
POTENTIAL FOR ENERGY  
EFFICIENCY IN MAINE AND  
RECOMMENDATIONS FOR  
CONSERVATION PROGRAM  
FUNDING

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NOTE: Interested Persons may comment or object to the analysis or recommendations made by the Commission's Energy Efficiency Team in this Report. Such comments or objections must be in writing and filed with the Administrative Director of the Commission no later than February 24, 2003. It is expected that the Commission will consider the analysis and recommendations contained in this Report at their Deliberative Session on March 3, 2003.

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### Executive Summary

Review of the studies and comments in this proceeding shows that the estimated maximum technical potential<sup>1</sup> for electric energy efficiency in Maine over the next decade is 1.8-2.2 million MWh/yr. The corresponding estimated maximum achievable potential<sup>2</sup> is 1.2-1.6 million MWh/yr. These figures represent annual savings level estimates possible by 2012. Both of these ranges are bounded on the high side by the estimates provided in the studies filed by the Public Advocate, and on the low side by staff's analysis of the specific comments

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<sup>1</sup> Technical potential represents the maximum savings that could be realized if everyone pursued all technically feasible energy efficiency opportunities in all markets and end uses.

<sup>2</sup> Achievable potential indicates the savings that could be realized if aggressive market intervention strategies are applied. It includes such factors as estimated market penetration rates and market saturation rates. Maximum achievable potential indicates the savings that could be achieved if budgetary constraints are not a factor.

provided by other parties. While there may be some room for adjustment in the analyses of energy efficiency potential, the estimated range of technical potential is 10-12 times, and achievable potential is 6-8 times, the savings that could be achieved if programs were funded at the maximum level allowed by the Conservation Act.

There is sufficient electric energy efficiency potential currently existing in the State to set assessment levels for all utilities at 1.5 mils/kWh, the maximum limit established by the Legislature. However, other considerations, primarily rate impacts, may warrant a multi-year approach that ramps into higher funding levels. For those utilities currently being assessed at the minimum level, a move to the maximum funding level would increase total electric rates by about 1.3%. Since CMP is already at the maximum funding level, this would represent no change for CMP customers. Based on the savings projections and the cost effectiveness analysis, a ramped approach would provide most of the benefits of a maximum funding approach, while permitting a phase-in of funding increases for those utilities currently at the minimum level. If the Commission believes a ramped approach is necessary, they should adopt an approach which would continue the assessment for CMP at the current 1.5 mils/kWh, and set the funding level for the other utilities at 0.6 mils/kWh, increasing this level by 0.2-0.3 mils/kWh annually. This will bring the other utilities to the maximum funding limit in 3-6 years, as suggested by OPA.

## Background

Section 4 of P.L. 2002, ch. 624 (the "Conservation Act" or the "Act") directs the Maine Public Utilities Commission ("Commission") to develop and implement energy conservation programs. Section 4 goes on to state that:

*"4. Funding Level. The Commission shall assess transmission and distribution utilities to collect funds for conservation programs and administrative costs in accordance with this subsection. The amount of all assessments by the Commission under this subsection plus expenditures of a transmission and distribution utility associated with prior conservation efforts must result in total conservation expenditures by each transmission and distribution utility that:*

- A. Are based on the relevant characteristics of the transmission and distribution utility's service territory, including the needs of customers;*
- B. Do not exceed 0.15 cents per kilowatt-hour;*
- C. Are no less than 0.5% of the total transmission and distribution revenues of the transmission and distribution utility; and*
- D. Are proportionally equivalent to the total conservation expenditures of other transmission and distribution utilities, unless the Commission finds that a different amount is justified; however, any increase in an assessment on a transmission and distribution utility by the Commission must be based on factors other than the achievement of proportional equivalency."*

On July 23, 2002, the Commission issued an Order Establishing Procedure and Schedule for Conservation Programs Implemented Pursuant to P.L. 2002, ch 624. In that Order, the Commission directed the Public Advocate and any other interested person wishing to do so, to file studies on the economic potential for energy efficiency in Maine. The Public Advocate filed two studies:

- “The Technical Potential for Electric Energy Conservation in Maine” by Exeter Associates, Inc. (“Exeter Study”)
- The Achievable Potential for Electric Efficiency Savings in Maine” by Optimal Energy, Inc. and Vermont Energy Investment Corp. (“Optimal Study”)

Interested persons were provided the opportunity to perform discovery related to these two studies, through written and oral data requests and two technical conferences. In a Procedural Order issued October 22, 2002, the Presiding Officer directed that formal comments in response to the two studies be filed by November 18, 2002. In addition, the Presiding Officer also directed that any person wishing to file comments on the issue of the proper funding level for the Commission's on-going electric energy efficiency program plan also be filed by that date.

Comments on the proper funding level were filed by: Central Maine Power, Bangor Hydro, Maine Public Service, Madison Electric Works, Madison Paper, and the Public Advocate on behalf of the Maine Energy Efficiency Coalition. CMP, BHE and MPS also filed comments on the two potential studies.

This report is intended to summarize Staff's review of the two potential studies, and recommend funding levels for the Commission's consideration.

Recommendations regarding an on-going program plan will be provided in a separate document.

Specifically, this report addresses the following key questions:

- What is the potential for energy efficiency in Maine in the next 10 years?
- To what extent does this potential vary between utilities?
- Within the limits set by the Legislature, what level of funding would be justified by the potential for energy efficiency?
- Within the limits set by the Legislature, what are reasonable funding options, and what are the resulting impacts on programs and savings?

### Energy Efficiency Potential

#### Exeter Study:

The Exeter Study estimates the maximum technical potential for electric energy efficiency in Maine by market sector, end use, and utility. It is based on Maine market and sales data, where available, and energy efficiency potential estimates from various other locations. Exeter's overall estimates for annual energy efficiency potential technically possible by 2012 are shown in Chart 1, below.

Chart 1

| Maximum Technical Potential<br>Exeter Report<br>Annual MWh - 2012 |           |
|-------------------------------------------------------------------|-----------|
| Residential                                                       |           |
| Low Income                                                        | 89,591    |
| Non-low Income                                                    | 396,853   |
| Total                                                             | 486,444   |
| Commercial                                                        |           |
| Small Business                                                    | 432,743   |
| Non-Small Bus.                                                    | 550,781   |
| Total                                                             | 983,524   |
| Public Authorities                                                | 190,415   |
| Industrial                                                        | 583,655   |
| Total                                                             | 2,244,038 |

From Exeter Report: Tables 3.17 & 4.7

During the review of this study by the parties, several errors in the analysis were discovered, and corrected by Exeter. Further analysis revealed additional errors. Most of these are due to bad cell references in Exeter's excel spreadsheets, and the fact that they did not include data for Fox Islands Electric Coop or Swans Island Electric Coop in their analysis. These errors are small, result in both increases and decreases in estimated potential, and do not substantially change the overall resulting estimate of technical potential. See Chart 2, below.

Chart 2

| Maximum Technical Potential<br>Annual MWh - 2012 |               |           |
|--------------------------------------------------|---------------|-----------|
|                                                  | Exeter Report | Adjusted  |
| Residential                                      |               |           |
| Low Income                                       | 89,591        | 109,710   |
| Non-low Income                                   | 396,853       | 375,761   |
| Sub-Total                                        | 486,444       | 485,471   |
| Commercial                                       |               |           |
| Small Business                                   | 432,751       | 416,203   |
| Non-Small Bus.                                   | 550,773       | 529,713   |
| Sub-Total                                        | 983,524       | 945,917   |
| Public Authorities                               | 190,415       | 187,293   |
| Industrial                                       | 583,655       | 597,976   |
| Sub-Total                                        | 1,757,594     | 1,731,186 |
| Total                                            | 2,244,038     | 2,216,657 |
| Ratio of Total Adjusted to Report                |               | 0.99      |

Based on the Exeter work, the total technical potential for energy efficiency in Maine is 2.2 million MWh/yr by 2012. Exeter's analysis breaks this estimate down into 4 major customer sectors, as shown in Chart 3, below. The Commercial sector accounts for the largest share of technical potential, followed by the Industrial and Residential sectors.

Chart 3

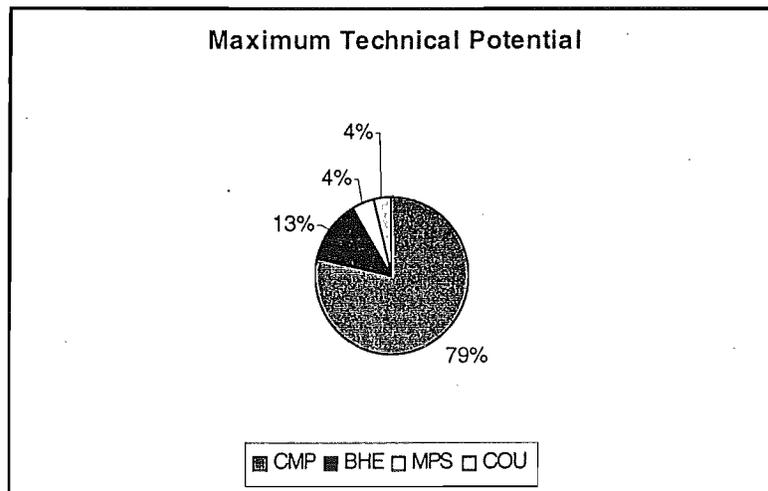
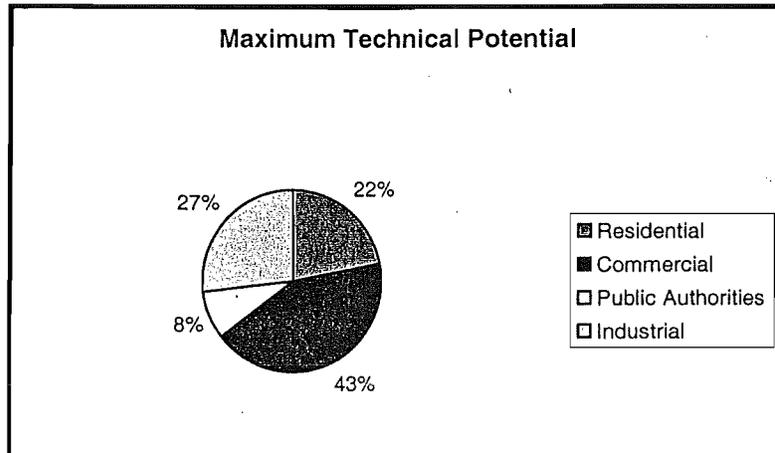
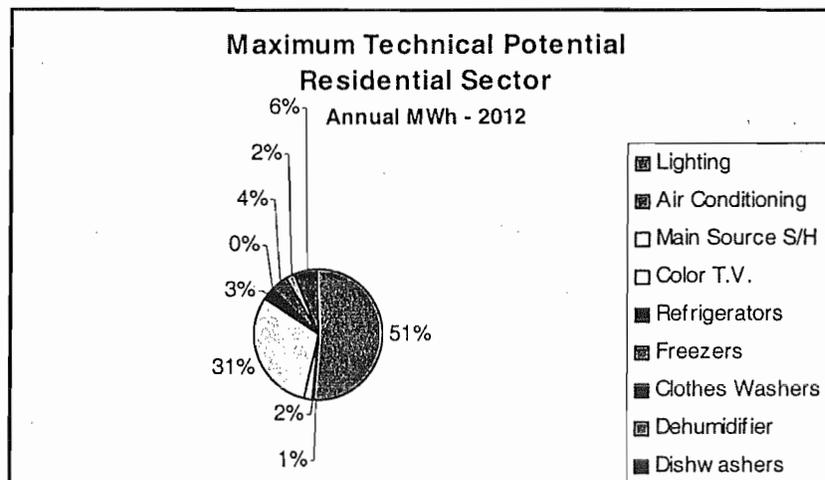


Chart 4

When the estimated technical potential is analyzed by utility service territory, the greatest share of the overall potential is in the CMP service territory. See Chart 4. This could be expected, since CMP delivers about 78% of the kWh in the State.

In the residential sector, Exeter estimates the technical potential for energy savings in lighting, main source electric space heat, and 7 other appliances. In general, Exeter uses a "replace at end of useful life" approach to estimate the rate at which energy efficiency could be implemented for each appliance or end use. They then allocate their results into low-income and non-low income segments, based on the percentage of each utility's customers that meet low-income guidelines. As shown in Chart 5, the largest component of potential savings in the residential sector is from lighting (244,000 MWh), followed by digital color TV's (150,000 MWh). In the case of digital TV's, Exeter has assumed an accelerated replacement schedule, due to the introduction of digital broadcasting.

Chart 5



In the C&I market, Exeter estimates the technical potential for energy savings in 3 sectors: industrial, commercial, and public authority. For each of these sectors, Exeter estimates the technical savings potential for a series of broad end use efficiency measures. In both the commercial and public authority sectors, the largest component of potential savings (53%) is lighting (491,000 MWh and 97,000 MWh respectively), followed by building controls (148,000 MWh and 29,000 MWh) and variable frequency drives (VFD's) (124,000 MWh and 22,000 MWh). In the industrial sector, half the potential savings (297,000 MWh) are from VFD's, while industrial lighting accounts for 94,000 MWh.

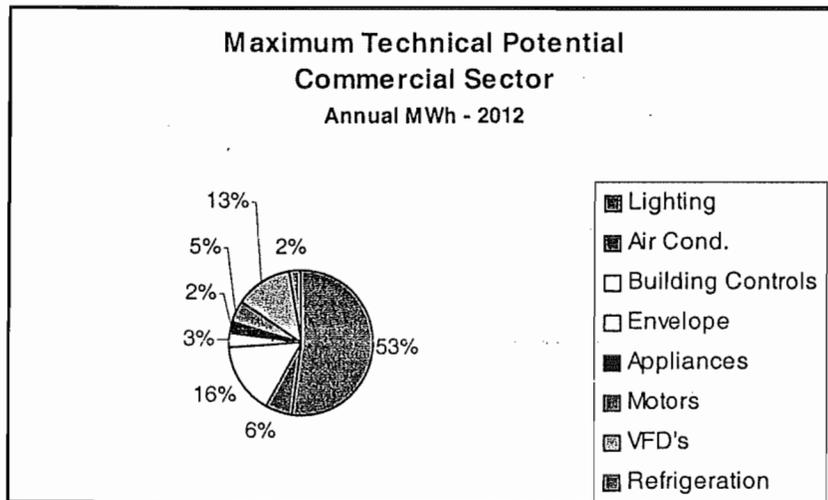


Chart 6

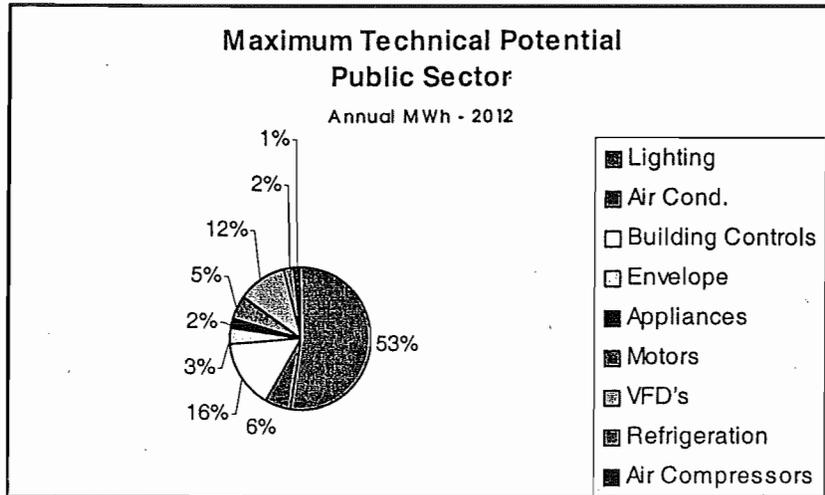


Chart 7

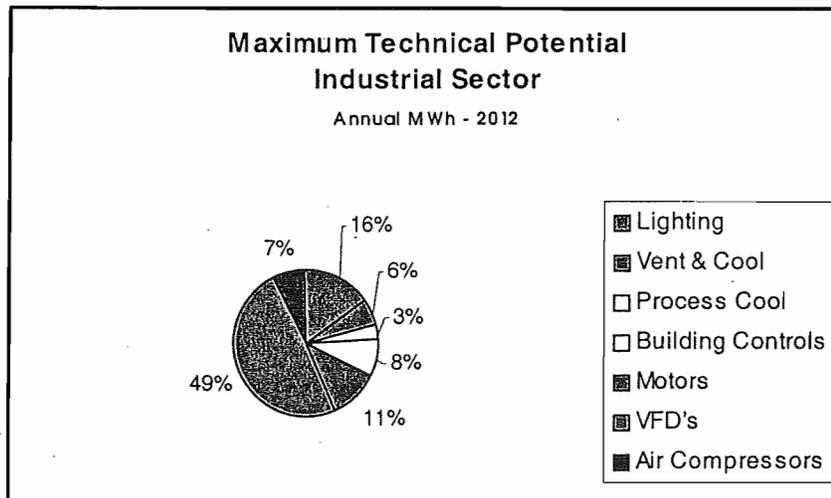


Chart 8

### Optimal Study

The Optimal Study is an analysis of achievable electric energy efficiency potential. Optimal and VEIC developed estimates of achievable market penetration rates and associated program costs, and applied them to Exeter's estimates of technical potential. They also developed original estimates for savings and costs for residential new construction and low-income programs, two markets not explicitly addressed by Exeter. The result is a projection of annual electric savings achievable for each major residential and non-residential market over the next ten years, compiled by sector, program, and utility. Since the Optimal Study is based to some extent on the results of Exeter's work, it is affected by the small adjustments discussed above.

Optimal projects achievable potential at 3 funding level scenarios:

- A Maximum Achievable Potential (Max) case, which represents that potential that could be achieved if there were no funding constraints. In this case, program funding rises from \$32 million on 2003 to just over \$100 million in 2012.
- A \$15 million case that has a funding level averaging \$15 million over the next decade. This case is intended to represent the potential that could be achieved with funding at the current legislated cap.

- A \$5 million case, which is intended to represent achievable potential with funding at the current legislated floor.

For each case, Optimal projects market penetration rates and program costs.

Optimal also estimates the economic impacts of each scenario, calculating future benefits based on avoided cost estimates, and discounting benefits and costs to 2003 at a real discount rate of 2.4%.

At the three funding levels analyzed by Optimal ("Max, \$15M and \$5M"), the achievable energy savings in 2012 are 73%, 12%, and 4% of the technical potential estimated by Exeter ("Tech"), as shown in Chart 9, below.

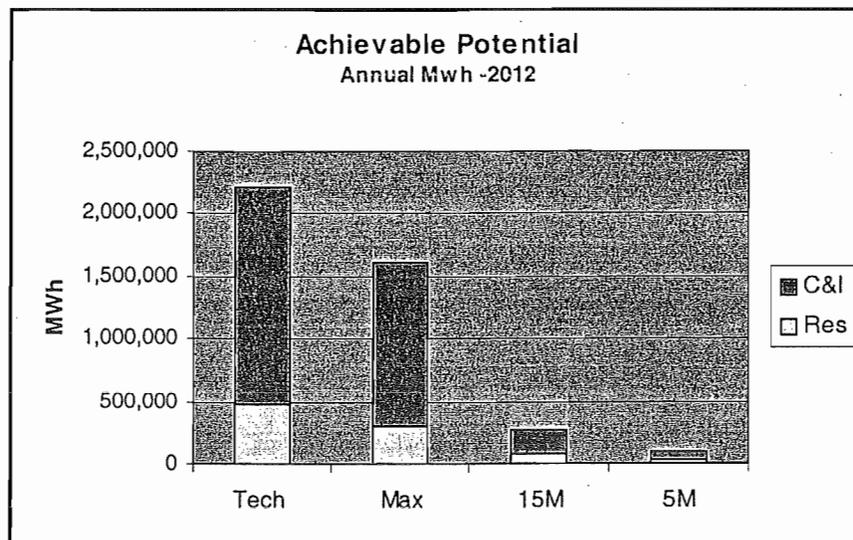


Chart 9

Chart 10 shows the cost effectiveness of the three Optimal cases<sup>3</sup>. All cases are cost effective. The Max case would yield a net benefit<sup>4</sup> of just over \$500 million. The two restricted funding cases yield net benefits of \$57 million and \$18 million, respectively.

Chart 10

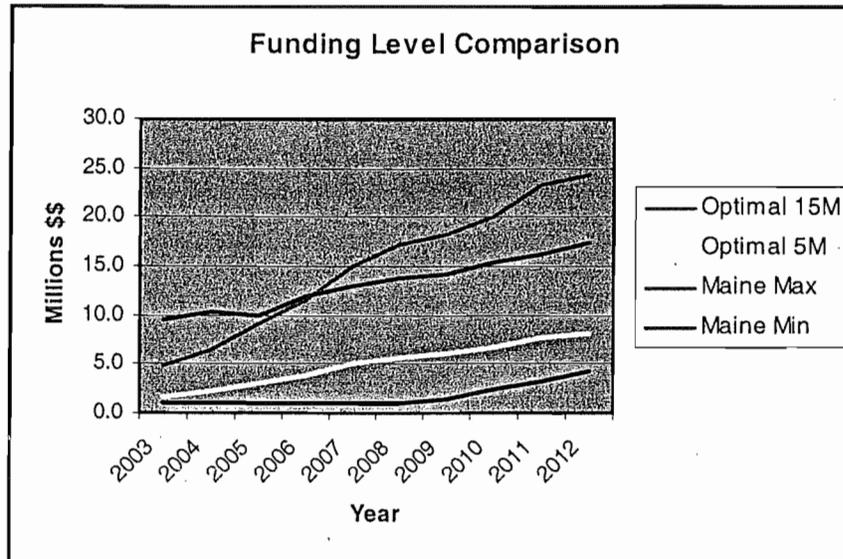
| Optimal Achievable Potential Study<br>Cost Effectiveness Comparison<br>Net Present Value 2003-2012<br>\$ millions |                |             |                |                       |
|-------------------------------------------------------------------------------------------------------------------|----------------|-------------|----------------|-----------------------|
|                                                                                                                   | NPV<br>Benefit | NPV<br>Cost | Net<br>Benefit | Benefit/Cost<br>Ratio |
| OPT Max                                                                                                           | \$1,235        | \$727       | \$508          | 1.70                  |
| OPT 15M                                                                                                           | \$207          | \$150       | \$57           | 1.38                  |
| OPT 5M                                                                                                            | \$67           | \$49        | \$18           | 1.37                  |

Although Optimal's \$15 million and \$5 million scenarios are intended to reflect the current maximum and minimum funding levels allowed by the Act, they don't include an adjustment for amortization of past Power Partners commitments. Subtracting the funds that would be used to pay for Power Partners, Maine's maximum available funding level for new programs would fall between the \$15M and \$5M cases, as shown below.

<sup>3</sup> Including the small Exeter adjustments.

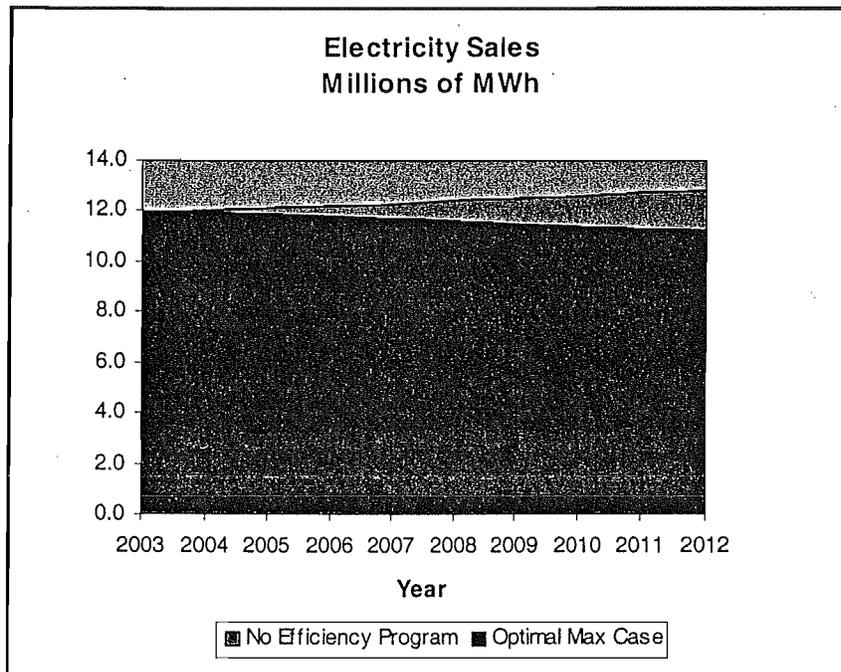
<sup>4</sup> NPV benefits less NPV costs, over the period 2003-2012

Chart 11



The electric load growth (annual MWH) in the state is projected at 0.7%/yr over the next decade. Overall, if the maximum potential estimated by Optimal were achieved, it would reduce load in 2012 from 108% to 94% of 2002 kWh levels.

Chart 12



### Comments on Efficiency Potential

Comments on the energy efficiency potential studies were received from CMP, BHE and MPS.

CMP asserts that Exeter has overestimated the potential for energy efficiency in Maine and has ignored Maine's past conservation efforts. CMP offers specific comments on the 2 studies:

- o CMP states that the average annual electric use per residential customer in Maine is 42% less than the national average, due to

the high price of electricity in the state and CMP's past conservation efforts.

- o Exeter has overestimated the amount of residential electric use associated with incandescent lamps. (CMP incorrectly asserts that Exeter estimated that 86% of residential electricity use was due to incandescent lamps. Exeter actually asserted that 86% of residential lighting use was due to incandescent lamps, and estimated this at 611 kWh/year)
- o CMP states that Exeter assumed that the saturation of CFL's in Maine is 5%. CMP further states that the 1993 Residential Energy Consumption Survey for the US shows that CFL's are used in 9% of households and CMP's own 2001 survey of residential customers shows a 91% saturation. (This appears to be a definitional issue. Exeter is estimating a 5% market share of CFL's in the residential lighting market, while CMP is quoting estimates on the number of households that use one or more CFL's.)
- o Exeter has overestimated the savings due to standby energy in efficient digital televisions in two ways. First, Exeter underestimates average daily television use (7.05 hrs/day vs. 7.7). Second, Exeter overestimates the rate at which Mainers will replace their televisions with digital TV's (Exeter assumes a 7 year replacement period).

- Exeter has overestimated the average annual energy consumption of dehumidifiers in Maine, since Maine has cooler summers and less humid weather than most regions of the country. CMP suggests that 638 kWh/yr is a more reasonable energy consumption estimate than Exeter's 1347 kWh/yr.
- CMP comments on Exeter's assumptions regarding the saturation of residential air-conditioning in Northern and Eastern Maine, but does not offer any alternative assumptions.
- Exeter's assumption that the average annual electric energy consumption of low income customers is wrong, and that, in Docket 2001-245, CMP, BHE, and MPS produced data showing that low income customers use about the same amount of electricity as an average residential customer.
- In the commercial and industrial sectors, CMP states that Exeter did not take into account its past conservation efforts, and consequently underestimated the current saturation rates for various C&I end uses in its territory. CMP offers its own assumptions.

BHE comments that the studies represent a good start toward estimating the potential for energy conservation in Maine, but that the use of these studies should be limited to targeting specific end-uses and not for determining specific program types or funding levels. BHE further comments that, according to the

studies, the majority of the potential in the state is due to lighting and lighting programs can serve a wide variety of customers at a relatively low cost.

BHE expresses concern that some programs analyzed in the Optimal Study, particularly Residential New Construction, have significant other benefits besides electricity savings, that programs should be designed to reduce inefficient electrical use, and that any incentives awarded to participants should be limited to the level of savings attained through avoided generation and T&D delivery costs. BHE further expresses concern that the benefit cost ratios (BCR's) for BHE in the funding constrained scenarios are less than half those of the other utilities.

Finally, BHE states that electric end uses should be the primary target. Other benefits, such as sustainable economic development and reduced environmental damage, should be maximized, but are not a focus of program design.

MPS points out that there is little if any load growth in northern Maine, and that the achieving incremental savings on T&D construction is more difficult in rural areas because service must be maintained. MPS agrees that it is desirable to achieve savings in fossil fuel and water, as well as conserving electricity, and wants to emphasize that other energy providers and those that embrace the conservation of natural resources should contribute to the conservation fund.

MPS further feels that the variance between the two reports is too large and agrees with Optimal that the Commission should rely on detailed program potential analysis to design and plan its on-going programs. MPS also points out that Northern Maine is part of the Northern Maine Independent System Administrator and not ISO-NE.

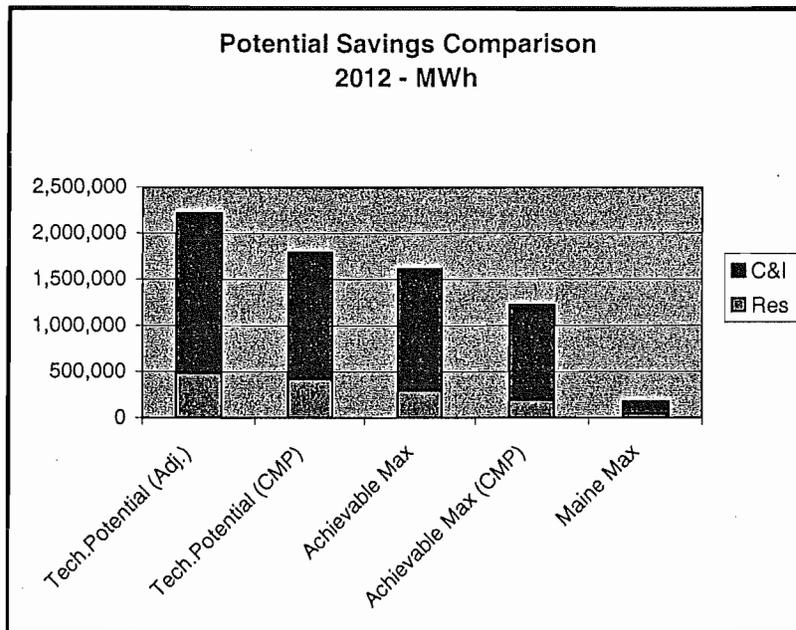
### Discussion

Exeter and CMP both offer differing assumptions on some parameters. To test the impact of these differences on the overall energy efficiency potential in the state, Exeter's analysis was modified to substitute almost all of CMP's assumptions. (This excludes residential lighting, where it appears CMP misinterpreted Exeter's assumptions, and air-conditioning, since CMP offered no alternative assumption and BHE and MPS did not comment on this.)

Chart 13 compares five levels of energy savings in 2012. From the left, they are: the technical potential in the State from the Exeter Study (adjusted), the technical potential using CMP's assumptions, the achievable potential in the state from Optimal's maximum scenario, the maximum achievable potential using CMP's assumptions, and the potential that could be achieved at the maximum funding level allowed by the Act. Chart 13 shows that using CMP's assumptions would reduce the overall technical potential for energy efficiency in the State through

2012 by 19%, compared to Exeter's analysis. Using CMP's assumptions would reduce the maximum achievable potential by 24%, compared to Optimal's Max Case. However, Maine can accomplish only a fraction of the achievable potential in the State over the next decade, even at the maximum funding level allowed.

Chart 13.



### Variation Between Utilities

While there is some variation in the energy efficiency potential in specific end uses or sectors between the T&D utilities, overall, there is substantial potential for savings in all utility service territories across Maine.

The Exeter and Optimal analyses identified some differences in energy efficiency potential between utility service territories, primarily due to different load growth rates or different saturations in air conditioning. Overall, however, each utility's energy efficiency potential as a proportion of overall State potential reasonably matches the utility's share of kWh sales levels. Comparing Charts 14a & 14b, the CMP service territory accounts for the largest share of electricity sales in the State(78%) followed by BHE (13%), the consumer owned utilities (COU's- 5%), and MPS (4%). Similarly, CMP accounts for 77% of Optimal's estimated achievable potential, followed by BHE (13%), the COU's (6%) and MPS (4%).

If CMP's assumptions are used, (Chart 14c) then CMP's proportion of overall savings potential would drop to 72%. All other utilities would see a proportional increase. Even if CMP's assumptions were adopted, a substantial proportion of the State's energy efficiency potential would still be in the CMP service territory, and this potential would be sufficient to support a high level of program activity and funding for several years.

Chart 14 a

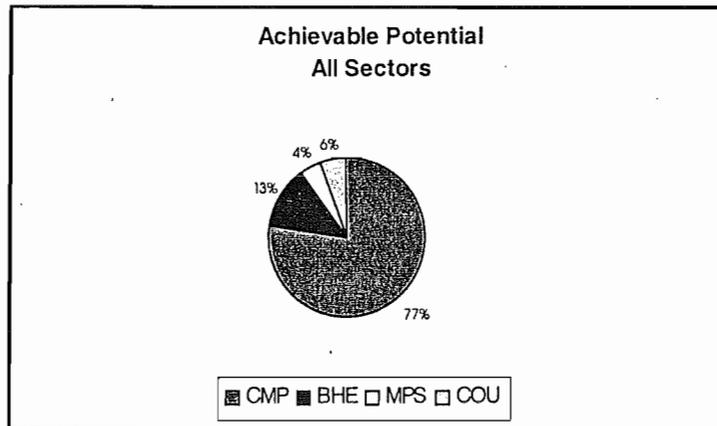
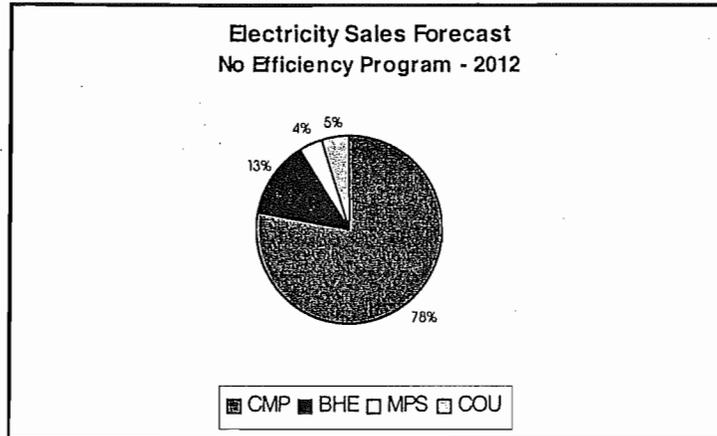


Chart 14 b

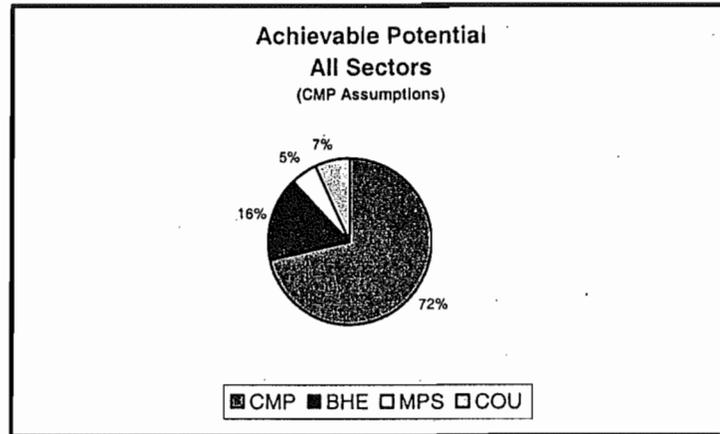


Chart 14c

Funding Options

At the current maximum funding limit set by the Legislature (1.5 mils/kWh), we can expect to achieve about 12% of the maximum achievable potential identified by the Optimal Study over the next decade. This is shown in Chart 15, by comparing the annual energy savings level in 2012 for Optimal's maximum achievable scenario (1.6 million MWh), with the savings level for the Maine Max case (190,000 MWh). Using CMP's estimates, the maximum achievable estimate is reduced to 1.2 million MWh, and we could expect to achieve about 16% of this amount at the current funding limit.

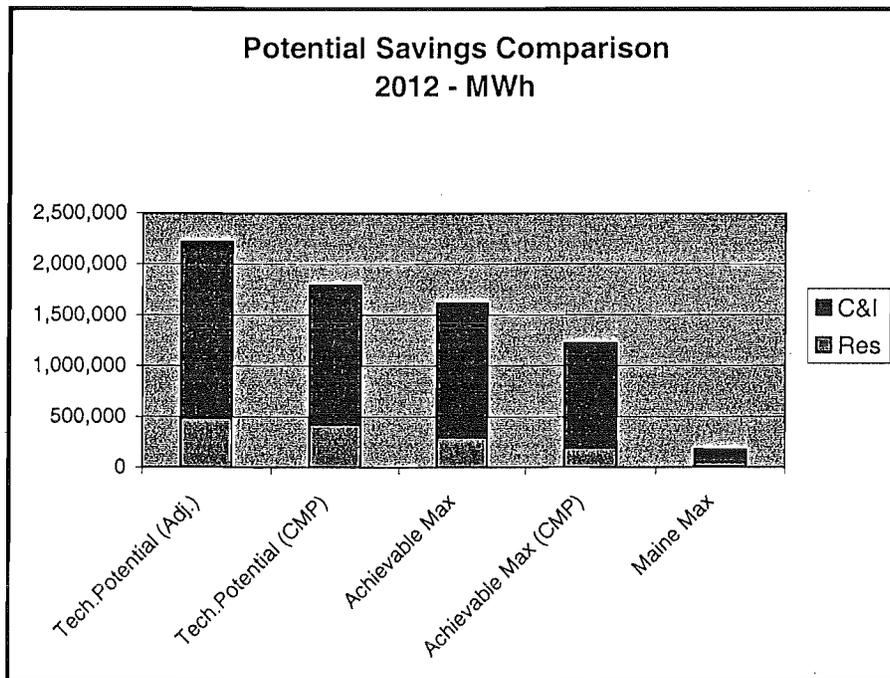


Chart 15

The Legislature has established<sup>5</sup> a range within which the Commission can set assessment levels for energy efficiency programs. The current minimum assessment is set at 0.5% of T&D utility revenue, and the maximum limit is set at 1.5 mils/kWh. Using the electricity sales forecast from the Exeter Report (adjusted), the estimated funds that would be available at the maximum and minimum funding levels over the next decade are shown in Chart 16. Total assessment represents the estimated assessment at the indicated level<sup>6</sup>, summed for all Maine utilities. Subtracted from this total are utility commitments to amortize previous programs (CMP Power Partners), to yield the net amount available each year for new programs from the Energy Efficiency Fund.

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<sup>5</sup> PL 2002, ch. 624, Section 4

<sup>6</sup> For the Maine Minimum case, CMP's assessment was assumed to equal the greater of the minimum funding level or what would be required to meet their Power Partners payment. Under this assumption, CMP would not provide funds for new programs until 2009. All other utilities would be assessed at the minimum.

Chart 16

**Energy Efficiency Fund  
Estimated Funding Range  
\$ millions**

| Year | Maine Maximum<br>(1.5 mils/kWh) |                      |                          | Maine Minimum<br>(0.5% rev.) |                      |                          |
|------|---------------------------------|----------------------|--------------------------|------------------------------|----------------------|--------------------------|
|      | Total<br>Assessment             | Previous<br>Programs | Available for<br>EE Fund | Total<br>Assessment          | Previous<br>Programs | Available for<br>EE Fund |
| 2003 | \$16.7                          | \$7.1                | \$9.6                    | \$8.1                        | \$7.1                | \$1.0                    |
| 2004 | \$16.8                          | \$6.6                | \$10.3                   | \$7.6                        | \$6.6                | \$1.0                    |
| 2005 | \$17.0                          | \$7.1                | \$9.9                    | \$8.1                        | \$7.1                | \$1.0                    |
| 2006 | \$17.1                          | \$5.2                | \$11.9                   | \$6.3                        | \$5.2                | \$1.0                    |
| 2007 | \$17.2                          | \$4.3                | \$12.9                   | \$5.4                        | \$4.3                | \$1.0                    |
| 2008 | \$17.4                          | \$3.6                | \$13.8                   | \$4.6                        | \$3.6                | \$1.1                    |
| 2009 | \$17.5                          | \$3.2                | \$14.3                   | \$4.7                        | \$3.2                | \$1.4                    |
| 2010 | \$17.6                          | \$2.2                | \$15.4                   | \$4.7                        | \$2.2                | \$2.5                    |
| 2011 | \$17.8                          | \$1.5                | \$16.3                   | \$4.7                        | \$1.5                | \$3.3                    |
| 2012 | \$17.9                          | \$0.6                | \$17.3                   | \$4.8                        | \$0.6                | \$4.2                    |

Chart 17, below, shows five alternative energy efficiency program funding level projections through 2012. Each of these projections is net of previous Power Partners commitments. The five curves represent funding at the current level and 4 options, which were selected to represent the range of funding levels that could be adopted by the Commission. These options are presented here to facilitate Commission consideration of the funding range and the resulting program and savings implications. They should not be considered as final program recommendations.

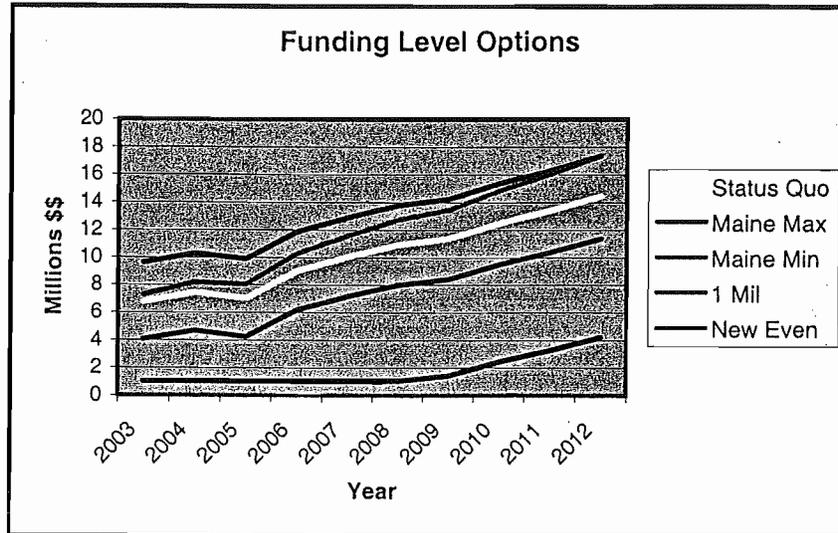


Chart 17

- “Status Quo”: This is a projection of the funds that would be available if the current assessment levels were maintained.
- “Maine Max”: Provides for funding at the maximum currently allowed by the Act, as suggested by the OPA, with all utilities assessed at 1.5 mils/kWh.
- “Maine Min” Provides for an assessment from CMP at the minimum needed to pay its previous power partners commitments (no contribution to new programs until 2009) and an assessment from all other utilities at the minimum level allowed by the Act, 0.5% of transmission and distribution revenue.
- “One Mil” Assesses funding from all utilities at a level of 1.0 mils/kWh, as suggested by CMP.

- "New Even" This is a funding option which continues CMP's assessment at the maximum level allowed, and sets the remaining utilities on a funding approach which starts at 0.6 mils/kWh in 2003 and ramps up at 0.1 mil/kWh annually to the maximum level. This approach results in a funding level for the remaining utilities that closely matches the net funds available from CMP for new programs after Power Partners payments are made. See Chart 18.

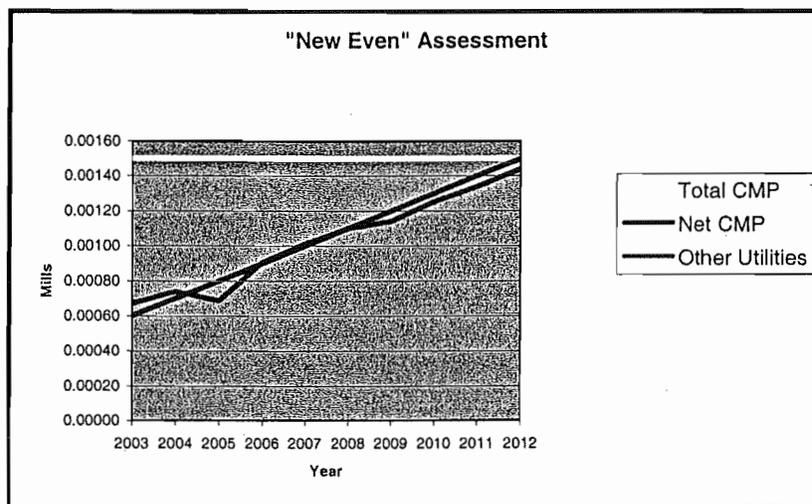


Chart 18

Using the data provided in the Exeter and Optimal Studies, staff developed estimates of annual energy savings, costs and benefits for each of the four options listed above. The maximum level of funding ("Maine Max") would allow for a reasonably robust program serving all major market sectors. The Maine Min option would severely restrict program offerings. At this level, the program would

fund only a small low-income program and a minimum small business program. The 1 Mil option is a medium level of funding between the maximum and minimum. This funding level would support a low-income program, a moderate small business program, and a residential lighting program, but large C&I programs or government /school programs would be very limited. The New Even approach would initially yield about the same funding as current assessment levels, and ramp gradually to a near maximum funding level by the end of the decade. Program offerings under this option would be similar to, but slightly smaller than the maximum option.

Estimated cumulative annual MWh savings in 2012 for each alternative are shown in Chart 19. Funding at the maximum limit would result in energy savings of 190,000 MWh/yr by 2012. In contrast, funding at the minimum level would produce only 24,000 MWh/yr of savings. At a 1 mil funding level, the estimated savings would be about half that obtainable at the maximum funding level (97,000 MWh/yr) and the New Even funding approach would result in 92% of the savings from maximum funding (174,000 MWh/yr).

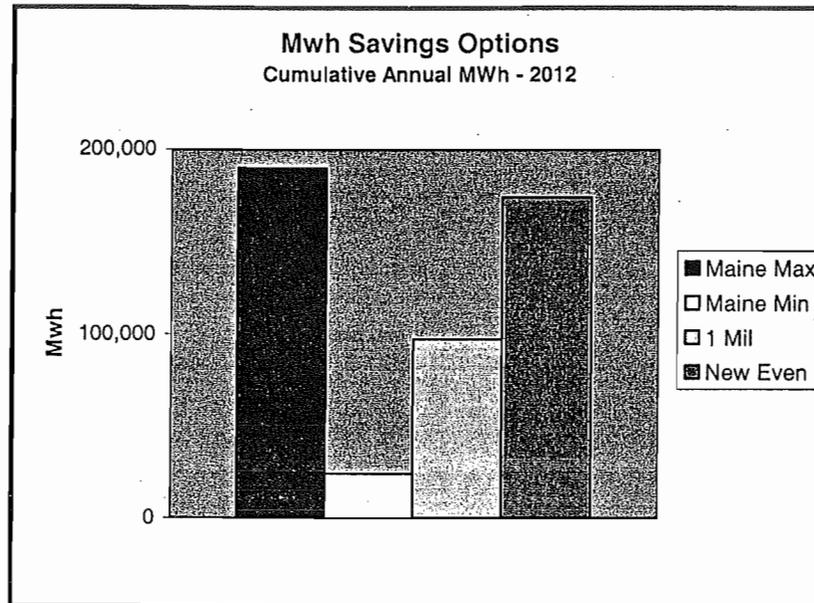


Chart 19

The financial impacts of the four options were estimated using the cost information supplied in the Exeter and Optimal Studies, including estimates of future avoided electricity costs in Maine.

#### Development of Avoided Costs:

The Commission is required by law to select energy conservation programs that are cost effective in a broader societal sense. In its November 6, 2002 Order "Adopting Rule and Statement of Factual and Policy Basis" the Commission revised Chapter 380, the rule it has historically used to judge whether energy conservation programs are cost effective. The rule defines the energy savings that should be used to determine whether programs are cost effective.

*Avoided electric generation costs including energy and capacity costs, using estimates of market prices and adjusting for line losses. These estimates may be differentiated by different time periods that influence market prices, including but not limited to peak and off-peak periods and summer and winter periods.*

In addition to the energy and capacity savings, the transmission and distribution costs that are avoided due to increased efficiency may also be included in the estimate of savings attributable to an energy conservation program.

*Avoided transmission and distribution costs, using estimates of transmission and distribution utility marginal transmission and distribution costs. These costs may be differentiated by time periods that influence costs.*

Initial Estimates:

In making their estimates of the economically efficient amounts of technical and achievable energy efficiency potential, the OPA's witnesses modified avoided energy supply costs that have been accepted for use in Massachusetts, Rhode

Island, and New Hampshire<sup>7</sup>. These costs were based on estimates of the New England wholesale electric market's energy and capacity costs. To develop the costs, OPA's consultants used a production-costing model that simulates the least cost dispatch of New England's fleet of power plants. To account for the effect that changes in fuel price would have on generating costs, the consultants used the latest available natural gas and oil price forecasts. In order to ensure that their model was properly calibrated, the consultants calibrated the model with the latest available Natsource electricity futures information. Natsource only publishes the forward prices for three years out, and the consultants calibrated the model for consistency with those prices, then simulated system dispatch from that point forward through the year 2012. Beyond 2012, the consultants extrapolated the market energy price at the rate of escalation of the energy costs of combined cycle gas plants for 2010 to 2015. The annual escalation rate in real price was .655% over the period, and the consultants assumed that rate was sufficient for extrapolating costs beyond the study period. Capacity cost estimates were derived similarly. The consultants began with Natsource prices for installed-capacity contracts of \$1.63/kW-month in 2002, and \$1.53/kW month in 2003. This is equivalent to an annual price of about \$18/kW-yr. From that point forward, the consultants ramped the price up to \$37.8/kW-year in 2007<sup>8</sup> assuming that the market would reach equilibrium by then. The seasonal value of capacity was determined through observation of the 60:40 ratio of

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<sup>7</sup>A more thorough discussion of the earlier study can be found in the report itself, "Updated Avoided-Energy-Supply Costs for Demand –Side-Management Screening in New England." Prepared by Paul Chernick and Susan Geller of Resource Insight and Bruce Biewald and David White of Synapse Energy Economics.

<sup>8</sup> Real dollars

summer to winter capacity values observed in the market for an earlier report. A final adjustment that the consultants made was to apply a ratio of 1.2 to the wholesale prices in order to make them equivalent to the observed difference between wholesale clearing prices and the slightly higher prices that marketers in the region appear to be offering to retail load.<sup>9</sup>

#### Maine Adjustments:

The estimates of avoided costs that were generated in the earlier study were decreased by about 37% to reflect observed decreases in capacity contract prices published for 2003 and 2004. The energy supply costs were further decreased by 5% for Maine relative to the rest of New England to reflect the lower locational marginal prices for Maine that were published in ISO New England's 2001 Regional Transmission Expansion Plan. This cost reduction will make the Maine avoided cost numbers suitable for use in the northern part of Maine that is served through New Brunswick. The consultants also customized the avoided costs for line losses by using recent marginal cost studies prepared by Central Maine Power Company and Bangor Hydro Electric Company. The consultants included marginal transmission and distribution costs of about \$80/kW-yr.<sup>10</sup>

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<sup>9</sup> The rationale for the observed differences included the possibility that the 20% differential includes the risk premium for serving retail load and that the production costing model has not estimated the cost of ancillary services.

<sup>10</sup> \$80/kW-yr was the lowest estimate from a range of CMP studies reviewed and was consistent with a 1988 estimate by BHE scaled to today's dollars.

Load Shapes and Seasonal Differentiation:

The market price of power varies seasonally and from hour to hour each day. The energy efficient technologies that are being examined have varying usage from hour to hour and, like the market prices, from season to season. The variations between market price and device use must be taken into consideration when calculating the value of the energy that a particular technology may save (e.g. an air conditioner does not run often in January when market prices are low, but may be on quite frequently during the system peak when prices are high). The OPA's consultants performed these calculations by using the "load shape" data of various technologies that had been developed from an earlier study they performed in Vermont.<sup>11</sup>

The estimates for avoided energy costs developed by the OPA's consultants are adequate for our use. We have made a small adjustment to remove the 20% retail adder to the transmission and distribution costs that was added by the consultants because we believe that the correct values to use are the wholesale market values and not what it costs to provide the energy at retail. We will participate with agencies in MA, NH, and RI on future updates of the study consistent with the directive of 35-A M.S.R.S. §3211-A (2)(l):

The commission may coordinate its efforts under this section with similar efforts in other states in the northeast region and enter into agreements with public agencies or other entities in or outside of the State for joint or cooperative conservation planning or

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<sup>11</sup> See OPA response to Oral Data Request Nos. 9 and 11 Docket 2002-162

conservation program delivery, if the commission finds that such coordination or agreements would provide demonstrable benefits to the citizens of the State and be consistent with this section, the conservation programs and the objectives and overall strategy for the conservation programs.

Cost Effectiveness:

The financial impacts of the four funding options are shown in Chart 20.

Funding at the maximum level over the next decade would yield a net benefit (in present value 2003 dollars) of \$44 million. A minimum funding program would produce about one tenth the net benefit (\$4.7 million). The 1 Mil option would yield about 44% of the net benefit (\$20 million), and the New Even option 88% (\$39 million) of the maximum option.

Chart 20

| <b>Cost Effectiveness Comparison</b> |         |        |         |              |
|--------------------------------------|---------|--------|---------|--------------|
| Net Present Value 2003-2012          |         |        |         |              |
| \$ millions                          |         |        |         |              |
|                                      | NPV     | NPV    | Net     | Benefit/Cost |
|                                      | Benefit | Cost   | Benefit | Ratio        |
| Maine Max                            | \$143.6 | \$99.1 | \$44.5  | 1.45         |
| Maine Min                            | \$15.9  | \$11.3 | \$4.7   | 1.41         |
| 1 Mil                                | \$75.1  | \$55.3 | \$19.8  | 1.36         |
| New Even                             | \$130.0 | \$90.8 | \$39.1  | 1.43         |

Program benefits continue over the life of the various efficiency measures and would continue to accrue even after the program ended. Chart 21 illustrates this, using the annual program costs and benefits from the Maine Max Case, and assuming the program would end after 2012. Program benefits continue to be realized for another decade, although at a decreasing rate as measures reach the end of their expected lives. This illustration is somewhat conservative, since it assumes that efficient measures would not be replaced at the end of their useful life. In reality, we should expect that some fraction of these measures will be replaced with technologies of equal (or greater) efficiency, and the resulting benefits would be extended.

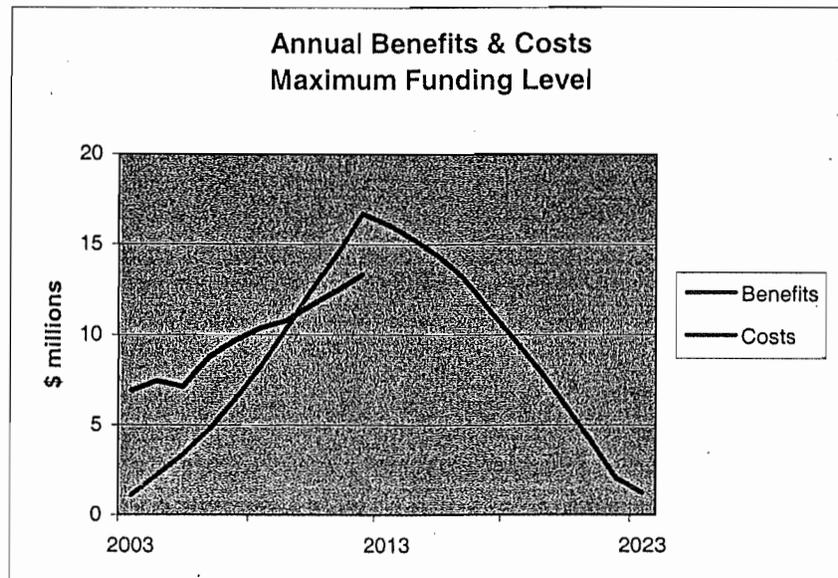


Chart 21

### Comments on Funding Level

Comments on funding levels were received from Madison Electric Works (MEW), CMP, BHE, MPS, Madison Paper, and the Public Advocate on behalf of the Maine Energy Efficiency Coalition.

MEW states that a single large customer accounts for over 8 times the consumption of the rest of their customers. This customer has previously installed energy saving equipment and implemented conservation measures, and therefore would be highly unlikely to benefit from the Commission's planned programs. MEW would therefore oppose any assessment that exceeds the statutory minimum.

CMP proposes a funding level of 1.0 mil/kWh, for an initial 3 years. CMP further states that the funding level should apply to all transmission and distribution utilities, since there is no evidence that there are any differences in the characteristics of service territories of the various T&D utilities in Maine.

BHE states that, over the last 5 years, it has spent about 0.6 mils/kWh on energy efficiency. It further states that no appropriate showing has been made to raise current funding levels and they should stay the same. BHE argues that energy efficiency investments are less attractive in their service territory than in the rest of the state, based on their review of Optimal's cost effectiveness analysis<sup>12</sup>.

Finally, BHE raises the issue of how non-core sales affect the mil rate that core customers pay.

MPS states that they are currently being assessed at the minimum level, which they believe to be appropriate. However, they would consider an increase in the assessment if their customers get a proportional benefit.

Madison Paper expresses the view that the Commission must conduct a particularized inquiry for each T&D utility as to the appropriate level of total conservation expenditures, and therefore, assessments for that T&D utility.

Madison Paper states that they have already invested in cost saving conservation measures, and further, would receive no system benefits because they take power exclusively over an MEW transmission line.

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<sup>12</sup> Response to CMP 01-52 Supplemental dated October 29, 2002.

The Public Advocate, on behalf of the MECC, cites the results of the Exeter and Optimal Studies and believes that the total available and achievable potential throughout Maine is several multiples of the potential that will be captured even under the maximum funding levels authorized by the legislature. MECC further states that this potential would be as a result of efforts in multiple markets that are targeted on multiple rate classes. These opportunities are distributed evenly and broadly throughout all service territories in Maine. MECC recommends that the Commission bring all utilities to the same level of maximum funding over a period of 3-6 years.

Discussion:

The views by some parties that funding should be set at 1 mil (CMP), or the minimum allowed (MEW, BHE and MPS) are overshadowed by the very large potential for cost effective energy savings in Maine, as detailed above. The achievable potential energy savings are several times that which could be achieved at the maximum funding level allowed by law. Funding at the minimum level would forgo over 800 million kWh of potential energy savings over the next decade, compared to that which could be achieved at the maximum funding level, while funding at the 1-mil level would forgo over 500 million kWh. As shown in Chart 20, above, the net benefits<sup>13</sup> that could be achieved at a maximum funding level over the next decade amount to almost \$45 million, while a program

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<sup>13</sup> NPV benefits less NPV costs, over the period 2003-2012

funded at the minimum level would result in slightly less than \$5 million and a 1 Mil program about \$20 million of net benefits. This review clearly supports establishing the funding level at the maximum level allowed.

Both CMP and MECC point out that the potential for energy efficiency exists broadly throughout Maine, and funding assessments should apply to all T&D utilities. The results of the analyses submitted by OPA show that, while there may be some differences in individual end uses or market segments, overall, the potential for energy efficiency is relatively proportional across T&D service territories. MEW and Madison Paper make the argument that a large industry that has implemented some level of energy efficiency measures should be excluded from the funding assessment. This argument should be rejected for several reasons. Where energy efficiency programs have been available to industry, they have taken advantage of them, either directly or with the assistance of energy service companies and others. The past experiences of CMP and BHE are two local examples. Energy efficiency programs focus the attention of business and others on identifying and implementing efficiency opportunities. Further, efficiency technology is continually changing, and new opportunities for savings are being identified and developed. Finally, the Commission should no more exclude a large industry that claims to have installed energy efficient equipment from a funding calculation than a residential customer who claims to have installed compact fluorescent bulbs in all their light fixtures. The Act states that minimum funding assessments should be based on

the total transmission and distribution revenues of the T&D utility. This indicates that customer revenue or kWh should not be excluded from the assessment calculation simply because the customer takes service at transmission voltage.

This leads to a related issue raised by BHE, that of non-core customers and sales. A similar issue has been discussed at various conferences during this proceeding about CMP's largest customers. When CMP's rates were unbundled into separate transmission, distribution and stranded cost rates, all of CMP's conservation-related costs were allocated as a distribution cost. During these conferences, some have at least implicitly questioned whether CMP's transmission-level customers should be eligible for conservation programs because they do not pay distribution rates. As discussed above, the Act indicates that funding should be based on total T&D revenues, or, by implication, total T&D energy delivery should the Commission use kWh as the basis for assessment. This would include T&D revenue from, or kWh delivered to, non-core customers and transmission-level customers.

Further, the Act specifically directs that the Commission:

*"To the greatest extent practicable, apportion remaining available funds among customer groups and geographic areas in a manner that allows all other customers to have reasonable opportunity to participate in one or more conservation programs."*

35-A M.R.S.A. § 3211-A(2)(B)(3). We interpret the Act as requiring all customers, whether transmission or distribution customers, core or non-core customers, to be eligible to participate in any appropriate programs developed by the Commission. Therefore, even assuming that all conservation-related expenses incurred by CMP are allocated to distribution customers and that rates paid by transmission-only customers do not include any conservation expenses,<sup>14</sup> all customer groups should be eligible to participate in some of the programs in the portfolio of conservation programs. The question of how the conservation assessment should be recovered in T&D rates, like all cost allocation questions, is a complex one. We recommend that the Commission establish the principle that the portfolio of conservation programs should be directed at all T&D customers, and defer to a rate proceeding or an ARP adjustment proceeding any issue regarding whether the cost allocation of conservation assessments for CMP, or any T&D utility, is inequitable and should be changed.

BHE's statement that energy efficiency investments are less attractive in their service territory than the rest of the state is based on a set of tables supplied by Optimal, in response to a data request<sup>15</sup>. Upon review of these tables and tracing back through the underlying Optimal and Exeter calculations, we can find no supportable difference in energy saving potential or cost, and believe it to be another error in the Exeter analysis.

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<sup>14</sup> We leave the statement as an assumption at this point, because we have not given interested persons the opportunity to contest the validity of the assumption.

<sup>15</sup> Response to CMP 01-52 Supplemental, dated October 29, 2002.

Dated: February 11, 2003

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'P. C. Hastings', with a long horizontal stroke extending to the right.

Philip C. Hastings, Director  
Energy Efficiency Program  
On Behalf of the Commission's  
Energy Efficiency Team

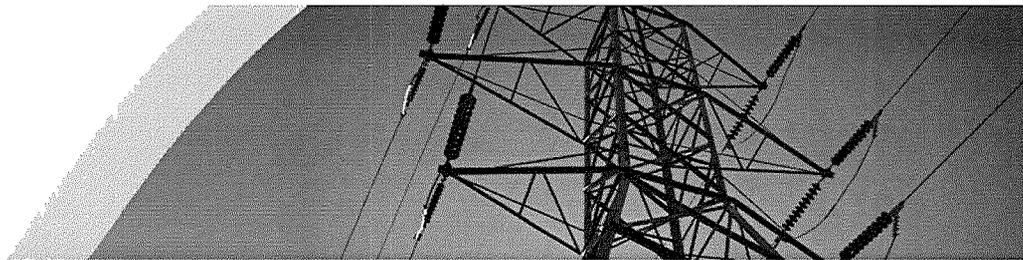
LD 233 - An Act to Promote Energy  
Conservation

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Testimony before the  
Utilities and Energy  
Committee

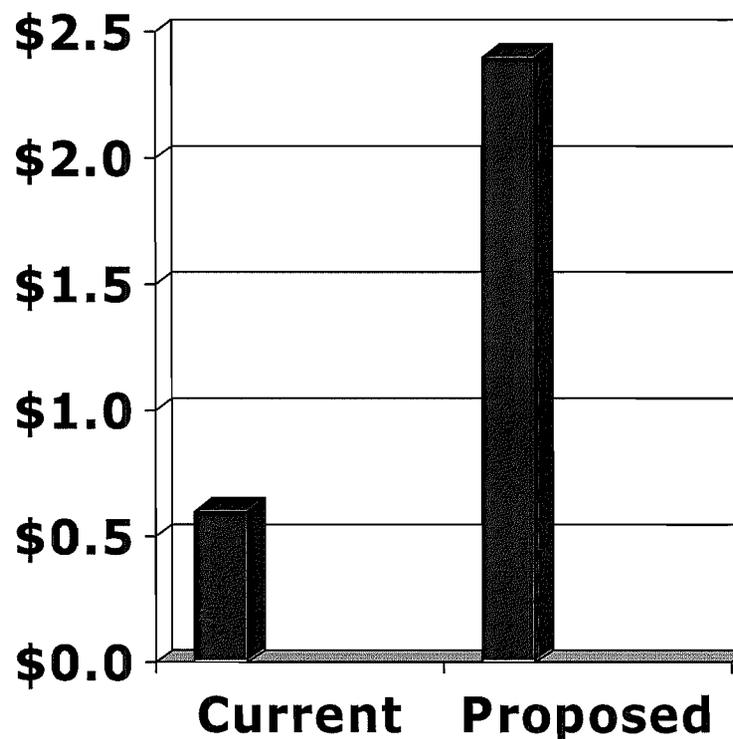
April 10, 2003





## LD 233 - An Act to Promote Energy Conservation

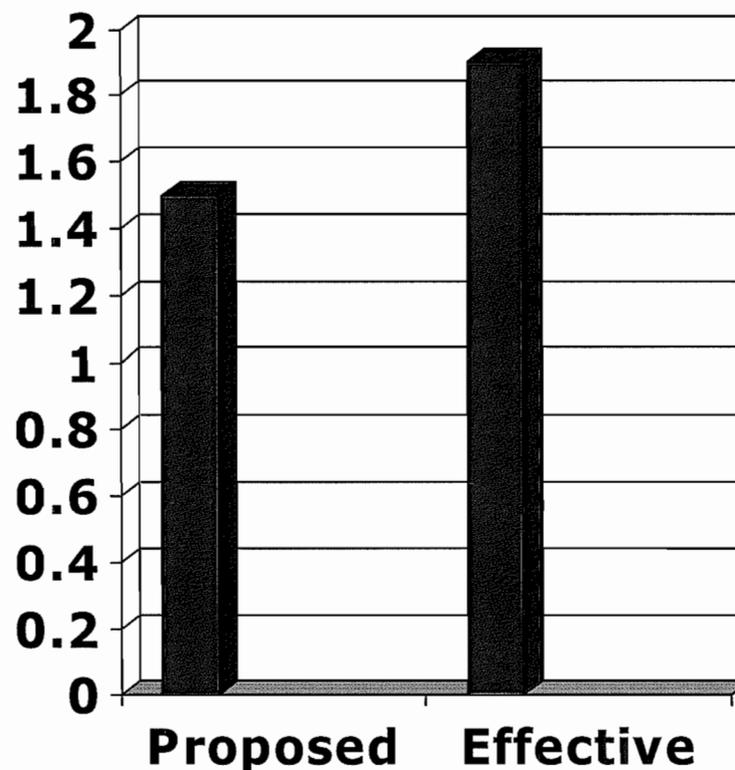
- Current assessment range is a minimum of 1/2% of revenues to a maximum of 1.5 mils/kWh (just over 2%)
- This represents a **315%** increase over the current assessment.





## LD 233 - An Act to Promote Energy Conservation

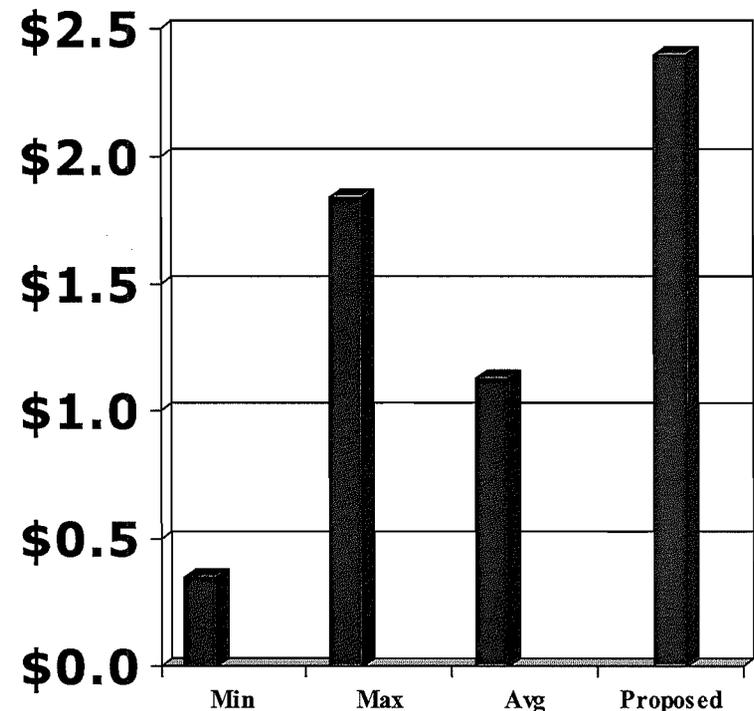
- Approximately 20% of BHE sales are to non-core customers who do not contribute to the assessment.
- This creates an effective assessment of 1.9 mils/kWh on core customers or **25%** above the intended maximum level.





## LD 233 - An Act to Promote Energy Conservation

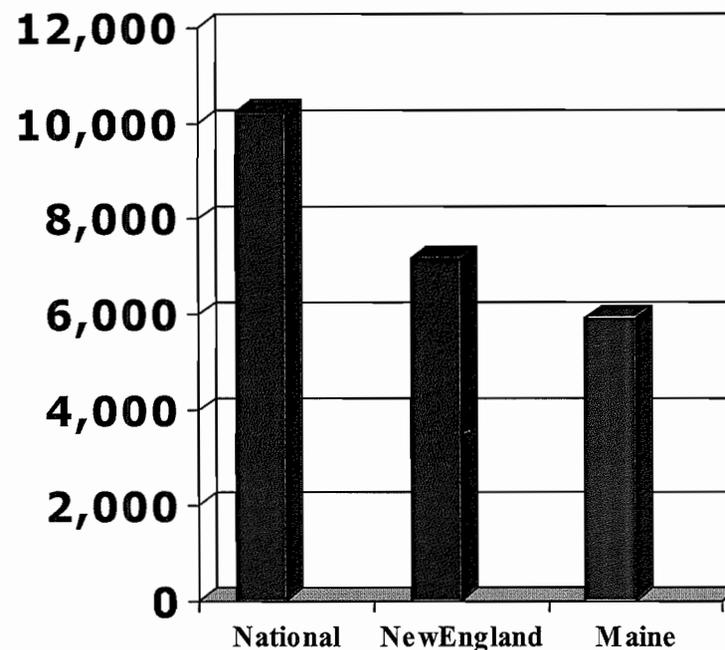
- Over the last 10 years BHE customers have funded approximately \$1.1 million per year for conservation measures
- LD 233 would require BHE customers to fund \$2.4 million every year or a **112%** increase in their historic assessment.





## LD 233 - An Act to Promote Energy Conservation

- The National average electricity usage for residential customers is 10,219 kWh/year
- The New England average is 7,166 kWh/yr
- Maine has one of the lowest in the US at 5,918 kWh/yr or **42%** less than the National average



Committee: UTE

LA: JC

File Name: G:\COMMITTEES\UTE\AMENDMT\121st-1st\ld 799 - 540 - building standards.doc(4/16/03 3:44 PM)

LR (item)#: \_\_\_\_\_

New Title?: Y

Add Emergency?: N

Date: April 15, 2003

**LD 233 (or some other LD)**  
**COMMITTEE AMENDMENT**  
**(based on PUC draft)**  
Alternate language putting the major provisions in law

Amend the bill by striking everything after the enacting clause and before the summary and inserting it its place the following:

**Sec. 1. 5 MRSA §1764-A** is enacted to read:

**§1764. Improvement of energy efficiency in state-funded construction.**

**1. Rules.** The commissioner, in consultation with the Energy Resources Council and the Public Utilities Commission shall by rule require all planning and design for the construction of new or substantially renovated state-owned or leased buildings, or buildings built with state funds, including buildings funded though state bonds or the Municipal Bond Bank

A. Involve consideration of architectural designs and energy systems that show the greatest net benefit over the life of the building by minimizing long term energy and operating costs;

B. Include an energy use target which exceeds by at least 20% the energy efficiency standards in effect for commercial and institutional buildings pursuant to Title 10, Section 1415-D; and

C. Include a life cycle cost analysis that explicitly considers cost and benefits over a minimum of 30 years and that explicitly include the public health and environmental benefits associated with energy efficient building design and construction, to the extent they can be reasonably quantified.

For purposes of this section, “substantially renovated” means any renovation for which the cost exceeds 50% of the building’s current value prior to renovation.

The commissioner shall adopt rules pursuant to this section by July 1, 2004. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, Chapter 375, subchapter II-A.

**2. Application.** Rules adopted pursuant to this section do not apply to any new or substantially renovated state-owned or leased buildings, or buildings built with state funds, including buildings funded through state bonds or the Municipal Bond Bank, that have received design approval prior to the effective date of the rules.

**3. Approval.** The commissioner shall withhold approval for construction of new or substantially renovated state-owned or leased buildings, or buildings built with state funds, including buildings funded through state bonds or the Municipal Bond Bank unless the agency or other entity or organization proposing the construction can show that it has duly considered the most energy and environmentally efficient designs suitable.

**Sec. 2. 20-A MRS §15905-B is enacted to read:**

**MANDATE**

**§15905-B. School energy efficiency standards rules.**

**1. Rules.** The state board, in consultation with the Department of Administrative and Financial Services and the Public Utilities Commission, shall by rule require that all planning and design for new or substantially renovated schools or school buildings

A. Involve consideration of architectural designs and energy systems that show the greatest net benefit over the life of the building by minimizing long term energy and operating costs;

B. Include an energy use target which exceeds by at least 20% the energy efficiency standards in effect for commercial and institutional buildings pursuant to Title 10, Section 1415-D; and

C. Include a life cycle cost analysis that explicitly considers cost and benefits over a minimum of 30 years and that explicitly include the public health and environmental benefits associated with energy efficient building design and construction, to the extent they can be reasonably quantified.

For purposes of this section, “substantially renovated” means any renovation for which the cost exceeds 50% of the building’s current value prior to renovation.

The state board shall adopt rules pursuant to this section by July 1, 2004. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, Chapter 375, subchapter II-A.

**2. Application.** Rules adopted pursuant to this subsection do not apply to any school construction project that receives voter approval at a public referendum pursuant to section 15904 prior to the effective date of the rules.

**3. Requirements for approval.** The commissioner and the state board shall withhold approval of a school construction project if the local school authority proposing the project can not show that it has duly considered the most energy and environmentally efficient designs suitable.

**Sec. 3. State Board of Education Rules; transition.** Prior to the effective date of rules adopted pursuant to Title 20-A, Section 15905, subsection 4-A, the State Board of Education shall disseminate to appropriate local authorities proposing to construct or substantially renovate any school or school building, information concerning the development of the rules and shall encourage planning and design that is consistent with the purposes of Title 20-A, Section 15905, subsection 4-A.

**Sec. 4. Work group; review of building energy efficiency standards.** The Public Utilities Commission, in consultation with the Energy Resources Council, shall form a working group to review current state building energy standards, and their enforcement, and various advanced building guidelines, including but not limited to the Leadership in Energy and Environmental Design system, the United States Environmental Protection Agency's Energy Star Buildings system, the State of California's CHPS guidelines, and the New Buildings Institute's Advanced Building Guidelines. The Public Utilities Commission shall submit a report that includes its findings and recommendations, including any recommended new rules or changes to existing rules or recommended legislation to the Joint Standing Committee on Energy and Utilities not later than February 1, 2004.

## SUMMARY

This amendment replaces the bill. This amendment:

1. Requires the State Board of Education, by July 1, 2004, to adopt rules regarding school construction to require planning and design for such construction to include an energy use target that exceeds by at least 20% the energy efficiency values established in the State building energy standards and a life-cycle cost analysis;
2. Requires that approval by the Commissioner of Education or the State Board of Education of school construction be withheld unless the local school authority shows that it has duly considered the most energy and environmentally efficient designs suitable;
3. Requires the Commissioner of Administrative and Financial Services, by July 1, 2004, to adopt rules regarding state-funded construction to require planning and design such construction to include an energy use target that exceeds by at least 20%

the energy efficiency values established in the State building energy standards and a life-cycle cost analysis;

4. Requires the Commissioner of Administrative and Financial Services to withhold approval of any state-funded construction unless the agency or other entity can show that it has duly considered the most energy and environmentally efficient designs suitable; and
5. Directs the Public Utilities Commission, in consultation with the Energy Resources Council, to form a working group to review current state building energy standards, and their enforcement, and submit a report to the Joint Standing Committee on Energy and Utilities not later than February 1, 2004.

Committee: UTE

LA: JC

File Name: G:\COMMITTEES\UTE\AMENDMT\121st-1st\085002 --latest working draft. doc.doc(4/26/03 12:35 PM)

LR (item)#: 850(2)

New Title?: Y

Add Emergency?: N

Date: April 15, 2003

ED 233

COMMITTEE AMENDMENT  
(tabled pending opta)

**modifications to language tabled on 4/17/03:**

- application and transition provisions moved to unallocated sections
- changes based on committee discussions highlighted
- further changes suggested by the Admin./DOT/DAFS. in *bold italics*

Amend the bill by striking everything after the enacting clause and before the summary and inserting in its place the following:

Sec. 1. 5 MRSA §1764-A is enacted to read:

**§1764-A. Improvement of energy efficiency in state-funded construction.**

**1. Rules.** The Bureau of General Services, in consultation with the Energy Resources Council and the Public Utilities Commission, shall by rule require all planning and design for the construction of new or substantially renovated state-owned or leased buildings, or buildings built with state funds, including buildings funded through state bonds or the Municipal Bond Bank

A. Involve consideration of architectural designs and energy systems that show the greatest net benefit over the life of the building by minimizing long term energy and operating costs;

B. Include an energy use target which exceeds by at least 20% the energy efficiency standards in effect for commercial and institutional buildings pursuant to Title 10, Section 1415-D; and

C. Include a life cycle cost analysis that explicitly considers cost and benefits over a minimum of 30 years and that explicitly include the public health and environmental benefits associated with energy efficient building design and construction, to the extent they can be reasonably quantified.

**Rules adopted pursuant to this subsection apply to all new or substantially renovated state-owned or leased buildings, or buildings built with state funds, including buildings**

*funded though state bonds or the Municipal Bond Bank, regardless of whether the planning and design for construction is subject to approval by the department.*

For purposes of this section, “substantially renovated” means any renovation for which the cost exceeds 50% of the building’s current value prior to renovation.

*Rules adopted pursuant to this subsection may provide for exemptions, waivers or other appropriate consideration for buildings with little or no energy usage, such as unheated sheds or warehouses.*

The commissioner shall adopt rules pursuant to this section by July 1, 2004. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, Chapter 375, subchapter II-A.

*2. Approval. No state agency responsible for approving the construction of a new or substantially renovated state-owned or leased building, or building built with state funds, including a building funded though state bonds or the Municipal Bond Bank, The commissioner shall withhold may grant such approval for construction of new or substantially renovated state-owned or leased buildings, or buildings built with state funds, including buildings funded though state bonds or the Municipal Bond Bank unless the agency, or other entity or organization proposing the construction, can show that it has duly considered the most energy and environmentally efficient designs suitable in accordance with rules adopted pursuant to this section.*

**Sec. 2. 20-A MRS §15908-A is enacted to read:**

**§15908-A. School energy efficiency standards rules.**

**1. Rules.** The state board, in consultation with the Department of Administrative and Financial Services and the Public Utilities Commission, shall by rule require as a condition for state funding for construction that all planning and design for new or substantially renovated schools or school buildings subject to state board approval

A. Involve consideration of architectural designs and energy systems that show the greatest net benefit over the life of the building by minimizing long term energy and operating costs;

B. Include an energy use target which exceeds by at least 20% the energy efficiency standards in effect for commercial and institutional buildings pursuant to Title 10, Section 1415-D; and

C. Include a life cycle cost analysis that explicitly considers cost and benefits over a minimum of 30 years and that explicitly include the public health and environmental benefits associated with energy efficient building design and construction, to the extent they can be reasonably quantified.

For purposes of this section, “substantially renovated” means any renovation for which the cost exceeds 50% of the building’s current value prior to renovation.

The state board shall adopt rules pursuant to this section by July 1, 2004. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, Chapter 375, subchapter II-A.

**2. Requirements for approval.** The state board shall withhold approval of a state-funded new or substantially renovated school or school building if the local school authority proposing the project can not show that it has duly considered the most energy and environmentally efficient designs suitable in accordance with rules adopted pursuant to this section.

**Sec. 3. State Board of Education Rules; transition.** Prior to the effective date of rules adopted pursuant to Title 20-A, Section 15908-A, the State Board of Education shall disseminate to appropriate local authorities proposing to construct or substantially renovate any school or school building, information concerning the development of the rules and shall encourage planning and design that is consistent with the purposes of Title 20-A, Section 15908-A.

**Sec. 4. Application.** Title 5, section 1764-A, as enacted by section 1 of this Act, does not apply to any new or substantially renovated state-owned or leased buildings, or buildings built with state funds, including buildings funded through state bonds or the Municipal Bond Bank, that have received design approval prior to the effective date of rules adopted pursuant to that section. Title 20-A, Section 15908-A, as enacted by section 2 of this Act, does not apply to any school construction project that receives voter approval at a public referendum pursuant to Title 20-A, section 15904 prior to the effective date of rules adopted pursuant to Title 20-A, Section 15908-A.

**Sec. 5. Work group; review of building energy efficiency standards.** The Public Utilities Commission, in consultation with the Energy Resources Council, shall form a working group to review current state building energy standards, and their enforcement, and various advanced building guidelines, including but not limited to the Leadership in Energy and Environmental Design system, the United States Environmental Protection Agency’s Energy Star Buildings system, the State of California’s CHPS guidelines, and the New Buildings Institute’s Advanced Building Guidelines. The Public Utilities Commission shall submit a report that includes its findings and recommendations, including any recommended new rules or changes to existing rules or recommended legislation to the Joint Standing Committee on Energy and Utilities not later than February 1, 2004. The Joint Standing Committee on Utilities and Energy may report out legislation to the Second Regular Session of the 121<sup>st</sup> Legislature concerning energy policy, including energy efficiency.

## SUMMARY

This amendment replaces the bill. This amendment:

1. Requires the State Board of Education, by July 1, 2004, to adopt rules regarding state-funded school construction to require planning and design for such construction to include a life-cycle cost analysis and an energy use target that exceeds by at least 20% the energy efficiency values established in the State building energy standards;
2. Requires that approval by the State Board of Education of state-funded school construction be withheld unless the local school authority shows that it has duly considered the most energy and environmentally efficient designs suitable;
3. Requires the Bureau of General Services, Department of Administrative and Financial Services, by July 1, 2004, to adopt rules regarding state-funded construction to require planning and design for such construction to include a life-cycle cost analysis and an energy use target that exceeds by at least 20% the energy efficiency values established in the State building energy standards;
4. Requires ~~the Commissioner of Administrative and Financial Services~~ **any agency responsible for approving state-funded construction** to withhold **such** approval ~~of any state-funded construction~~ unless the agency or other entity proposing the construction can show that it has duly considered the most energy and environmentally efficient designs suitable; and
5. Directs the Public Utilities Commission, in consultation with the Energy Resources Council, to form a working group to review current state building energy standards, and their enforcement, and submit a report to the Joint Standing Committee on Energy and Utilities not later than February 1, 2004, and authorizes the committee to report out legislation.

DATE:

(Filing No. S- )

**UTILITIES AND ENERGY**

Reported by:

Reproduced and distributed under the direction of the Secretary of the Senate.

**STATE OF MAINE  
SENATE  
121ST LEGISLATURE  
FIRST REGULAR SESSION**

COMMITTEE AMENDMENT " " to S.P. 92, L.D. 233, Bill, "An Act To Promote Energy Conservation"

Amend the bill by striking out everything after the enacting clause and before the summary and inserting in its place the following:

'Sec. 1. 5 MRSA §1764-A is enacted to read:

**§1764-A. Improvement of energy efficiency in state-funded construction**

**1. Definition.** For purposes of this section, "substantially renovated" means any renovation for which the cost exceeds 50% of the building's current value prior to renovation.

**2. Rules.** The Bureau of General Services, in consultation with the Energy Resources Council and the Public Utilities Commission, shall by rule require that all planning and design for the construction of new or substantially renovated state-owned or state-leased buildings and buildings built with state funds, including buildings funded through state bonds or the Maine Municipal Bond Bank:

**A. Involve consideration of architectural designs and energy systems that show the greatest net benefit over the life of the building by minimizing long-term energy and operating costs;**

**B. Include an energy-use target that exceeds by at least 20% the energy efficiency standards in effect for commercial**

2 and institutional buildings pursuant to Title 10, section  
3 1415-D; and

4 C. Include a life-cycle cost analysis that explicitly  
5 considers cost and benefits over a minimum of 30 years and  
6 that explicitly includes the public health and environmental  
7 benefits associated with energy-efficient building design  
8 and construction, to the extent they can be reasonably  
9 quantified.

10 Rules adopted pursuant to this section apply to all new or  
11 substantially renovated state-owned or state-leased buildings and  
12 buildings built with state funds, including buildings funded  
13 through state bonds or the Maine Municipal Bond Bank, regardless  
14 of whether the planning and design for construction is subject to  
15 approval by the department.

16 Rules adopted pursuant to this section may provide for  
17 exemptions, waivers or other appropriate consideration for  
18 buildings with little or no energy usage, such as unheated sheds  
19 or warehouses.

20 The Bureau of General Services shall adopt rules pursuant to this  
21 section by July 1, 2004. Rules adopted pursuant to this section  
22 are routine technical rules as defined in Title 5, chapter 375,  
23 subchapter 2-A.

24 3. Approval. A state agency responsible for approving the  
25 construction of a new or substantially renovated state-owned or  
26 state-leased building and buildings built with state funds,  
27 including buildings funded through state bonds or the Maine  
28 Municipal Bond Bank, may not grant such approval unless the  
29 agency or other entity or organization proposing the construction  
30 can show that it has duly considered the most energy-efficient  
31 and environmentally efficient designs suitable in accordance with  
32 rules adopted pursuant to this section.

33 **Sec. 2. 20-A MRSA §15908-A is enacted to read:**

34 **§15908-A. School energy efficiency standards rules**

35 1. Definition. For purposes of this section,  
36 "substantially renovated" means any renovation for which the cost  
37 exceeds 50% of the building's current value prior to renovation.

38 2. Rules. The state board, in consultation with the  
39 Department of Administrative and Financial Services and the  
40 Public Utilities Commission, shall by rule require as a condition  
41 for state funding for construction that all planning and design  
42 for new or substantially renovated schools or school buildings  
43 subject to state board approval:

2           A. Involve consideration of architectural designs and  
4           energy systems that show the greatest net benefit over the  
          life of the building by minimizing long-term energy and  
          operating costs;

6           B. Include an energy-use target that exceeds by at least  
8           20% the energy efficiency standards in effect for  
10          commercial and institutional buildings pursuant to Title 10,  
          section 1415-D; and

12          C. Include a life-cycle cost analysis that explicitly  
14          considers cost and benefits over a minimum of 30 years and  
16          that explicitly includes the public health and environmental  
          benefits associated with energy-efficient building design  
          and construction, to the extent they can be reasonably  
          quantified.

18           The state board shall adopt rules pursuant to this section by  
20           July 1, 2004. Rules adopted pursuant to this section are routine  
22           technical rules as defined in Title 5, chapter 375, subchapter  
          2-A.

24           3. Requirements for approval. The state board shall  
26           withhold approval of a state-funded new or substantially  
28           renovated school or school building if the local school authority  
30           proposing the project can not show that it has duly considered  
          the most energy-efficient and environmentally efficient designs  
          suitable in accordance with rules adopted pursuant to this  
          section.

32           **Sec. 3. State Board of Education rules; transition.** Prior to the  
34           effective date of rules adopted pursuant to the Maine Revised  
36           Statutes, Title 20-A, section 15908-A, the State Board of  
38           Education shall disseminate to appropriate local authorities  
40           proposing to construct or substantially renovate any school or  
          school building information concerning the development of the  
          rules and shall encourage planning and design that is consistent  
          with the purposes of Title 20-A, section 15908-A.

42           **Sec. 4. Work group; review of building energy-efficiency standards.**  
44           The Public Utilities Commission, in consultation with the Energy  
46           Resources Council, shall form a working group to review current  
48           state building energy standards and their enforcement. The  
50           working group shall also review various advanced building  
          guidelines, including, but not limited to, the Leadership in  
          Energy and Environmental Design system, the United States  
          Environmental Protection Agency's Energy Star buildings system,  
          the State of California's Collaborative for High Performance  
          Schools guidelines, and the New Buildings Institute's

Advanced Building Guidelines. The Public Utilities Commission shall submit a report that includes its findings and recommendations, including any recommended new rules or changes to existing rules or recommended legislation, to the Joint Standing Committee on Energy and Utilities not later than February 1, 2004. The Joint Standing Committee on Utilities and Energy may report out legislation to the Second Regular Session of the 121st Legislature concerning energy policy, including energy efficiency.

**Sec. 5. Application.** The Maine Revised Statutes, Title 5, section 1764-A does not apply to any new or substantially renovated state-owned or state-leased buildings or buildings built with state funds, including buildings funded through state bonds or the Maine Municipal Bond Bank, that have received design approval prior to the effective date of rules adopted pursuant to that section. Title 20-A, section 15908-A does not apply to any school construction project that receives voter approval at a public referendum pursuant to Title 20-A, section 15904 prior to the effective date of rules adopted pursuant to Title 20-A, section 15908-A.'

## SUMMARY

This amendment, which is the majority report of the Joint Standing Committee on Utilities and Energy, replaces the bill. This amendment:

1. Requires the State Board of Education, by July 1, 2004, to adopt rules regarding state-funded school construction to require planning and design for such construction to include a life-cycle cost analysis and an energy-use target that exceeds by at least 20% the energy efficiency values established in the state building energy standards;

2. Requires that approval by the State Board of Education of state-funded school construction be withheld unless the local school authority shows that it has duly considered the most energy-efficient and environmentally efficient designs suitable;

3. Requires the Department of Administrative and Financial Services, Bureau of General Services, by July 1, 2004, to adopt rules regarding state-funded construction to require planning and design for such construction to include a life-cycle cost analysis and an energy-use target that exceeds by at least 20% the energy efficiency values established in the state building energy standards;

2 4. Requires any agency responsible for approving  
state-funded construction to withhold such approval unless the  
4 agency or other entity proposing the construction can show that  
it has duly considered the most energy-efficient and  
environmentally efficient designs suitable; and  
6

8 5. Directs the Public Utilities Commission, in consultation  
with the Energy Resources Council, to form a working group to  
review current state building energy standards and their  
10 enforcement and submit a report to the Joint Standing Committee  
on Energy and Utilities not later than February 1, 2004 and  
12 authorizes the committee to report out legislation.

FISCAL NOTE REQUIRED  
(See attached)

**COMMITTEE AMENDMENT**



**121st Maine Legislature  
Office of Fiscal and Program Review**

**LD 233**

**An Act To Promote Energy Conservation**

**LR 0850(01)**

**Fiscal Note for Original Bill**

**Sponsor: Sen. Strimling**

**Committee: Utilities and Energy**

**Fiscal Note Required: Yes**

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**Fiscal Note**

Minor cost increase - General Fund

Minor savings - Other Special Revenue Funds

Minor revenue increase - Other Special Revenue Funds

**Fiscal Detail and Notes**

The bill will eliminate proceedings that the Public Utilities Commission must currently conduct to determine the proper funding pursuant to 35-A MRSA section 3211-A, subsection 4. These administrative savings are expected to be minor. Requiring an assessment of \$.0015 per kilowatt hour on all electricity delivered by Maine's utilities will result in a minor increase in dedicated funding for energy conservation programs in an amount that can not be determined at this time. The cost to the State of Maine as an energy consumer will not be significant since most state facilities are assessed at the cap of \$.0015 per kilowatt hour rate.

121st Maine Legislature  
Office of Fiscal and Program Review

LD 233

An Act To Promote Energy Conservation



LR 0850(02)

Fiscal Note for Bill as Amended by the Committee Amendment " "

Committee: Utilities and Energy

Fiscal Note Required: Yes

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### Fiscal Note

Undetermined current biennium cost increase - General Fund

#### Fiscal Detail and Notes

The additional costs associated with adopting rules to improve energy efficiency in state funded construction can be absorbed by the Department of Administrative and Financial Services, the Energy Resources Council and the Public Utilities Commission utilizing existing budgeted resources. This bill is not a mandate since it applies to buildings built with state funds, including buildings funded through state bonds or the Municipal Bond Bank. This bill is not expected to have any significant fiscal impact on the current budget and future budgets since any future increased construction costs resulting from adhering to the proposed energy standards will be offset by the energy efficiencies savings achieved over the life of the bond. Also, the additional costs resulting from the formation of a working group to review current state building standards and report to the Legislature can be absorbed by the Public Utilities Commission and the Energy Resources Council utilizing existing budgeted resources.

This legislation may increase the construction and planning costs of a State Board of Education funded Major Capital Improvement project such as the construction of a new school or renovations to an existing school. The potential increase in cost for each project can not be determined at this time. However, because debt service costs associated with funding school construction projects can not exceed the annual levels established in 20-A MRSA §15905, a decrease in the total number of projects may be required to stay within the spending limits. If all planned projects are to be undertaken the debt service limit may need to be raised.

121st Maine Legislature  
Office of Fiscal and Program Review

LD 233

An Act To Promote Energy Conservation

LR 0850(03)

Fiscal Note for Bill as Engrossed with:

C "A" (S-145)

Committee: Utilities and Energy



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## Fiscal Note

Undetermined current biennium cost increase - General Fund

### Fiscal Detail and Notes

The additional costs associated with adopting rules to improve energy efficiency in state funded construction can be absorbed by the Department of Administrative and Financial Services, the Energy Resources Council and the Public Utilities Commission utilizing existing budgeted resources. This bill is not a mandate since it applies to buildings built with state funds, including buildings funded through state bonds or the Municipal Bond Bank. This bill is not expected to have any significant fiscal impact on the current budget and future budgets since any future increased construction costs resulting from adhering to the proposed energy standards will be offset by the energy efficiencies savings achieved over the life of the bond. Also, the additional costs resulting from the formation of a working group to review current state building standards and report to the Legislature can be absorbed by the Public Utilities Commission and the Energy Resources Council utilizing existing budgeted resources.

This legislation may increase the construction and planning costs of a State Board of Education funded Major Capital Improvement project such as the construction of a new school or renovations to an existing school. The potential increase in cost for each project can not be determined at this time. However, because debt service costs associated with funding school construction projects can not exceed the annual levels established in 20-A MRSA §15905, a decrease in the total number of projects may be required to stay within the spending limits. If all planned projects are to be undertaken the debt service limit may need to be raised.

# VOTING TALLY SHEET

LD # or Confirmation: 233

Committee: Joint Standing Committee on Utilities and Energy

Date: 4-28-03

Motion: Ought to Pass - Amended / ONTP

Motion by: Rep. Bliss

Seconded by: Rep. Berry

| Those Voting in Favor of the Motion | Recommendation of those opposed to the Motion |     |        |           |          | Absent | Abstain |
|-------------------------------------|-----------------------------------------------|-----|--------|-----------|----------|--------|---------|
|                                     | ONTP                                          | OTP | OTP-AM | New Draft | Re-Refer |        |         |

**Senators**

|                      |   |  |  |  |  |  |  |
|----------------------|---|--|--|--|--|--|--|
| 1. Christopher Hall  | ✓ |  |  |  |  |  |  |
| 2. Lynn Bromley      |   |  |  |  |  |  |  |
| 3. Edward Youngblood | ✓ |  |  |  |  |  |  |

**Representatives**

|                            |       |   |  |  |  |  |  |
|----------------------------|-------|---|--|--|--|--|--|
| 1. Peter L. Rines          | ✓     |   |  |  |  |  |  |
| 2. Kenneth C. Fletcher     | ✓     |   |  |  |  |  |  |
| 3. Jacqueline A. Lundeen   | ✓     |   |  |  |  |  |  |
| 4. Stanley A. Moody        | ✓     |   |  |  |  |  |  |
| 5. Herbert Adams           | ✓     |   |  |  |  |  |  |
| 6. Donald P. Berry, Sr.    | ✓     |   |  |  |  |  |  |
| 7. Lawrence Bliss          | ✓     |   |  |  |  |  |  |
| 8. Albion Goodwin          |       | ✓ |  |  |  |  |  |
| 9. Philip A. Cressey Jr.   | ✓ PAE |   |  |  |  |  |  |
| 10. Maitland E. Richardson | ✓     |   |  |  |  |  |  |
| <b>TOTALS</b>              |       |   |  |  |  |  |  |

# SENATE REPORT

## THE COMMITTEE ON Utilities and Energy

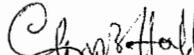
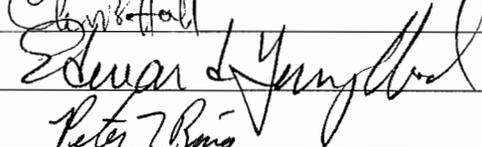
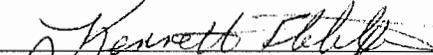
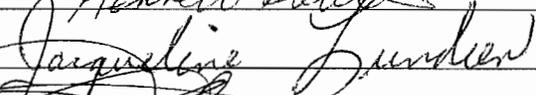
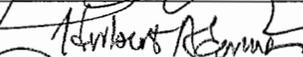
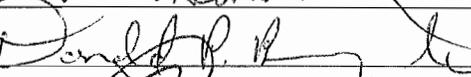
to which was referred the following:

### An Act To Promote Energy Conservation

S.P. 92

L.D. 233

has had the same under consideration, and asks leave to report that the same Ought to Pass As Amended by Committee Amendment “ “

| (Signature)                              | of<br>For the Committee                                                              |
|------------------------------------------|--------------------------------------------------------------------------------------|
| Sen. Christopher Hall of Lincoln         |    |
| Sen. Edward M. Youngblood of Penobscot   |    |
| Rep. Peter L. Rines of Wiscasset         |    |
| Rep. Kenneth C. Fletcher of Winslow      |   |
| Rep. Jacqueline A. Lundeen of Mars Hill  |  |
| Rep. Stanley A. Moody of Manchester      |  |
| Rep. Herbert Adams of Portland           |  |
| Rep. Donald P. Berry, Sr. of Belmont     |  |
| Rep. Lawrence Bliss of South Portland    |  |
| Rep. Philip A. Cressey, Jr. of Baldwin   |  |
| Rep. Maitland E. Richardson of Skowhegan |  |
| (Type)                                   | (Signatures)                                                                         |
| Rep. of (Town) and/or Sen. of (County)   |                                                                                      |

# SENATE REPORT

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