

## 6. MASSACHUSETTS

(1999 Utility Statistics from [www.eia.doe.gov](http://www.eia.doe.gov))

Population (2001 Census Estimate): 6,379,304  
Net Summer Capability (MW) 11,805  
Electricity Consumption (MWh) 54,162,546

	Investor- Owned	Public	Federal	Coop- erative	Total
Number of Utilities	9	40	0	0	49
Percentage of Retail Sales	85.7	14.3	0	0	100.0

Mechanism: 2.5mills/kWh wires charge, including Low Income funding  
Creation: Legislative  
Duration: Sunset December 31, 2007  
Administration: Utilities, with direction and oversight from the State  
Budget: \$115-120million/year  
Program Name: No statewide program name  
Benefit Measure: Total Resource Cost test, plus report on post-market effects  
Incentives: Shareholder incentive tied to goals; No lost revenue recovery

### Survey Questions

#### 1. Process and timeline

Restructuring legislation, GLC 164 (the 1997 Act) passed in November, 1997; effective March, 1998. Utility conservation plans approved in 1998. Chapter 45 of the Acts of 2002 (the 2002 Act) extended programs through 2007.

#### 2. Organizational Structure

##### Distribution Utilities (DUs)

Investor-owned electric distribution utilities (DUs) administer EE programs, delivered by competitive procurement as much as possible. The DUs develop their program plans with input from the Collaborative (see below). They submit their budget and plans to the Division of Energy Resources (DOER), which makes recommendations to the Department of Telecommunications and Energy (DTE) for approval or modification. The DUs submit program results to DOER for review and reporting purposes, and to DTE for incentive determination.

## 2001 Utility Planning and Administration (P&A) Costs

<u>Utility</u>	<u>P&amp;A Costs*</u>	<u>Total EE program</u>	<u>Percent</u>
Mass Electric	\$1.8million	\$64million	2.8%
NSTAR	\$3.6million	\$58million	6.2%
Western Mass	\$1.43million	\$10million	14.3%
Fitchburg	\$307,000	\$1.615million	19%
Total	\$7.14million	\$133.6million	5.3%

\*NOTE: These figures for planning and administration do not include marketing, evaluation, research and other activities that might be considered administrative by other organizations. These four utilities do not use the exactly the same accounting or administrative definitions. They do include expenses of the Collaborative.

DOER staff provide about 2.6 FTE effort from six individuals to the EE programs.  
DTE staff provide less than 1 FTE effort from 4 individuals to the EE programs.

### The Collaborative

Members of the Collaborative are self-appointed, but they must demonstrate they represent some significant segment of consumers impacted by the programs, and they must agree to observe Collaborative rules such as confidentiality. In March 2003 the Collaborative hired a Coordinator, who will work at the rate of 0.4 FTE.

The role of the Collaborative is to assist the DUs in planning, designing and evaluating programs. There is no rule that representation has to be proportionate to consumer share. At the end of 2002 the Collaborative included DOER, one low-income representative for each utility's service territory (they take turns voting), the Attorney General's office, the Northeast Energy Efficiency Council, the Energy Consortium, the Associated Industries of Massachusetts, and the Massachusetts Climate Action Network (MCAN).

The Collaborative employs 14 part-time consultants in four areas: Residential, C&I, Evaluation and Policy. They are used "as needed." They design and monitor the utilities' programs and evaluations.

According to DOER staff, the total Collaborative budget for 2003, including consultants, will be \$650,000, about 1/2% of the total EE/LI budget.

### 3. Funding mechanisms

The 1997 Act replaced a regulatory non-bypassable wires charge with a statutory charge to fund energy efficiency (EE) and low-income (LI) programs. The charge started at 3.3mills/kWh in 1998 and ramped down to 2.5mills/kWh in 2002. The EE/LI funds were predicted to average about \$130million/year in the first five years.

The 2002 Act extended the EE/LI wire charges until December, 2007. The minimum rate of

2.5mills/kWh under the previous statute became the required rate for EE/LI programs during the remainder of the time period. The funds are expected to average close to \$117million/year from 2003-2007.

#### Overall Energy Efficiency Program Budget

The total ratepayer-funded energy efficiency expenditures in 2000 were \$130.5million. This included funds from the 2000 wires charges as well as unspent funds from previous years and the interest earned on those funds. This is the percentage breakdown, according to the most recent DOER annual report.

Rebates to Customers	45%
Implementation	31%
Performance Incentives	10%
Administration	7%
Evaluation	2%
Marketing	3%
Other	1%

#### 4. Association with a long run resources plan

There is no association with a long run resources plan. There is no IRP process.

#### 5. Guidelines for program effectiveness and success

From the DOER "Third Annual Report on Energy Efficiency Activities":

##### Overall Statewide Energy Efficiency Goal:

Strengthen the economy and protect the environment by increasing the efficiency of energy use.

##### Energy Efficiency Operational Objectives:

- (1) Reduce the use of electricity cost-effectively.
- (2) Ensure that energy efficiency funds are allocated to low-income customers consistent with legislative requirements, and allocated equitably to other customer classes.

##### Energy Efficiency Programmatic Objectives:

- (1) Reduce customer energy costs by balancing short-run and long-run savings from energy efficiency programs.
- (2) Support the development of competitive markets for energy efficiency products and services.

The 2002 Act directs the DOER to ensure that ratepayer funding for EE is equitably allocated among customer sectors based on sector contribution to the fund.

## 6. Pre-implementation program evaluation guidance

### Specific Energy Efficiency Programs

The consultants to the Collaborative work with utilities to design measurement and evaluation into their programs, using guidance from DOER and DTE. Utilities contract with independent evaluators to audit programs and verify results.

Starting in 2000, pursuant to DTE 98-100 Order and Guidelines, programs will be screened for cost-effectiveness using the Total Resource Cost test. Quantifiable benefits can include the avoidance of non-energy costs such as water, gas, and operation and maintenance costs. The DTE 98-100 Order also required program administrators to report on post-program effects.

Several new performance metrics will be measured by DUs if a new shareholder incentive is accepted. They include the efficiency of acquisition, and non-energy performance metrics such as market transformation.

### Overall Program Evaluation

Legislation requires DOER to report directly to the legislature on the effectiveness and need for EE programs before they lapse in 2007.

## 7. Results of program evaluation

The DOER "Third Annual Report on Energy Efficiency Activities in Massachusetts" summarizes program results and measurement strategies.

### Highlights:

EE programs improved reliability and lowered wholesale electricity prices through demand reduction by nearly \$6million in 2000.

Participants saved over \$19million on their 2000 electric bills.

Savings projected to grow to approx. \$295million over lifespan of installed measures.

4,147million kWh estimated to be saved over lifetime of the investments.

Some of the results for Year 2000 programs include:

Total Participant Annual Energy Savings	\$19million
Total Participant Measure Lifetime Energy Savings	\$295million
Average Cost for Conserved Energy	4.1cents/kWh
Total Participant Annual Demand Savings	\$1.2million
Interruptible Service Credit Payments	\$3.1million
Savings due to Lower Wholesale Energy Clearing Prices	\$5.7million
New Jobs Created	1,183
Disposable Income from Net Employment	\$48million

NOx Emissions Avoided Annual and Measure Lifetime	705/6,558 tons
SO2 Emissions Avoided "	1,405/9,086 tons CO2
Emissions Avoided "	253,100/2,042,400 tons
Benefit-Cost Ratio with and without Post Program Effects	1.9 and 2.4

8. Financial or performance incentives

Shareholder incentives have been available to utilities participating in DSM activities since the early 1990's. In recent settlements negotiated with the Collaborative, three of the four DUs agreed to forego lost-base revenue in return for clear and consistent shareholder incentives. The fourth DU litigated, requesting both the shareholder incentive and loss-based revenues, and lost.

In Docket DTE 98-100, the DTE determined that all costs associated with program implementation would be included in the calculation of the incentive, including marketing, administration, evaluation, etc.

The Collaborative and utilities have negotiated a new shareholder incentive proposal they will present to DTE in 2003. The DUs agreed to more stringent goals (including energy savings, acquisition efficiency and market incentives) and accountability with the Collaborative in return for a more reasonable shareholder incentive. If DUs achieve 100% of their "performance metrics", they earn back 5% of their EE expenditures, after taxes. The threshold for payment would be 75% attainment. Exemplary performance would be capped at 110%, earning an incentive of 5.5%.

**Issues and Special Situations**

Consumer Awareness/Branding

Consumer awareness is not a metric of success. In fact, the Collaborative has discouraged the use of resources for broad media buys and consumer awareness. They see more payback from training utility energy efficiency staff and account representatives, and vendors/contractors to sell the technologies/programs.

The Collaborative has struggled with the concept of statewide "branding." To date they have decided not to pursue it. They see good results from DUs having independence and ownership in their service areas.

Standardized Reporting

The DUs propose EE plans to DOER using standardized tables. They report program performance data to DTE and DOER using a set of standardized tables. These allow for easy comparison between years and across programs. The consistent use of these tables eases administrative and evaluation burdens over the years.

## Cape Light Compact: Example of Local Administration

They are a "municipal aggregator" as allowed by statute, serving 170,000 consumers. They administer about \$5million in EE funds per year. Very flexible. Each town (18 towns) has 6 months to use their allotment; if they don't someone else can during the last 6 months.  
Contact: Kevin Galligan, Program Manager, 508-375-6828.

### **Resources**

Chapter 164 of the Acts of 1997, effective 3/1/98  
[www.state.ma.us/legis/laws/seslaw97/s1970164.htm](http://www.state.ma.us/legis/laws/seslaw97/s1970164.htm)

Chapter 45 of the Acts of 2002, effective 2/28/02  
[www.state.ma.us/legis/laws/seslaw02/s1020045.htm](http://www.state.ma.us/legis/laws/seslaw02/s1020045.htm)

DOER, *Third Annual Report on Energy Efficiency Activities in Massachusetts: 2000 Energy Efficiency Activities*, Summer 2002. Executive Summary and full report at:  
[www.state.ma.us/doer/](http://www.state.ma.us/doer/) Scroll down page to Third Annual Report.

DTE 98-100 Order and Guidelines (RE: cost-effectiveness, DOER review, and shareholder incentives) issued 11/10/98  
[www.state.ma.us/dpu/electric/98-100/finalguidelinesorder.htm](http://www.state.ma.us/dpu/electric/98-100/finalguidelinesorder.htm)

Dept of Telecommunication and Energy (DTE), formerly Department of Public Utilities  
[www.state.ma.us/dpu/](http://www.state.ma.us/dpu/)  
617-305-3500  
Gene Fry, Economist (he authored much of 98-100, new cost-effectiveness rules)  
617-305-3654  
[Gene.Fry@state.ma.us](mailto:Gene.Fry@state.ma.us)

Division of Energy Resources (DOER)  
[www.state.ma.us/doer/](http://www.state.ma.us/doer/)  
617-727-4732 x 139  
Bruce Ledgerwood, Energy Efficiency Team Leader  
[bruce.ledgerwood@state.ma.us](mailto:bruce.ledgerwood@state.ma.us)

Northeast Energy Efficiency Partnership (NEEP)  
[www.neep.org](http://www.neep.org)  
781-860-9177  
Julie Michals (former DOER staffer and principal author of DOER energy efficiency legislative reports)  
[Jmichals@neep.org](mailto:Jmichals@neep.org)