

2. CONNECTICUT

(1999 Utility Statistics from www.eia.doe.gov)

Population (2001 Census Estimate): 3,425,074
Net Summer Capability (MW) 7,077
Electricity Consumption (MWh) 30,664,200

	Investor- Owned	Public	Federal	Coop- erative	Total
Number of Utilities	3	7	0	0	10
Percentage of Retail Sales	93.9	6.1	0	0	100.0

Mechanism: 3mills/kWh surcharge on retail electric sales for Energy Efficiency
Separate renewable and Societal Benefits charges for other purposes
Creation: Legislative
Duration: No sunset
Administration: Utilities, with substantial direction and oversight from the Energy
Conservation Management Board. Plan approval by DPUC.
Budget: 2002: \$86.45million
Program Name: Conservation and Load Management (C&LM) Programs
"Energy Efficiency--Saving without Sacrifice"
Benefit Measure: Electric System (Utility) Test and Total Resource Test
Incentives: Utilities may receive performance incentives;
No lost revenue recovery.

Survey Questions

1. Process and timeline

In July 1998 Public Act 98-28 became effective, establishing the surcharge on electric sales. Initial Conservation and Load Management (C&LM) plans were filed in 1999 and approved in 2000.

2. Organizational Structure

The Distribution Utilities (DUs) administer the C&LM programs. The two regulated electric utilities involved serve 95% of the CT market. The DUs prepare cost-effective program implementation plans and budgets with the assistance of the volunteer Energy Conservation Management Board (ECMB) and consultants, subject to approval by the Department of Public Utility Control (DPUC).

2002 Proposed Administrative Costs

<u>Utility</u>	<u>Admin. Costs*</u>	<u>Total C&LM Costs</u>	<u>Percent*</u>
CT Light and Power Co.	\$1million	\$69.47million	1.4%
United Illuminating Co.	\$404,000	\$16.98million	2.4%
Total	\$1.4million	\$86.45million	1.6%

*NOTE: These figures for administration do not include planning, analysis and evaluation activities or the ECMB costs. Some managers' costs that had previously been considered administrative were reallocated to specific programs.

According to statute, administrative costs may not exceed 5% of revenue collected for the fund.

DPUC staff provide about 0.5 FTE effort from 7 individuals to the C&LM plans.

Energy Conservation Management Board (ECMB)

The Act created the ECMB and requires it to advise and assist the utilities in the development and implementation of their comprehensive C&LM plans as well as market transformation plans. In practice, the ECMB attempts to reach consensus on plans and budgets, and presents them to the DPUC for approval.

The DPUC appoints members of this all-volunteer board. By statute it is composed of representatives of an environmental group, the Office of Consumer Counsel, the Office of the Attorney General, the Department of Environmental Protection, the two utilities, a statewide manufacturing association, a chamber of commerce, a statewide business association, a statewide retail association, and residential customers.

The ECMB is required to submit annual reports to the legislature covering C&LM program expenditures, fund balances and benefit cost analyses.

The ECMB uses C&LM funds to retain expert, independent consultants to assist the ECMB in reviewing and analyzing C&LM plans, programmatic design, goal setting and performance and incentive structures. The ECMB is presently contracting for a study of total energy efficiency potential in Connecticut.

In September 2001, the DPUC accepted the ECMB's three stage "Roadmap" to formalize a process for public input.

The budget for the ECMB is paid with C&LM funds, and varies from year to year. CL&P proposed \$221,000 for its contribution in 2002 and UI proposed \$135,000 for its contribution, for a total of \$356,000, or less than 0.5% of the total C&LM budget.

3. Funding mechanisms

Beginning January 1, 2000, the Act created a 3mills/kWh charge to be assessed on each kWh of electricity sold in the service territories of the two DUs. The DUs must each establish a C&LM Fund, held separate from other funds and accounts of the DU, to hold the funds collected from the three mill charge.

4. Degree of association with a long run resources plan.

The C&LM plan is incorporated in the State's comprehensive energy plan. There is no IRP planning.

5. Guidelines for program effectiveness and success

The Act requires that C&LM programs be cost-effective.

The 2003-2004 C&LM Plan describes the following program goals:

- Advance the efficient use of energy;
- Reduce air pollution and the negative environmental impacts from generating electricity;
- and
- Promote economic development and energy security in Connecticut.

There are many other goals described in the DU plans, including:

- Lower energy costs and increase aggregate productivity.
- Create an energy efficiency "ethic".
- Increase measurable energy efficiency for business success in the global economy.
- Transform markets and capture lost opportunities.
- Address market barriers to energy efficiency, especially for special needs groups.
- Sponsor RD&D of new energy efficient technologies, products, or processes.
- Allocate C&LM resources in an equitable manner across all customer sectors.
- Pursue uniform statewide programs between the two utilities.
- Pursue increased use of third-party planning and delivery of programs.
- Demonstrate measurable success in terms of environmental and economic betterment.

Equity: Historically, geographic and customer equity has been a goal of the C&LM programs. Serious demand and peak issues in southwestern Connecticut have resulted in a disproportionate focus of resources in that area. However, in their most recent resolutions filed with the DPUC, the ECMB has reaffirmed its commitment to equity over time.

6. Pre-implementation program evaluation guidance

The consultants to the ECMB work with utility staff to evaluate the savings that can be expected from specific program designs, including benefit:cost ratios. The consultants also help utility staff design measurement and evaluation into the programs. They propose to use industry-accepted protocols when possible including:

- 1997 International Performance Measurement and Verification Protocol;

1996 Federal Energy Management Program's Measurement Verification Guidelines; and draft ASHRAE 14-P Measurement of Energy and Demand Savings Guidelines.

The utilities' planning and evaluation staffs conduct program evaluation. The utilities also issue RFP's for third party evaluation of some programs. The ECMB consultants review the utility and third party evaluations. This year's docket (03-01-01) has become a venue for parties to examine the issue of program evaluation.

The DPUC uses the Electric Systems (aka Utility) test to screen for cost-effectiveness. The 2003-2004 C&LM plans proposed in Docket 03-01-01 are the first to incorporate the same screening tools and similar assumptions for key variables for both utilities' programs. Both utilities use the Electric Systems test and the Total Resource test to screen programs for cost-effectiveness.

Evaluation of regional market transformation activities will be commissioned and jointly funded by all participating utilities.

The DUs have been instructed by DPUC to develop specific goals and targets to use to evaluate their R&D efforts. The ECMB has directed the DUs to track expenditures for programs by class and geographic area so information is available in the future to ensure parity.

7. Results of program evaluation

Evaluation of Expected Outcomes

In Docket 01-01-14, September 2001, the DPUC made the following program screening determinations about the projected cost-effectiveness of programs offered by the two utilities:

The CL&P programs were expected to produce benefits of \$62million, approximately twice the value of expenditures. The benefit:cost ratio of the Total Resource test was reported to be 2.1 and the Electric Systems test was reported to be 1.9.

UI's total savings were projected to be \$25.4million, approximately 50% more than the value of expenditures. The overall Electric System benefit:cost ratio was reported to be 1.47.

Evaluation of Program Results

The ECMB reported the following 2001 C&LM program results, from a variety of utility and third-party evaluators, in its report to the legislature:

- Measures installed in 2001 resulted in 314million annual kWh savings and 4,735million kWh over the lifetime of the measures;
- Peak demand savings in 2001 were 65,605 kW;

- \$86million customer contribution resulted in energy savings of \$473million over the lifetime of the measures (4,735million kWh at 10 cents/kWh);
- More than 400,000 customers participated, representing all areas of the state.
- 75% of the lifetime savings were in the C&I sector;
- 21% were in the non-low income residential sector;
- 4% were in the low income residential sector;
- The measures taken in 2001 resulted in the following emissions reductions (in tons):

SO _x	972 year 2001	14,679 lifetime
NO _x	329 year 2001	4,972 lifetime
CO ₂	238,260 year 2001	3,598,600 lifetime

8. Financial or performance incentives

Each year the DUs propose energy savings goals and other performance metrics eligible for performance incentive payments. Within the range of 70-130% achievement, the DUs can earn pre-tax incentives of 2-8% of C&LM expenditures. Anticipated incentives are built into the annual budgets.

The Attorney General's office has argued against any performance incentive and its calculation. Over the course of several dockets, the DPUC has affirmed the value of the incentive, and that the expenditures used to calculate the incentive may include administrative and overhead costs, but not ECMB costs and the incentive costs.

Due to problems in southwestern Connecticut, in 2002 the DPUC agreed to utility incentives for MW savings from load response programs (LRP). In the 2003-2004 proposal [Docket 03-01-01] some demand goals are folded into a new performance incentive metric, the "Electric System Benefit", with reductions in SWCT resulting in higher incentives than reductions in other parts of Connecticut.

In Docket 01-01-14, September 19, 2001, the DPUC agreed on a reasonable rate of return when DUs market and sell their C&LM programs.

Issues and Special Situations

Consumer Awareness/Branding

The Consumer Education Outreach Program Unit of the DPUC is funded by the Systems Benefit Charge, not C&LM funds. All eleven staff members provide outreach that improves consumer awareness of C&LM programs.

In docket 01-01-14, the DPUC asked the DUs and the ECMB to find a way to incorporate customer awareness as a performance metric. The utilities surveyed and tracked customer awareness in 2001 to provide a baseline. DPUC required DUs to develop a common slogan for the C&LM programs. The DUs acquired trademark status for their Smart Living Catalog.

Legislative/Executive Diversion of Funds

Public Act 01-9 diverted \$12million from the 2002 C&LM budgets for state building conservation. The present legislative session has already authorized another \$12million diversion from the C&LM programs to pay for State utility bills or conservation. In a recent speech, the governor indicated he might direct that all C&LM funds for the next two years be utilized to reduce the deficit. There are state agencies and third parties considering a legal challenge to this legislative action.

Performance Incentives

There have been unforeseen consequences to the incentive structure that have surprised the parties. For example, in Docket 03-01-01, DPUC staff questioned whether a utility's massive give-away of lighting materials at year's end was, in part, the logical outcome of the incentive structure. The parties will be discussing incentives and disincentives during the course of this docket.

Societal Benefits fee

There is a separate Societal Benefits fee established by the PUC, that supports consumer education (about retail choice), dislocated electrical worker programs, low-income energy conservation, hardship protection for qualifying customers, post-retirement safe shutdown of plants/sites, nuclear plant decommissioning, spent fuel and nuclear storage costs; and other required payments to municipalities and resource recovery facilities. Connecticut also has a separate renewable energy charge, presently 0.75mills/kwh.

Programs

Sample programs from this year's plan include, but are not limited to:

Residential: SmartLiving Catalog, Energy Star Appliances, Retail Lighting, Residential Heating and Cooling, Refrigerator Early Retirement, Low Income, Community Based Program and the state-mandated Energy Conservation Loan Program.

Commercial and Industrial: Small Business Energy Advantage, C&I New Construction/Energy Blueprint, State Buildings, Municipal programs, C&I RFP, and Operations and Maintenance RFP.

Load Management: ISO-NE Program Support and utility-specific load management programs. DPUC staff are excited about some of the new efficiency possibilities using radio control of non-intrusive load.

The C&LM funds also support an endowed chair at Eastern Connecticut State University and the Sustainable Energy Institute at the same institution.

Resources

Connecticut Department of Public Utility Control

www.state.ct.us/dpuc

860-827-1553

At this website one may access:

Docket decisions, utility plans and the legislative report

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Connecticut Energy Conservation Management Board

www.state.ct.us/dpuc/ecmb/index.html

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www.dpuc-electric-choice.com

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Connecticut Light and Power

www.cl-p.com/

United Illuminating Company

www.uinet.com

To access the *Year 2001 ECMB Report to the Legislature* do the following:

Go to: www.state.ct.us/dpuc

Choose "General Info"; choose "ECMB" on the sidebar; choose "Misc. Documents"; then choose 2001 ECMB Legislative Report

Conservation and Load Management Plan: Years 2003-2004

Go to: www.state.ct.us/dpuc/database.htm

Choose: "Active Docket Database"; Choose: "Go to a specific docket number"

Choose: "Electric" ; Scroll down and select "03-01-01"

Choose: "Corres 01/13/2003[03-01-01] (CL&P & UI) DPUC Review...Plan for Years 2003-2004"; Choose: "Exhibit CLPUI 1 (plan)filed.doc"