

Energy Efficiency: Investing in Connecticut's Future

REPORT OF THE
ENERGY CONSERVATION MANAGEMENT BOARD
YEAR 2003 PROGRAMS AND OPERATIONS

JANUARY 31, 2004

Prepared for the Connecticut Legislature
Energy & Technology Committee
Environment Committee



Connecticut's Conservation & Load Management Fund Activities Reduce Harmful Greenhouse Gases

2003 Annual Energy Saved is 130.7 Million kWh
This Savings is Equivalent to:



61,400 Tons of Coal Not Burned

9.9 Million Gallons of Oil Not Burned

18,300 Cars Off the Road

16,600 Homes with Electric Energy per Year

\$13 Million Saved in Electric Energy Costs

BASED ON 2003 DATA

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NUMBERS FOR 2003 IN THIS REPORT ARE PRELIMINARY

Executive Summary

CONNECTICUT CONSERVATION AND LOAD MANAGEMENT (C&LM) FUND –
2003 ACHIEVEMENTS

The ECMB was created by the Legislature to advise the Department of Public Utility Control (DPUC) and the State's electric distribution companies in formulating energy conservation and load management programs and to promote market transformation.

Conservation program participants saved over \$13 million in 2003.

The Connecticut Conservation and Load Management Fund (Fund) was created by the State Legislature to provide cost-effective energy conservation programs and market transformation initiatives. CGS § 16-245m. The Energy Conservation Management Board (ECMB) was created by the State Legislature to advise and assist the State's electric distribution companies in the development and implementation of these programs and initiatives. The Department of Public Utility Control (DPUC) is responsible for final approval of the programs.

Customers of The United Illuminating Company (UI) and The Connecticut Light and Power Company (CL&P) contribute to the Fund through a conservation surcharge on their electric bills. In 2003, UI and CL&P customers contributed over \$88 million to the Fund. Section 20 of Public Act 03-02 diverted \$1 million per month from the Fund to the State's General Fund. The DPUC ordered both Companies to only expend C&LM funds collected through June 30, 2003 due to budget uncertainty. By July 1, 2003, most C&LM programs were suspended. Ultimately, PA 03-06 required a significant portion of the Fund to be used to securitize a bonding mechanism with the proceeds going to the State's General Fund. Legislative determination to use a securitization mechanism allowed the Fund to continue provision of some C&LM services.

However, the diversion of C&LM collections to the General Fund has significantly reduced C&LM in Connecticut. The amount actually available for conservation programs in 2003 was reduced by 25 percent and the impact to the C&LM budget in 2004 will be a reduction in program funding of 44 percent. Approximately, 84,000 residential customers and 2,500 businesses were not served in 2003 due to the Fund's diversion.

While facing significant financial challenges in 2003, UI and CL&P, with guidance from the ECMB, continued to administer the State's energy conservation programs in a cost-effective manner. These programs have proven to be highly effective in reducing energy consumption, providing significant cost savings, reducing air pollution and promoting economic development and energy security to Connecticut residents and businesses. In 2003, program achievements included:

► **ENERGY AND COST SAVINGS:** Connecticut saved enough electricity from energy conservation programs over the life of the measures installed from 2000-2003 to power 1.8 million homes with electricity for a year. Connecticut's 2000-2003 conservation programs will result in lifetime electricity savings of 14.2 billion kWh through 2018. Connecticut residents and businesses achieved energy savings of approximately 130.7 million kWh in 2003. At the average price of \$0.10 per kWh, this equates to an energy cost savings of nearly \$13 million annually, and a projected long-term savings of approximately \$206 million over the lifetime of the installed measures. Had full funding been available, Connecticut residents and businesses could have saved an additional 104 million kWh in 2003.

The Connecticut Conservation and Load Management Fund programs and services created over 1,000 non-utility jobs in the energy efficiency industry.

There were more than 236,000 instances of participation in the State's energy efficiency programs in 2003.

Conservation Fund efforts support the State's Climate Change objectives.

C&LM programs help reduce peak load in SWCT.

- ▶ **ECONOMIC BENEFITS:** Connecticut businesses and consumers purchase equipment and technical services through participation in energy conservation programs and this generates additional revenues for the State in income, business, and sales taxes from Conservation Fund efforts. Over 1,000 jobs, beyond those within the Companies, in the energy efficiency industry are created to implement C&LM Fund programs and services. Conservation activities utilize the services of Connecticut retailers, energy services companies, architects, engineers, mechanical and electrical contractors and construction companies throughout the State. Over 1,925 small and 1,055 medium and large businesses participated in the State's 2003 conservation programs. The Fund enables businesses to be more competitive by lowering their operating costs and enhancing productivity from improved manufacturing processes. The Fund helps Connecticut companies grow and stay in the State as well as attract new businesses to Connecticut. Approximately \$1.3 million was awarded in 2003 for Research, Development and Demonstration projects for energy efficiency and environmentally-friendly distributed generation. Connecticut would have realized increased economic benefits with the availability of full conservation funding. With full funding, an additional 1,800 small and 700 medium and large businesses could have participated in conservation programs.
- ▶ **CUSTOMERS SERVED:** There were more than 236,000 instances of participation in the State's energy efficiency programs in 2003. These programs are tailored to meet the specific needs of all customer classes; therefore all customer classes benefit: large and small businesses, homeowners and renters, state and local governments and customers with low-income. Educational institutions, manufacturers, small retailers, non-profit organizations and some 9,060 low-income customers, for example, reduced energy consumption and costs. With full funding, an additional 86,000 customers could have been served.
- ▶ **ENVIRONMENTAL BENEFITS:** Energy efficiency programs reduce pollution by reducing electrical demand and power production, thereby decreasing the amount of air pollutants generated. It is estimated that efficiency measures implemented in 2003 will reduce the potential levels of pollutant emissions (SO_x and NO_x) in Connecticut by 287 tons per year. The carbon dioxide emissions avoided will be an additional 87,500 tons per year. Carbon dioxide is a prime greenhouse gas and has been linked with increased potential for global warming and climate change. Connecticut's Conservation Fund efforts are consistent with and support the state's environmental initiatives to reduce carbon dioxide, ozone, and fine particulate emissions. With full funding emissions could have been reduced by an additional 80%.
- ▶ **PEAK LOAD REDUCTION:** Reductions in electrical demand resulting from energy conservation and load management activities are especially important during periods of very high peak demand when availability of electrical supplies is less certain. The estimated peak demand reduction available in Connecticut attributed to energy conservation and load management programs delivered in 2002 was 98,500 kW. This reduction serves to relieve stressed transmission lines in the State and especially in the critical towns in southwestern Connecticut (SWCT). Program funding was less certain in 2003 and the peak demand reduction was 89,500 kW. Further peak demand reductions of 18,500 kW could have been achieved with full funding.

To learn more about Connecticut's energy conservation programs, call UI at 1-877-WISE USE, CL&P at 1-877-602- SAVE or visit the following web sites: www.state.ct.us/dpuc/ecmb (ECMB); www.uinet.com (UI); www.cl-p.com (CL&P).

Assistance to Customers in Connecticut Towns*

ANDOVER	\$42,503	EAST HAMPTON	\$237,955
ANSONIA	\$103,244	EAST HARTFORD	\$464,360
ASHFORD	\$9,004	EAST HAVEN	\$30,962
AVON	\$364,917	EAST LYME	\$439,166
BARKHAMSTED	\$13,067	EAST WINDSOR	\$103,665
BEACON FALLS	\$26,583	EASTFORD	\$7,429
BERLIN	\$299,188	EASTON	\$90,654
BETHANY	\$17,368	ELLINGTON	\$91,177
BETHEL	\$228,819	ENFIELD	\$980,767
BETHLEHEM	\$21,758	ESSEX	\$57,884
BLOOMFIELD	\$498,883	FAIRFIELD	\$543,218
BOLTON	\$7,339	FARMINGTON	\$313,847
BRANFORD	\$65,796	FRANKLIN	\$21,040
BRIDGEPORT	\$1,078,586	GLASTONBURY	\$318,783
BRIDGEWATER	\$3,599	GOSHEN	\$9,732
BRISTOL	\$1,023,279	GRANBY	\$53,962
BROOKFIELD	\$95,888	GREENWICH	\$411,273
BROOKLYN	\$63,476	GRISWOLD	\$45,827
BURLINGTON	\$34,150	GROTON	\$304,444
CANAAN	\$14,281	GUILFORD	\$204,823
CANTERBURY	\$11,097	HADDAM	\$35,224
CANTON	\$30,986	HAMDEN	\$404,754
CHAPLIN	\$1,798	HAMPTON	\$7,949
CHESHIRE	\$214,651	HARTFORD	\$1,439,858
CHESTER	\$10,689	HARTLAND	\$3,446
CLINTON	\$36,979	HARWINTON	\$104,759
COLCHESTER	\$72,456	HEBRON	\$234,462
COLEBROOK	\$9,577	KENT	\$33,570
COLUMBIA	\$108,825	KILLINGLY	\$510,516
CORNWALL	\$2,312	KILLINGWORTH	\$23,762
COVENTRY	\$90,442	LEBANON	\$14,213
CROMWELL	\$147,314	LEDYARD	\$121,794
DANBURY	\$1,252,544	LISBON	\$20,686
DARIEN	\$78,703	LITCHFIELD	\$60,197
DEEP RIVER	\$38,373	LYME	\$15,951
DERBY	\$50,843	MADISON	\$70,722
DURHAM	\$80,829	MANCHESTER	\$669,701
EAST GRANBY	\$69,489	MANSFIELD	\$567,351
EAST HADDAM	\$21,183	MARLBOROUGH	\$16,842

MERIDEN	\$531,111	SHARON	\$6,344
MIDDLEBURY	\$27,115	SHELTON	\$624,796
MIDDLEFIELD	\$212,055	SHERMAN	\$27,810
MIDDLETOWN	\$626,359	SIMSBURY	\$426,532
MILFORD	\$287,949	SOMERS	\$46,447
MONROE	\$87,438	SOUTH WINDSOR	\$841,149
MONTVILLE	\$80,711	SOUTHBURY	\$161,007
MORRIS	\$4,155	SOUTHINGTON	\$236,545
NAUGATUCK	\$422,408	SPRAGUE	\$37,269
NEW BRITAIN	\$527,466	STAFFORD	\$181,012
NEW CANAAN	\$40,235	STAMFORD	\$2,556,552
NEW FAIRFIELD	\$39,106	STERLING	\$26,775
NEW HARTFORD	\$14,241	STONINGTON	\$195,195
NEW HAVEN	\$1,125,362	STRATFORD	\$618,078
NEW LONDON	\$146,245	SUFFIELD	\$168,107
NEW MILFORD	\$261,179	THOMASTON	\$100,912
NEWINGTON	\$147,819	THOMPSON	\$46,799
NEWTOWN	\$398,001	TOLLAND	\$113,404
NORFOLK	\$2,696	TORRINGTON	\$260,449
NORTH BRANFORD	\$41,834	TRUMBULL	\$231,274
NORTH CANAAN	\$27,754	UNION	\$19,413
NORTH HAVEN	\$381,959	VERNON	\$310,959
NORTH STONINGTON	\$13,915	VOLUNTOWN	\$3,261
NORWALK	\$1,440,281	WARREN	\$1,540
OLD LYME	\$53,777	WASHINGTON	\$19,577
OLD SAYBROOK	\$65,385	WATERBURY	\$1,136,553
ORANGE	\$131,417	WATERFORD	\$124,907
OXFORD	\$121,068	WATERTOWN	\$1,096,368
PLAINFIELD	\$152,835	WEST HARTFORD	\$826,982
PLAINVILLE	\$145,518	WEST HAVEN	\$389,127
PLYMOUTH	\$104,004	WESTBROOK	\$22,763
POMFRET	\$26,645	WESTON	\$14,038
PORTLAND	\$99,306	WESTPORT	\$233,990
PRESTON	\$13,275	WETHERSFIELD	\$69,882
PROSPECT	\$77,892	WILLINGTON	\$31,085
PUTNAM	\$229,589	WILTON	\$143,133
REDDING	\$88,022	WINCHESTER	\$73,017
RIDGEFIELD	\$302,303	WINDHAM	\$396,082
ROCKY HILL	\$337,240	WINDSOR	\$515,874
ROXBURY	\$3,574	WINDSOR LOCKS	\$127,194
SALEM	\$4,975	WOLCOTT	\$58,696
SALISBURY	\$298,383	WOODBRIDGE	\$50,545
SCOTLAND	\$2,960	WOODBURY	\$77,917
SEYMOUR	\$499,932	WOODSTOCK	\$76,682

*ALL FIGURES ARE APPROXIMATE AND BASED ON 2002 DATA.

Connecticut's Conservation Fund Programs and Operations

Ranked Number 1 in Northeast Region

Chart A: Comparison of Regional Conservation Savings Results

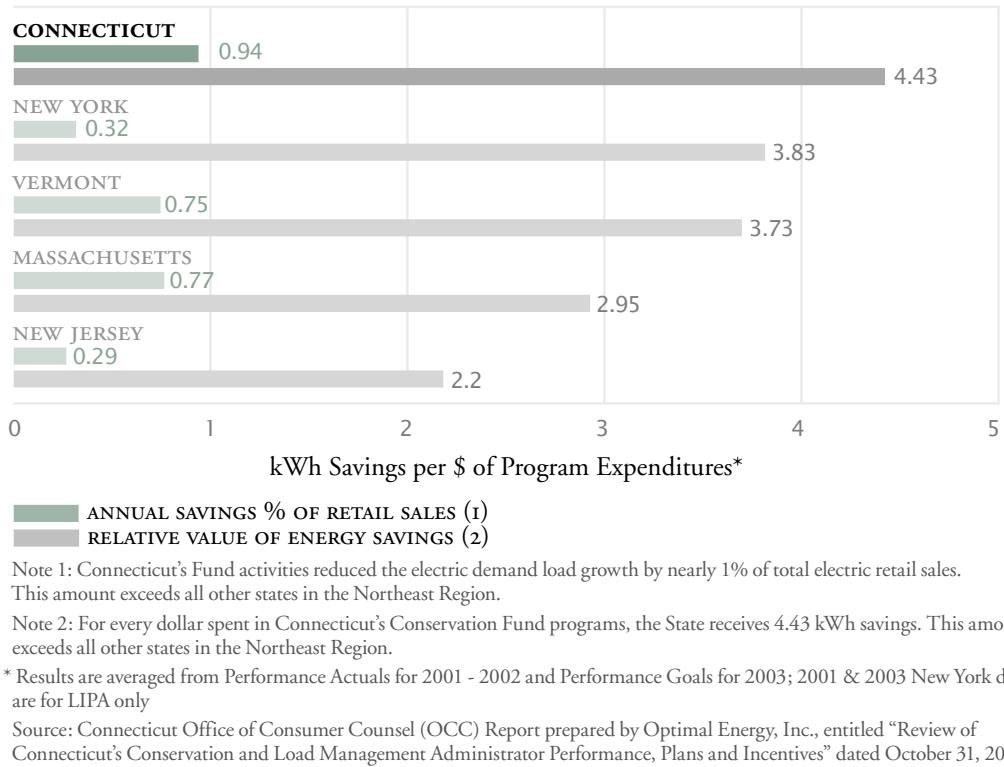
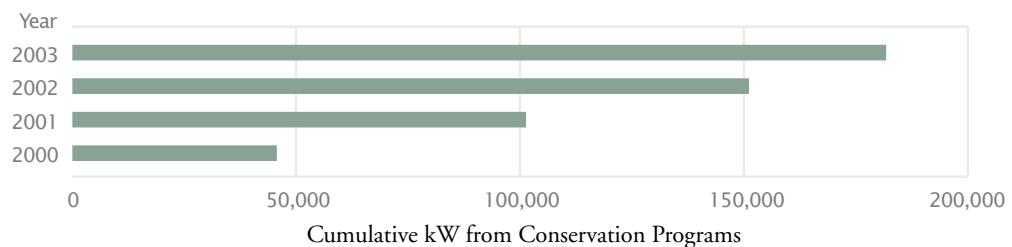


Chart B:
Peak Demand Reduction from Conservation Programs



2003 Conservation Fund Programs Received National and Regional Awards And Recognition



CT Conservation Fund Program	Award/Recognition
Custom Services	ACEEE - Exemplary
Building Operator Certification	ACEEE - Exemplary
Cool Choice	ACEEE - Exemplary
Energy Conscious Construction	ACEEE - Exemplary
RD&D	ACEEE - Exemplary
ENERGY STAR® Retail Lighting	EPA ENERGY STAR Leadership in Energy Efficiency
Prime	The Connecticut Quality Improvement Award Partnership – Gold Award
Community Based Program	Connecticut Department of Environmental Protection – GreenCircle Award

Economic Benefits

- ▶ Over \$20.3 million was awarded to 2,980 Connecticut commercial and industrial customers in 2003. As a result, they improved manufacturing efficiencies and reduced their energy consumption thereby making them more competitive and allowing them to remain in Connecticut. A sample listing of these companies is on pages 8 & 9.
- ▶ The Connecticut Conservation and Load Management Fund programs and services created over 1,000 non-utility jobs in the energy efficiency industry.
- ▶ Conservation programs used the services of dozens of Connecticut businesses such as energy services companies, architects, engineers, mechanical and electrical contractors, and construction companies in providing energy conservation services.
- ▶ Each dollar spent in 2003 on Connecticut's Conservation Fund programs will generate \$4.00 in future lifetime savings.
- ▶ Connecticut businesses and consumers purchased equipment and technical services through participation in energy conservation programs and this generated additional revenues for the State in income, business and sales taxes from Conservation Fund efforts.
- ▶ Approximately 1,925 Connecticut small businesses received services to improve their operating costs. These businesses received zero percent financing to remove barriers to implementing energy efficiency improvements to their facilities.
- ▶ The Fund supported Connecticut's new Fuel Cell industry with a grant from the Research, Development and Demonstration Program to promote energy efficiency and environmentally-friendly distributed generation.
- ▶ Connecticut's Conservation funds were used to leverage millions of dollars in additional Federal and State grants and private sector contributions for projects.
- ▶ Hundreds of retailers in Connecticut participated in the programs especially for ENERGY STAR® products which are also promoted nationally by the U. S. Department of Energy (DOE) and the Environmental Protection Agency (EPA).
- ▶ Research, Development and Demonstration activities of the Fund created a core competency in Connecticut for energy efficiency and environmentally-friendly distributed generation. Approximately \$1.3 million was awarded in 2003. RD&D projects are provided on page 19.

Economic Benefits: Sample List of Customers Served

2,980 Commercial, Industrial and Institutional Customers Participated in 2003

2507 ASSOCIATES LLC	BROOKFIELD, TOWN OF	FAIRFIELD BD. OF EDUCATION
3 R DEVELOPERS	BROOKLACE, INC.	FAIRFIELD UNIVERSITY
85 WILLOW STREET LLC	BROWNING & LEE INC.	FARMINGTON LIBRARY
A G BISSET COMPANY INC.	CANDID CORPORATION	FIREPLACES BY SUPERIOR
ACES ARISE	CANNELLO PRINTING CO.	FLETCHER THOMPSON INC.
ACME AUTO SUPPLY INC.	CAS MEDICAL SYSTEMS INC.	FORTUNE PLASTICS
ACUCUT, INC.	CHESTER PRECISION COMPANY	FOXWOODS
AERO-CRAFT CORP.	CLIFFORD METAL	FRANKLIN MUSHROOM FARMS
AFM ENGINEERING CORP.	COLEBROOK, TOWN OF	GARTNER INC.
AIW-ALTON, INC.	COLONIAL COATING	GEER WOODS
ALGOQUIN INDUSTRIES	COLUMBIA, TOWN OF	GENERAL DRAFTING & DESIGN
ANDOVER, TOWN OF	CONNECTICUT AUDUBON SOCIETY	GENERAL ELECTRIC
ANOCOIL	CONNECTICUT DMV	GEORGETOWN MARKET
ANSEL LABEL & PACKAGING	CONNECTICUT DIE CUT SERVICE	GIROUARD ASSOCIATES
ANSONIA COPPER & BRASS	CONNECTICUT POST MALL, LTD.	GLOBAL WIRE, INC.
ANSONIA STEEL FABRICATION	COSTCO WHOLESALE	GLORIAS FARMER MARKET
ANSTRO MANUFACTURING	COURT CLUB, THE	GOODSPEED OPERA HOUSE
APOLLO PACKAGING INC.	CROMPTON CORP	GRAND PEQUOT TOWER
AQUA POOL & PATIO	CRYSTAL LLC	GREEK OLIVE, THE
AQUARION WATER OF CT	CVS	GREEN TREE MANOR
ARTHUR COCCHIA & SONS	DANBURY HOSPITAL	GREENS FARM ACADEMY
ASSOCIATED SPRING	DANIELSON OIL COMPANY	GRELA WELL DRILLING CO
AUTOMATIC DATA PROCESS	DARI-FARMS	H & B TOOL COMPANY
B K M TOTAL OFFICE TODAY	DAVIS IGA	H M P INDUSTRIES, INC.
BAYER CORPORATION	DAY KIMBAL HOSPITAL	H. P. HOOD
BEAD INDUSTRIES	DAYMARR REALTY INC.	HAMDEN BD. OF EDUCATION
BECTON DICKINSON	DAYS HOTEL	HAMDEN FAMILY DENTAL
BELLTOWN COLONIAL IGA	DELORGE AUTO BODY INC.	HAMPFORD RESEARCH INC.
BERLIN BICYCLE MOPED SHOP	DERBY BD. OF EDUCATION	HAYNES CONSTRUCTION
BEST CLEANERS INC.	DERECKTOR SHIPYARDS	HELICOPTER SUPPORT INC.
BIC CORPORATION	DIP TOP	HILTON GARDEN INN
BIG Y	DIVERSIFIED TECH CORP.	HINE BROS.
BOB'S STORES	DOMINO'S PIZZA CT DISTRIBUTION	HOPKINS SCHOOL
BOSCO DODGE	CENTER	HOSPITAL OF ST. RAPHAEL
BOUFFARD METAL GOODS	DOWNTOWN RACQUET CLUB	HOTCHKISS SCHOOL, THE
BOVANOS INDUSTRIES, INC.	DURACELL WORLD HEADQUARTERS	INLINE PLASTIC CORP.
BRANSON ULTRASONICS CORP.	DURHAM BD. OF EDUCATION	INTERLUDE HOMES
BRAXTON MANUFACTURING	DURHAM MANUFACTURING	INTERMARK FABRIC
BRIDGEPORT BD. OF EDUCATION	EAST HARTFORD BD. OF EDUCATION	INTERNATIONAL PAPER
BRIDGEPORT FITTINGS	ENFIELD SENIOR CENTER	INTERSTATE LUMBER COMPANY
BRISTOL HOSPITAL	ENTHONE INC.	J C PENNEY INC.
BROOKFIELD BD. OF EDUCATION	EXPRESS 764	JOHNSON & MEMORIAL

JOURNAL INQUIRER	OLD LYME COUNTRY CLUB	TALMADGE PARK CONV.
KANES MARKET INC.	OWNES-BROCKWAY	TERRY CONNORS ICE RINK
KANTHAL	OXFORD HEALTH PLAN	THULE, INC.
KID CITY	OXFORD PAINT & HARDWARE	TILCON CONNECTICUT, INC.
KIMBERLY CLARK	PACKARD INC.	TOLLAND BD. OF EDUCATION
KINGSWOOD OXFORD	PARSONS BUICK	TOOL TEK INC.
LATEX FOAM PRODUCTS	PECK MANUFACTURING	TRAMMELL CROW
LEE COMPANY, THE	PEGASUS MANUFACTURING	TREFZ CORP PLAZA BUILDING
LINDELL LUMBER	PEPPERIDGE FARM INC.	TRIDENT INC.
LISBON BD. OF EDUCATION	PHYSICIANS HEALTH SERVICE	TRINITY COLLEGE
LOGUE FARMS	PLASTIC FORMING COMPANY	TRUEBRO
LOOS AND COMPANY INC.	PORTLAND MUNICIPAL BLDG	TRUMAN ARNOLD COMPANY
LOURO CORP	POST PUBLISHING COMPANY	TRUMBULL MARRIOTT HOTEL
MADISON BD. OF EDUCATION	PRECISION PLASTICS	ULTIMATE INTERIORS
MANCHESTER MEMORIAL HOSPITAL	PRECISION PUNCH	UNILEVER
MARK TWAIN HOUSE, THE	PREMIERE OF NEWINGTON	UNION SAVINGS BANK
MAS ASSOCIATES	PROSPECT VET CLINIC	UNITARIAN SOCIETY
MATTABASSETT DISTRICT WASTE	R. D. SCINTO INC.	UNIVERSITY OF CONNECTICUT
WATER TREATMENT PLANT	RAGOZZINO'S	URS CORPORATION
MATTATUCK SCRAP	REGIONAL SCHOOL DISTRICT 8	US REPEATING ARMS
MCCALL FOUNDATION, INC.	RESPOND SYSTEM INC.	US SURGICAL CORPORATION
MEYER GAGE CO.	RICHARDS CHEVROLET INC.	V A MEDICAL CENTER
MILFORD BD. OF EDUCATION	ROGERS CORPORATION	VALLEY AUTO SUPPLY INC.
MILFORD IGA LLC	ROGERS MANUFACTURING CO.	W. J. STEARNS & SONS
MINUTE MAN PRESS	SACRED HEART MANOR	WALLACH SURGICAL DEVICES
MODERN METAL FINISHING	SALVATION ARMY, THE	WAMPUS MILFORD ASSOCIATION
MONROE SENIOR CENTER	SANDOVALS OF DARIEN	WARD LEONARD ELECTRIC
MOORE NORTH AMERICA, INC.	SARGENT MANUFACTURING	WATER POLLUTION CONTROL AUTH.
MOORE TOOL CO.	SAWYER SCHOOL, THE	WAYSIDE MARKET INC.
MORINS AUTO CENTER	SCHWANS SALES ENTERPRISES	WE GEORGE STREET LLC
MULVANEY PROPERTIES	SCOTTS CO, THE	WEBSTER BANK
NAMCO CORP.	SIKORSKY AIRCRAFT	WESLEYAN UNIVERSITY
NASCO INC.	SKY TOP LANES INC.	WESTMINSTER ATHLETIC CENTER
NASDAQ INC.	SLONE PHARMACY, THE	WESTON PHARMACY
NAUGATUCK AUTO PARTS	SORENSEN TRANSPORTATION	WESTVACO
NEW CANAAN YMCA	SOUTHWORTH DODGE INC.	WETHERSFIELD BD. OF EDUCATION
NEW HARTFORD, TOWN OF	SPONGEX INTERNATIONAL LTD.	WIFFLE BALL INC.
NEW HAVEN BD. OF EDUCATION	ST. LUKES FRANKLIN HOUSE	WILTON ANIMAL HOSPITAL
NEW HAVEN, CITY OF	STANLEY BOSTITCH	WINDHAM HOSPITAL
NEWBERRY INDUSTRIES INC.	STAPLES INC.	WOLFES ENTERPRISES
NEWTOWN BEE NEWSPAPER	STEAK-UM COMPANY, THE	WOODBURY PEWTERS
NORTH SAILS GROUP LLC	STELRAY PRODUCTS INC.	YALE-NEW HAVEN MEDICAL
NORTHEAST FOODS	STEPHEN JAGUAR	YARDNEY ELECTRIC
NORTHEAST GRAPHICS	STEW LEONARDS	
NORTHWEST CONNECTICUT	STORE HAUS INC.	
COMMUNITY TECHNICAL COLLEGE	STRATON INDUSTRIES	
NOVA ELECTRONICS INC.	SUPERIOR PRODUCTS	
O & G INDUSTRIES	SURESOURCE	
OAK LANE COUNTRY CLUB	T & J IGA FOOD MARKET	

Economic Benefits: CL&P Case Studies

ENERGY CONSCIOUS CONSTRUCTION

The Silas Deane Middle School in Wethersfield recently completed a 121,600 square foot renovation project. Starting in early 2002, CL&P energy experts worked with the project's design team to develop an energy-efficient, clean environment for the school. As a participant in CL&P's C&LM Fund comprehensive Energy Conscious Construction Program (ECC), the town was provided energy-efficient recommendations and building energy analysis. David Whall, Director of Business Services for Wethersfield said, "the process went very smoothly. CL&P took care of everything." Through this program, CL&P provided the Town of Wethersfield with assistance in designing an efficient building and a monetary incentive to cover the additional cost of qualifying energy-efficient measures. As part of the renovation, energy-efficient lighting design, window glazing, occupancy sensors, motors, chillers and variable frequency drives were upgraded from standard efficiency equipment. Carbon dioxide (CO₂) controls were added to save energy while maintaining indoor air quality. Due to these energy efficiency measures, the town will save over \$1,300,000 and over 10 million kilowatt hours during the lifetime of the conservation measures. The town qualified for a one-time incentive of \$98,000 to cover the project's incremental costs.

CL&P's Energy Efficiency Team helped the Town of Wethersfield:

- ▶ Save \$82,000 annually on utility costs
- ▶ Save 257 kW in peak demand and more than 609,000 kilowatt hours annually
- ▶ Save 3,460 MMBTU's annually
- ▶ Receive a \$98,000 incentive payment to cover the cost of the upgrades

SMALL BUSINESS ENERGY ADVANTAGE

Page Hardware & Appliance Company, located in Guilford is a family-owned business. It was founded in 1939 in the building that once housed the small town's general store. Page sells hardware, housewares and appliances and offers services such as sharpening, screen repair, computerized paint matching and bridal registry. While similar businesses have succumbed to warehouse-style hardware stores, Page continues to thrive.

In 1973, Page bought the adjacent building and turned it into an appliance showroom. But the old lighting did not do justice to the appliances. Working with a CL&P C&LM Project Administrator, an energy assessment was performed at Page Hardware. Through the C&LM Fund's Small Business Energy Advantage Program, old magnetic ballasts and lamps were replaced by new, efficient electronic ballasts and energy-saving lamps. Compact fluorescents replaced all the old incandescents. The transformation was remarkable. The owner was thrilled, saying that the change in lighting took them from the 50s into the 21st century. And, just as important, all the work was done without disrupting business.

CL&P's Energy Efficiency Team helped Page Hardware and Appliance:

- ▶ Save \$2,500 and more than 23,000 kWh annually
- ▶ Incur no up-front costs
- ▶ Pay up to 50% of the costs for retrofit lighting
- ▶ Provide zero percent financing option for the customer balance. Loan repayment can be rolled into the monthly electric bill and is based on estimated energy savings so the customer will pay approximately the same as prior to participation

Economic Benefits: UI Case Studies

ENERGY BLUEPRINT, ENERGY OPPORTUNITIES

There's only one cure for high-energy costs - reduce energy use. That's the prescription the VA Connecticut Health Care System in West Haven followed in 2002 by initiating a campus-wide energy conservation project that was completed in July 2003.

The impetus for the campus-wide project was the U.S. Energy Policy Act of 1992 and two subsequent Executive Orders that mandated a 30% reduction of energy consumption in federal facilities by 2005 and a 35% cut by 2010.

Energy conservation measures were aimed at reducing yearly electricity usage and equivalent dollar costs (kWh/\$):

- ▶ Replacing standard-efficiency motors operating HVAC pumps and Air Handling Unit fans with premium efficiency motors to reduce electricity consumption by 15,832 kWh/\$942
- ▶ Retrofitting a total of 382 existing lighting fixtures in 18 buildings with T8 lamps and electronic ballasts, replacing incandescent fixtures with compact fluorescent fixtures, and installing occupancy sensors to save 807,479 kWh/\$49,265
- ▶ Simplifying the chilled water system and improving the system's overall efficiency for estimated savings of 1,227,520 kWh/\$98,779
- ▶ Adding nearly 500 control and monitoring points to the existing time-of-day energy management system for estimated savings of 365,463 kWh/\$41,815

The C&LM Fund provided a payment of \$100,000 as an Energy Blueprint incentive for switching to premium-efficiency motors and improving the chilled water system's operating efficiency. Another \$100,000 Energy Opportunities incentive covered retrofitting the lighting, occupancy sensors, and adding control points to expand the energy management system.

"The results of this multi-million dollar project will be very worthwhile," said Bob Palazzi, the hospital's Chief of Design and Development. He added "... our expected energy savings will have reduced our overall energy consumption by at least 30%, and perhaps as high as 35%, putting us well ahead of the 2005 deadline and positioning us to meet the 2010 energy reduction requirement."

SMALL BUSINESS ENERGY ADVANTAGE

A friend advised Lee Pereira, President of Quality Stairs, Inc. in Bridgeport, to look into UI's Small Business Energy Advantage program and, once he did, he liked what he saw. So he contacted Energy Solutions, a UI-approved vendor also located in Bridgeport.

Work in the manufacturing area consisted of replacing 64 existing lamps, which used 174W, with fixtures that only use 98W.

"We redesigned the lighting layout by reducing the number of fixtures from 16 using 174W to nine using 60W," Bob Auer said. "By replacing existing two-light 8-foot high-output fluorescent fixtures with a combination of four-lamp low-output fixtures and two-lamp high output fixtures with reflectors, all equipped with electronic ballasts, we corrected uneven lighting in the storeroom."

Finally, old 8-foot high-output fixtures in the garage/loading dock area were replaced with two-lamp strip fluorescent lighting and installed ceiling sensors. "Strip lighting is very economical because the fixture is nothing but a base for the ballasts and sockets—there are no reflectors or covers or lenses," Auer said. "The sensors automatically turn off the lights when no one is using the area."

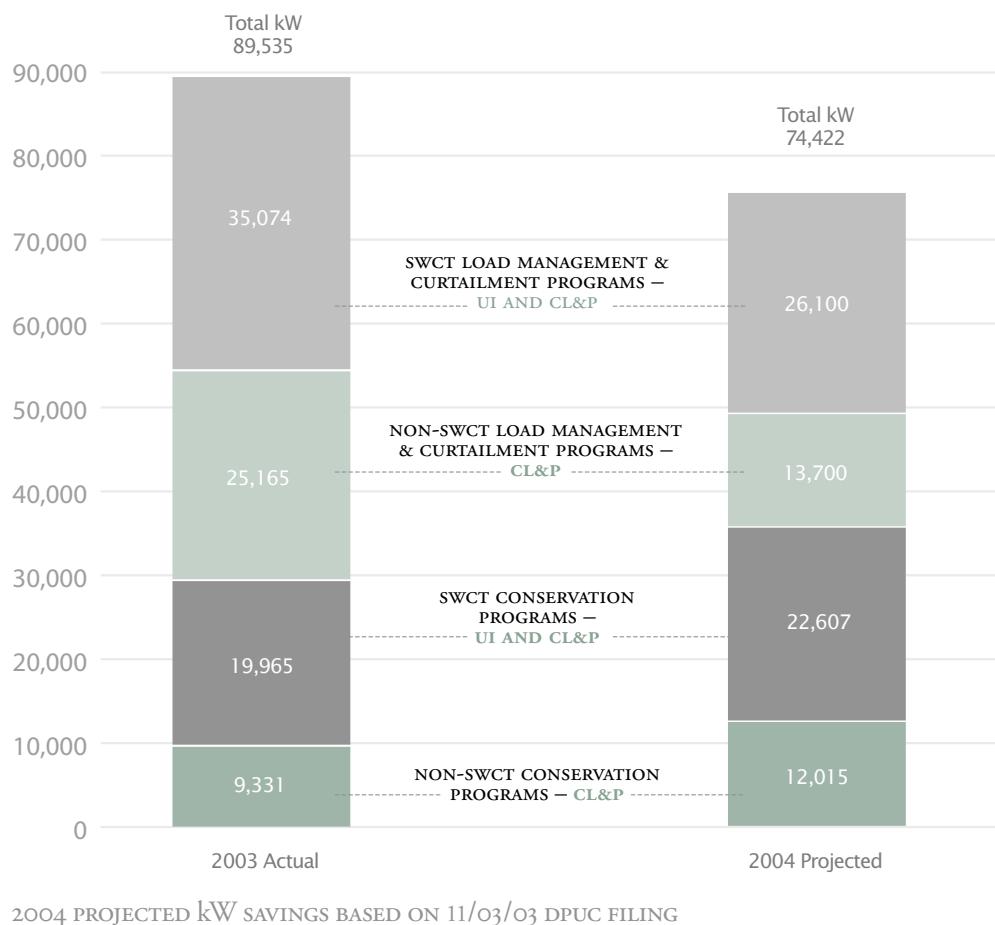
The retrofit was completed in January and produced significant energy savings—and a \$4,372 incentive to apply against the project's \$11,830 cost. Average monthly consumption from January through July 2003 was 9,739 kWh compared to 12,660 kWh for the same period in 2002. That's a 25 percent reduction.

Pereira is applying a portion of his monthly savings to repaying a non-interest-bearing loan from the Connecticut Conservation and Load Management Fund for the \$7,458 balance of the project. "No matter how you look at it, no money's coming out of my pocket to pay for these necessary improvements" Pereira said. "This program is a real bargain for anyone running a small business."

Peak Demand Impact

Chart C: Peak Demand Savings Available from Conservation and Load Management Funds In kW

The projected total 2004 savings in Chart C is the equivalent electrical consumption of approximately 24,000 average air conditioned homes in Connecticut.



PEAK DEMAND SAVINGS IMPACTS

- **ENHANCED ELECTRIC SYSTEM RELIABILITY:** Conservation activities make an important contribution to electric system reliability during peak periods, like hot summer days, when energy supplies are at or near capacity.
- **LOWER COSTS:** Conservation and load management programs reduce the amount of power needed during peak demand periods and thereby help reduce the Federally mandated congestion charges to customers.
- **IMPROVED AIR QUALITY:** Consumers and businesses use less energy because of the conservation measures they implement resulting in power plants running fewer hours and emitting less air pollution like carbon dioxide which is linked to greenhouse gases contributing to global warming and climate change.

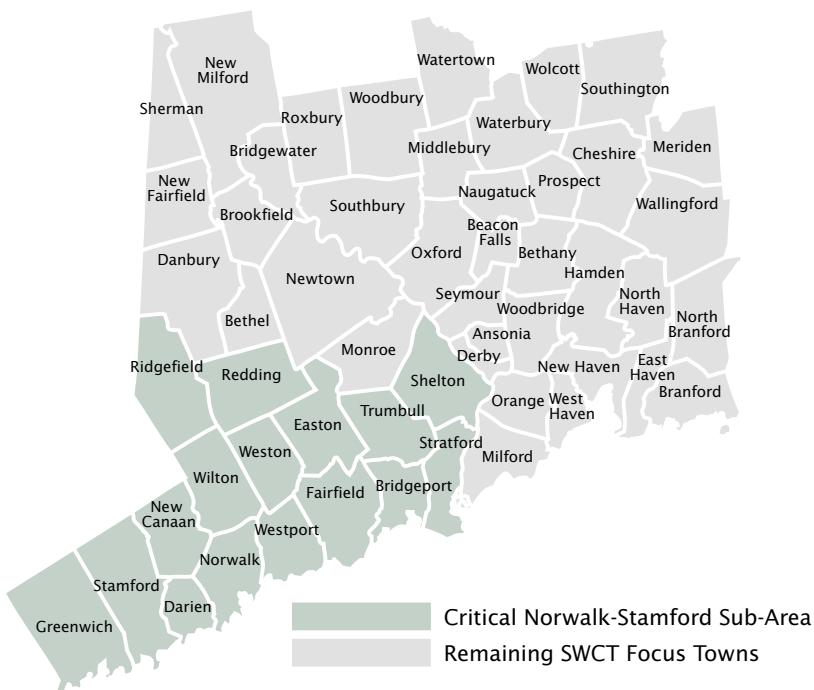
Southwestern Connecticut (SWCT) Focus

Since the spring of 2002, there has been considerable interest in using C&LM programs to help alleviate potential electricity shortages and reduce transmission constraints in southwestern Connecticut (SWCT). Because of bottlenecks in the transmission system which delivers electricity to SWCT, there is a potential for a shortage in the area for several years until remedies are implemented. This is especially true at times of peak demand for electricity, such as during summer afternoons when the use of air conditioning is high. Energy efficiency programs avoid the need to use inefficient diesel generators during periods of peak demand. Such periods often coincide with hot, smoggy weather and these generators exacerbate public health impacts during the very periods when air quality is already compromised.

In the summer of 2003, Connecticut experienced first-hand the effects of a major blackout affecting businesses and residents across the State. It is critically important, now more than ever, to understand the value of C&LM programs to help reduce electric demand on our constrained transmission system in SWCT. Special efforts were made to increase efficiency and potentially shed the use of electric equipment in SWCT to help reduce the demand for electricity during peak times. For example, there were targeted efforts to increase the efficiency of air-conditioning equipment for residential, commercial and industrial customers. Further, many customers worked with the Companies and agreed to shut down or shed usage of equipment, if they were called upon to do this during a peak period. The Companies worked in conjunction with the Independent System Operator of New England (ISO-NE) in these efforts with customers. ISO-NE has responsibility for coordinating electricity from all sources in New England to assure everyone has adequate power available to meet their needs.

Successful conservation program activities targeted in SWCT during 2003 included:

- ▶ Launching of the highly successful “Wait ‘til 8” campaign to raise consumer awareness of the importance of shifting loads away from peak hours.
- ▶ Cool Zone Program providing cash incentives for homeowners who upgraded air conditioning equipment to high efficiency models.
- ▶ Cash incentives to businesses which agreed to shut down equipment during peak periods of electricity demand to meet the grid stability demands.
- ▶ Special emphasis on energy service companies who worked to increase the energy efficiency of businesses in the area.
- ▶ Increased focus of the UI and CL&P Small Business Energy Advantage Programs to increase the energy efficiency in small businesses.
- ▶ Pool Pump Timer pilot program to add equipment to swimming pool pumps to encourage use during off peak times.



Southwestern Connecticut (SWCT) Focus

- ▶ Pilot of Room Air Conditioner Retirement program with Town of Fairfield to replace inefficient units with ENERGY STAR and to use the Town's appliance recycling infrastructure to dispose of old units.
- ▶ CL&P Weatherization Residential Assistance Partnership (WRAP) put special emphasis on replacing older inefficient refrigerators with efficient ENERGY STAR models.

A recent investigation into using C&LM to help address the SWCT reliability and congestion problems was conducted during a DPUC Technical Session. As a result, the Companies' program focus in 2004 will be to provide targeted efforts in the priority towns of the Norwalk-Stamford sub-area. The remaining SWCT region will also be the focus of increased C&LM program emphasis in 2004. CL&P estimates that while approximately 17% of its revenues come from the Norwalk-Stamford sub-area, 25% of the total conservation program budget will be allocated to this critical area. Similarly, the remainder of the SWCT region represents approximately 21% of its revenues and 25% of the total program budget will be allocated to this important region. UI's entire service territory is within the SWCT region. UI estimates that 41% of its revenues come from the Norwalk-Stamford sub-area and approximately 50% of the total program budget will be allocated to that critical area.

The Companies will continue to use proven delivery mechanisms from the existing portfolio of core programs to provide the focused initiatives in the Norwalk-Stamford sub-area. These programs have proven their ability to provide cost-effective energy and capacity reductions across the state for a number of years. The Companies will utilize a combination of focused marketing tactics as well as special increased incentives to provide the desired load relief.

Targeted conservation program activities in SWCT planned for 2004 include:

- ▶ Build on the success of the "Wait 'til 8" campaign with additional general awareness advertising in 2004.
- ▶ The Community Based Program will partner with towns in the Norwalk-Stamford sub-area and target increasing awareness of, and interest in, energy efficiency.
- ▶ The Appliance Retirement program will focus on removing unnecessary second and third appliances and improve energy efficiency in homes by increasing the penetration of ENERGY STAR refrigerators.
- ▶ The Small Business Energy Advantage program will have a strong focus in SWCT with targeted marketing in the Norwalk-Stamford sub-area.
- ▶ The C&I RFP program will have special bid rounds specifically for SWCT.
- ▶ The Companies will offer incentives focused on kW reductions by customers in SWCT.

Benefits: Overall Benefits to Customers

DOLLARS AND ENERGY

"Energy efficiency improvements are possible throughout energy markets, from the point of production to the home, office, factory, or automobile/truck. Gains in energy efficiency are similar to productivity gains in labor and capital, where more output is gotten for the same or less input. Each improvement is in a factor of production that helps the economy grow and helps increase economic prosperity. In fact, the National Energy Policy (NEP) directs the Secretary of Energy to establish a national priority... to improve the energy intensity of the U.S. economy, thereby improving energy efficiency."

Source: U.S. Department of Energy – Office of Energy Efficiency and Renewable Energy, FY 2003 Budget-in-Brief.

Chart D: Conservation Activities Save Energy and Money for Customers

The conservation measures installed by programs in 2003 saved enough energy in a year to serve approximately 16,600 average homes in Connecticut for an entire year. Over the life of the measures installed through the programs, they will save approximately \$200 million or enough energy to serve approximately 263,000 homes for an entire year.

Energy Savings from Energy Efficiency Programs (in Millions of kWh)		
Type of Savings	2003 ACTUAL	2004 PROJECTED
Annual kWh	131	170
Lifetime kWh	2,056	2423

Benefits: Overall Benefits to Customers

DOLLARS AND ENERGY

Chart E: Summary of Energy Savings by Customer Class (in millions of kWh)

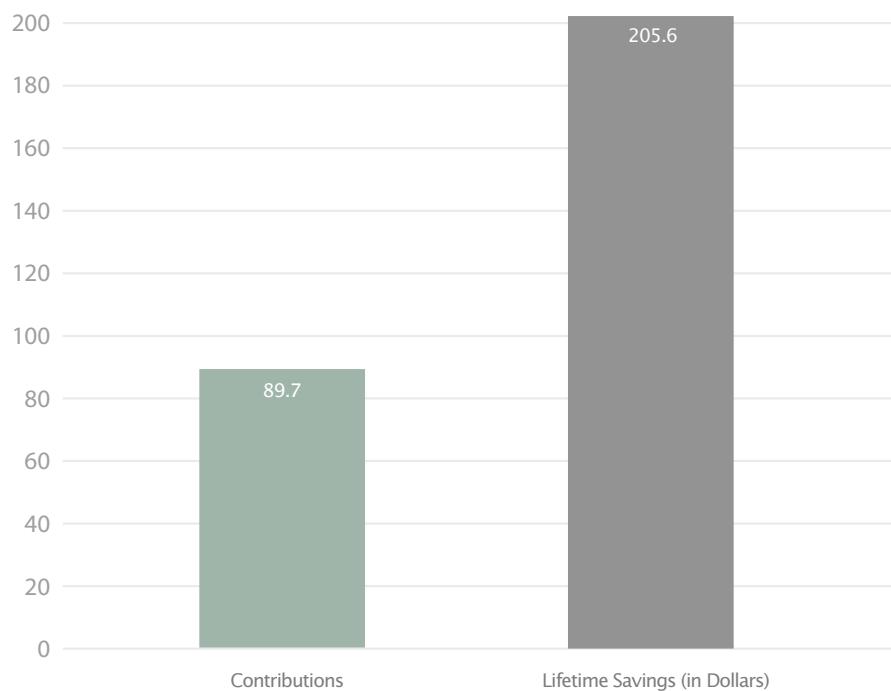
Customer Sector	Annual Savings		Lifetime Savings	
	2003 ANNUAL SAVINGS*	2004 PROJECTED	2003 ANNUAL SAVINGS*	2004 PROJECTED
Low Income	7.7	9.0	108.9	103.0
Residential (Non Low Income)	17.3	29.9	209.4	292.4
Commercial & Industrial	105.7	131.1	1,737.3	2,027.8
Totals	130.7	170.0	2,055.6	2,423.3

* THESE ARE PRELIMINARY ESTIMATES OF ENERGY SAVINGS

Customer benefits are distributed across all customer classes

The ECMB seeks to ensure that all types of customers benefit from the Conservation Fund. Thus, the budget is apportioned across all customer classes. In 2003, there were more than 236,000 instances of participation in the two Companies' energy efficiency programs. These programs are helping large and small businesses, homeowners and renters, and state and local governments conserve energy and natural resources.

Chart F: Contributions and Dollars Saved (in Millions of Dollars)



Benefits: Environmental Benefits to Connecticut

The ECMB is very interested in environmental stewardship. The actions taken in 2003, over their lifetime, will have the following results:

Chart G: Reduction in Criteria Pollutants and Carbon Dioxide (in Tons)

	2003 ANNUAL ACTUAL	2003 LIFETIME ACTUAL	2004 ANNUAL PROJECTED	2004 LIFETIME PROJECTED
SO _x	214	3,361	276	3,962
NO _x	73	1,151	95	1,357
CO ₂	87,428	1,374,993	113,026	1,620,916

Sulfur oxides and nitrogen oxides are air pollutants that contribute significantly to acid rain and acid deposits in bodies of water such as Long Island Sound.

Nitrogen oxides are primary components of summer smog. In particulate form, both impair visibility and are linked with increased asthma cases and other health problems.

Carbon dioxide is a prime greenhouse gas. Increased fossil fuel combustion, of which the generation of electricity is a significant contributor, has been linked with increased concentrations of carbon dioxide, global warming and climate change. During 2003, Connecticut convened a stakeholder process that will result in production of a Climate Change Action Plan that will guide the State's efforts to address this important issue. Connecticut's Conservation Fund efforts will help reduce carbon dioxide emissions and have a positive impact on the State's Climate Change and other environmental initiatives.

Energy efficiency programs reduce pollution by lowering demand and power production, thereby decreasing the amount of pollutants generated. Limiting these emissions is crucial to improving our air.

Benefits: Benefits to Low-Income Customers

CT Commissioner of Department of Social Services Praises C&LM Fund Efforts

"Connecticut's Conservation and Load Management Fund helped in the awarding of over \$300,000 in additional federal energy assistance dollars for low-income residents in 2003. By leveraging these additional federal dollars, we were able to assist more families and individuals with their heating bills. In the area of weatherization, we continued to see excellent results from the Weatherization Residential Assistance Partnership (WRAP), administered by the Conservation and Load Management Fund through the state's Community Action Agencies. WRAP dollars, along with funding from the Department of Energy, help local weatherization programs make households energy efficient and comfortable. These collaborative efforts are especially important in maximizing federal financial participation at a time when we need it the most."

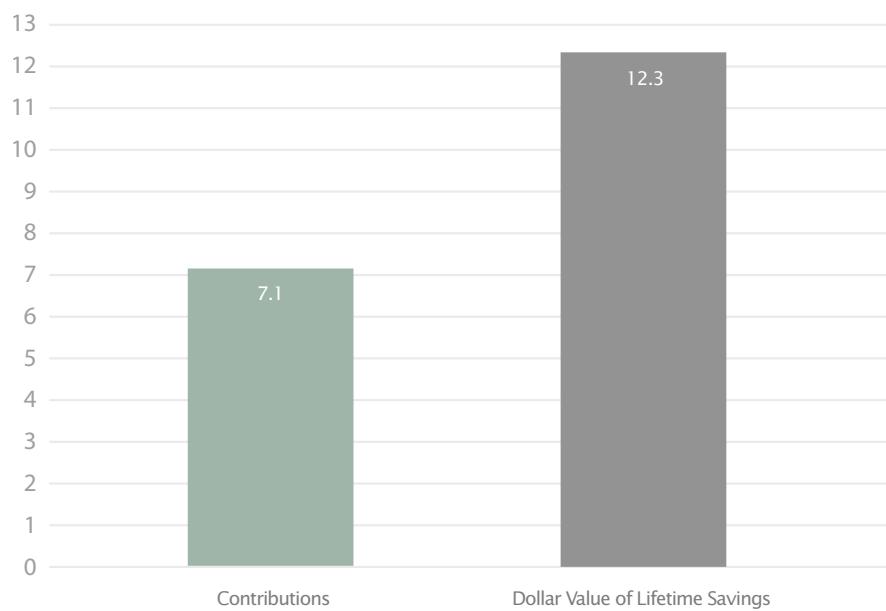
Patricia A. Wilson-Coker
Commissioner,
Department of Social Services

Low-income customers saved as much as \$35/month from energy efficiency measures installed.

In 2003, the ECMB continued to emphasize the need to assist low-income customers. These customers were served with the assistance of local Community Action Agencies, third-party vendors and other Connecticut social service providers. They received various energy efficiency measures to save energy in their homes and reduce their energy bills which can comprise a large percentage of their household expenses.

- The C&LM Fund provides direct services and education for special needs customers. Customers with limited incomes, disabilities or other unique needs are served by these programs.
- Approximately 9,060 low-income customers received services.
- In 2003, low-income customers saved 110 million lifetime kWh. Even at a conservative 0.113 cents per kWh savings, this equates to \$12.3 million.
- The total energy cost savings for some low-income customers has been as much as \$35 per month.
- Low-income customers have a higher energy burden compared to higher income customers – 12%-26% for low-income families compared to 4% for middle income families (energy burden is the total energy cost as a percent of income).

Chart H: 2003 Low-Income Customer Contributions vs. Lifetime Dollars Saved (in Millions of Dollars)



Research, Development & Demonstration (RD&D) Project Commitments

The Research, Development and Demonstration (RD&D) program solicits proposals for projects for innovative electric energy efficiency and environmentally friendly distributed resources. The RD&D fund is established to support projects which have not yet been proven or commercialized. Two RD&D projects that received ECMB initial approval in 2002 were approved for continuation in 2003 by the ECMB:

1. Multi-Year Fuel Cell Technology Development Program

**GenCell Corporation, Southbury \$2,700,000
(Total Three-Year Program)**

Three-year development program to complete the design, construction, and field test of a commercial molten carbonate fuel cell (MCFC). This program will also further develop proton exchange membrane fuel cell (PEMFC) power plant systems that utilize core technologies developed at GenCell Corporation. In addition, development of the core technologies for applications in solid oxide fuel cell (SOFC) systems will be advanced to the prototype level.

This project created 12 new high-quality technical jobs and leveraged over \$1 million dollars in additional grants from the Department of Energy and the Connecticut Clean Energy Fund. This project was awarded \$950,000 in 2003.

2. Residential Heat Pump Clothes Dryer – Phase II

Self Propelled R&D Specialists, LLC, East Hartford \$387,000

Development of a beta level prototype residential heat pump clothes dryer that will offer faster dry cycle times, gentle clothes drying, improved efficiencies and lower electric costs. This is the second phase of a two-phase project to develop and demonstrate a competitive high-end heat pump clothes dryer that is highly efficient and has the potential to be the first clothes dryer qualified to attain an ENERGY STAR rating.

Forty-four Percent of 2004 Conservation Fund Budget Transferred to State for Budget Deficit Relief

The final outcome of the State's budget crisis in 2003 resulted in legislation that required a significant portion of the funds collected on customer's bills as C&LM charges be used to securitize a bonding mechanism with the proceeds going to the state's General Fund. The impact to the C&LM budget in 2004 and beyond will be a reduction in program funding of 44 percent. It is critical to long-term efficiency goals that funding continue without further changes in the level available to the programs. Cost-effective C&LM investments often involve multi-year efforts and contracting. In addition to reducing potential benefits, transfers from the Fund can impact services for small businesses, residential and low-income customers and other special needs customers served by the Fund as well as commercial and industrial customers.

Blackout Strikes the Region

In the summer of 2003, Connecticut experienced first-hand the effects of a major blackout affecting businesses and residents across the State. It is critically important, now more than ever, to understand the value of C&LM programs to help reduce electric demand on our constrained transmission system in SWCT until other viable solutions are available. The ECMB's plan for 2004 is to continue to target funding in SWCT. With the implementation of locational marginal pricing by ISO-NE in March of 2003, most Connecticut customers are seeing higher congestion bills resulting from the congestion situation in southwestern Connecticut. Therefore, all of the State's residents will benefit from this emphasis on SWCT.

Doing More with Less

A major focus for 2004 will be to make the most cost-effective use of the remaining program dollars to best serve the ratepayers of Connecticut. The ECMB strives to achieve customer class, as well as geographic equity, as C&LM funds are contributed by ratepayers of all classes throughout the State. When viewed over time, all classes of customers should receive a fair share of pooled fund benefits, and all geographic areas of the State should be fairly served. However, because of reduced budgets in 2004, it will be extremely challenging to equitably serve all customer classes as in past years. The Companies will work closely with the ECMB and the DPUC to closely monitor program budgets and results to maximize the services delivered to customers in these financially constrained times.

Low-Income Customers Need Help Now More than Ever

The ECMB continues to be concerned about C&LM Fund expenditures for low-income households with the reduced budgets in 2004. Cuts in these program budgets will harm the customers least able to afford the loss of assistance. The ECMB will continue to emphasize better coordination with State agencies to achieve maximum results.

CL&P & UI 2004 Proposed Budget Summary

CONSERVATION & LOAD MANAGEMENT PROGRAMS	2003 ACTUALS (PRELIMINARY)	2004 PROPOSED BUDGET
RESIDENTIAL	\$ 5,535	\$ 8,634
Consumer Products		
Residential Retail Lighting	2,708	5,645
Energy Star Appliances (Including Room AC)	1,585	2,898
Appliance Retirement (Refrigerators)	1,123	1,182
Customer Initiated Projects	—	1,065
Residential New Construction	1,473	1,173
Residential Heating & Cooling	1,354	1,816
COMMERCIAL & INDUSTRIAL	\$ 20,079	\$ 23,343
Energy Blueprint/New Construction	7,394	5,572
Custom (CL&P in 2003)	4,980	5,650
Express (CL&P in 2003)	766	1,100
Energy Opportunities/Retrofit	1,169	1,757
RFP Program	2,235	4,050
O&M RFP	\$ 522	\$ 1,360
Small Business	\$ 3,013	\$ 3,854
OTHER *	\$ 24,501	\$ 17,893
Education/Other	2,515	1,775
SmartLiving Catalog	1,175	—
SmartLiving Center	638	581
eemsarts (K-12 Education)	515	449
Residential Audits - non WRAP	31	30
Community Based Program	156	295
SLC Contingency	—	420
Special Needs	6,871	5,176
Low Income (WRAP & UI Helps)	3,980	3,772
State Buildings	—	—
Municipal Energy	2,891	1,404
Other Programs/Requirements	1,520	1,375
Institute for Sustainable Energy (ECSU)	1,113	850
Energy Conservation Loan Fund	185	165
Heat Pump Water Heaters (Hot Shot/WSaver)	222	200
Billing System Conversion: On-Bill Financing	—	105
C&LM Loan Defaults	—	55
Load Management	3,712	2,006
ISO Load Response Supplemental Payments	1,037	974
ISO Load Response Program Support	1,391	397
Infrastructure	107	435
Power Factor	331	—
Time of Use Program	218	—
Demand Reduction	453	—
“Wait ‘til 8”	175	200
Renewables Incentives		200
Research, Development & Demonstration	1,750	1,074
Program Planning, Tracking & Evaluation	2,284	3,078
Planning & Evaluation	1,300	1,523
Information Technology	610	1,040
ECMB	374	365
Audit Per DPUC Order	—	150
ADMINISTRATION	\$ 5,849	\$ 3,209
Administration	2,854	854
Performance Management Fee ***	2,995	2,355
TOTALS	\$ 50,115	\$ 49,870
TOTAL C&LM BUDGET	\$ 50,115	\$ 49,870
Residential	\$ 12,799	\$ 14,687
C&I	\$ 26,320	\$ 26,772
Other	\$ 5,147	\$ 5,202
Administration	\$ 5,849	\$ 3,209
TOTAL C&LM BUDGET	\$ 50,115	\$ 49,870
Transfers to State **	\$ 11,011	\$ 40,080
TOTAL	\$ 61,126	\$ 89,950

* Includes elements of Residential, C&I and Other

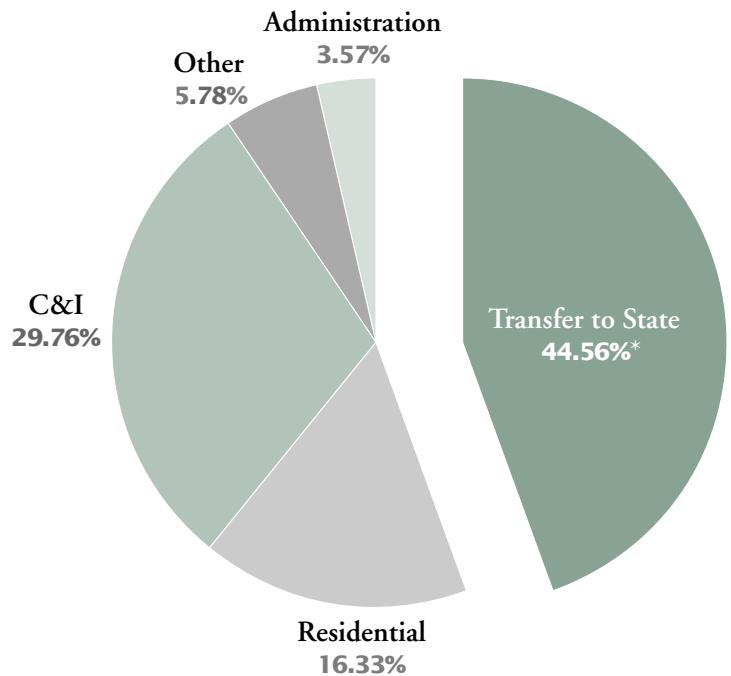
** Includes PA 03-2 and Securitization

*** Based on DPUC Draft Decision dated 1/15/04 Docket No. 03-11-01

Totals vary due to rounding

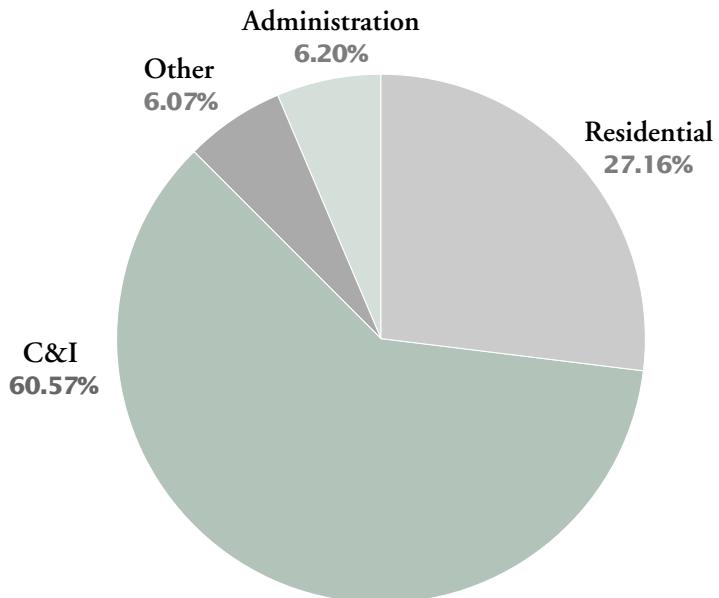
Connecticut C&LM Budget Allocations

Chart I:
2004 CL&P and UI
Proposed Budget



* 2004 "Transfer to State" includes funds diverted to the State's General Fund under PA 03-02, 03-06

Chart J:
2003 CL&P and UI
Budget



Benefits of Connecticut's Conservation Programs Far Exceed Costs

2004 Program Benefit/Cost Ratios

	ELECTRIC SYSTEM TEST		TOTAL RESOURCE TEST	
	CL&P BENEFIT/ COST	UI BENEFIT/ COST	CL&P BENEFIT/ COST	UI BENEFIT/ COST
Residential				
Residential Retail Lighting	3.0	2.1	3.4	2.4
ENERGY STAR Appliances	1.9	2.0	1.7	1.7
Appliance Retirement Program	1.6	1.2	1.3	1.2
Customer Initiated Projects	1.9	—	1.7	—
ENERGY STAR Homes	1.1	0.9	1.5	1.4
Residential Heating & Cooling	2.2	2.9	2.0	2.4
Commercial & Industrial				
New Construction / Energy Blueprint	5.2	8.0	5.7	4.5
Energy Opportunities (UI Program)	—	8.4	—	2.5
Custom Services (CL&P Program)	3.4	—	2.9	—
Express Services (CL&P Program)	6.9	—	4.8	—
RFP Program	3.5	6.9	1.8	2.2
O&M Services	3.2	—	3.1	—
O&M RFP	0.8	1.0	0.8	0.7
Small & Medium Customer (Small Business Energy Advantage)	3.7	4.0	1.5	1.7
Other				
Low-Income	1.2	0.9	2.1	1.1
Municipal	1.4	5.5	1.3	1.9
Energy Conservation Loan Program	0.2	—	0.2	—
Load Management				
ISO NE-NE Load Response Supplemental Payments	4.9	—	4.9	—
Demand Reduction	4.0	—	2.4	—

Note: Generally benefit-cost ratios greater than 1.0 are desirable for C&LM programs.

CL&P C&LM Program Summary for 2004 - RESIDENTIAL PROGRAMS

Programs	Target Market	Incentive	Program Features
ENERGY STAR® Retail Products*	All residential customers with special promotions in SWCT.	Point of sale retail promotions, special events and a mail order component. Designed to influence customer buying decisions for energy-efficient bulbs and fixtures.	Promotion and education of ENERGY STAR lighting products to residential customers and retailers.
Appliance Retirement Program*	Residential customers in SWCT.	Free pick-up of working inefficient refrigerators, room air conditioners and dehumidifiers. Retail component will have rebates to replace existing/working units with an ENERGY STAR model.	Promotion and education of ENERGY STAR appliances to residential customers in SWCT.
Residential Customer Initiated Program	Any customer, group or organization who contracts with CL&P for an approved residential project with a minimum \$50,000 incentive request.	Incentives are intended to be market driven in that bidders (or potential participants) request the incentive level that is needed to implement a retrofit or a replacement energy-efficient project.	Competitive procurement of bids from residential customers, ESCO's, and trade allies for implementation.
Residential New Construction*	Newly constructed homes.	Incentives for high efficiency HVAC equipment, home performance and energy-efficient lighting products.	Builder training, home inspections and rebates for electric energy-saving equipment and measures.
Residential Heating & Cooling*	SWCT residential customers installing central air conditioning.	Prescriptive incentives for installing energy-efficient central air conditioners and heat pumps. Additional incentives for these systems if they are performance tested.	Seminars for installation contractors and equipment incentives for installation of energy-efficient central air conditioning or heat pumps.
eesmarts™*	Boards of Education, school principals, teachers, and parents as a way of reaching and educating Connecticut youth about energy efficiency.	Free curriculum, complete with teacher's guide and student resources. Includes train-the-trainer seminars.	Develop an energy conservation ethic among students encouraging both students and their parents to incorporate energy-efficient practices in their schools and homes.
Residential Audits	Non-low-income residential customers using electric or oil heat.	Free audits.	On-site home energy audits, including low-cost, unbiased energy efficiency information. Cost-effective lighting and electric water heating measures may also be offered.
Energy Conservation Loan Program*	Owners of single and multi-family buildings, having an average annual income below 150% of the median income in CT.	Low interest loans for residential energy conservation work.	State administered loans granted to finance energy conservation measures and installations.
Low-Income* (WRAP)	Existing low-income residents with incomes at or below 200% of the Federal poverty guideline.	Full incremental cost of conservation measures.	Provides thermal weatherization, efficient lighting, domestic hot water measures, heating system repairs and the replacement of high energy use refrigerators.

Call 1-877-602-SAVE for additional information.

* Joint Program

CL&P C&LM Program Summary for 2004 - COMMERCIAL & INDUSTRIAL PROGRAMS

Programs	Target Market	Incentive	Program Features
C&I New Construction*	New commercial & industrial buildings, planned remodeling, large renovation projects.	Between 50% - 100% of incremental cost.	Equipment, system and design incentives for installation of energy-efficient electric measures.
Custom Services	All C&I customers.	Typically 100% of incremental cost (prescriptive or "Upgrade" incentives) or 50% of installed cost ("Add-On" incentives) Retrofit incentives being developed.	Focused studies for customers who have a specific project in mind. Incentives are paid for those measures that are cost-effective. Implementation is by the customer.
Express Service	All C&I customers. Lighting – up to 350 kW Motors – up to 200 hp HVAC – up to 30 tons	Incentives are prescriptive and typically pay 100% of the incremental cost.	Simple, expeditious application process.
C&I RFP*	C&I customers greater than 350 kW & residential customers.	Bidder requests incentive as part of competitive process.	Competitive procurement of bids from C&I customers, ESCO's, and trade allies for studies and implementation.
O&M Services	All C&I customers.	Up to 50% of installed cost.	The company's incentive level for the 52 towns in SWCT will be increased to 100%. In the areas outside of these 52 towns the incentive levels will remain at 50%.
O&M RFP*	All C&I customers.	Program provides information and training. Direct incentives will result from the energy efficiency projects that are developed.	Implementation of two, third party programs which will lead to sustained energy savings in facility O&M.
Small Business Energy Advantage*	All C&I customers - up to 100 KW of average peak demand.	Prescriptive Incentives: Lighting – Capped at 50% of installed cost HVAC – Prescriptive O&M Incentives Refrigeration – Capped at 50% of installed cost.	On-site assessment and installation of cost-effective electric energy measures. Zero-percent financing available to qualified customers.
Community Based Program*	Residential and C&I customers, government officials, educational groups, economic development organizations, business groups, retailers, trade allies and civic organizations with the town(s).	Financial incentives are provided through other C&LM programs.	To increase energy efficiency awareness throughout the communities, increasing its participation in all of the Companies conservation programs and to transform the Communities from passive consumers of energy to active participants in selling the benefits of wise resource utilization.
Municipal	All Connecticut municipal buildings in non-Urban Act cities and towns, distressed cities and Urban Act cities & towns.	Between 50% - 75% of installed cost.	Installation of all cost-effective electric energy conservation measures.
Connecticut Hospitals Association Loan	The 31 acute care hospitals in Connecticut.	No-interest loans for energy efficiency projects.	Energy efficiency opportunities, options and recommendations as well as no-interest loans for energy-efficiency projects.
Conservation & Load Management Financing Program* (Pending DPUC Approval)	Three distinct groups of customers; small business; municipalities; and residential Customer Initiated Projects participants.	Offer zero-percent financing so that the customer's share of project cost can be paid in tandem with their utility bill.	Provide zero-percent or interest free financing to Small Business and Municipal customers and participants of CL&P's Residential Customer Initiated Projects program enabling these customers to implement cost-effective, energy-efficient projects.
Small Industrial Conservation Loan	Smaller industrial customers, defined as less than 100 employees.	Interest-free loan.	Interest-free loan at \$5,000 minimum up to a maximum of \$100,000 per customer for energy-efficient equipment replacements only.
ISO-NE Load Response Program Support*	All C&I customers with at least 100 kW of curtailable load.	Supplemental payments made to Demand Response enrollment located in SWCT. The focus of the 2004 efforts will be maintaining a reduced number of 2003 participants as opposed to expansion of enrollment.	Maintain the ability, of existing participants, to reduce load during periods of system capacity deficiency.
Demand Reduction*	C&I customers that are able and willing to control kW demand at peak times through monitoring and control.	Incentives for qualifying projects will be the lesser of \$500/kW or 50% of installed cost in SWCT and \$300/kW or 50% of installed cost outside of SWCT.	Incentives for cost effective projects which provide peak load kW (or kW and kWh) reductions in Commercial, Industrial and large residential complex applications.

Call **1-877-602-SAVE** for additional information.

* Joint Program

UI C&LM Program Summary for 2004 - RESIDENTIAL PROGRAMS

Programs	Target Market	Incentive	Program Features
ENERGY STAR® Retail Products (Appliances)*	All residential customers.	Incentives for the purchase of pool pump timers, qualifying ENERGY STAR clothes washers, and room AC; special promotions and/or training and education for clothes washers, room AC, refrigerators and dishwashers.	Promotion, training and education of energy-efficient appliances to retailers and consumers.
ENERGY STAR Retail Products (Lighting)*	All residential customers.	Incentives to influence customer buying decisions at point of purchase, special promotions.	Promotion and education of ENERGY STAR lighting products to residential customers and retailers.
Residential New Construction*	New Homes.	Incentives for ENERGY STAR lighting fixtures, energy star appliances, and HVAC; building certification.	National energy efficiency campaign to help home builders and buyers design and construct homes that use less energy.
Residential Central A/C Program*	All residential customers.	Prescriptive incentives for installing energy-efficient central air conditioners and heat pumps, contractor incentive for providing basic commissioning data.	Promotion, training and education on qualifying high-efficiency equipment and installation; instruction on basic commissioning process.
Appliance Retirement*	All residential customers.	Stand-alone customer-initiated and retailer co-op retirement, room AC turn-in based program featuring demanufacturing service, room AC and retailer co-op refrigerators, enhanced incentives.	Convenient disposal of old appliances in conjunction with education, training and promotion of energy saving ENERGY STAR replacement appliances.
SmartLiving™ Center*	Key market includes homeowners, homebuyers, architects, builders, and designers and trade allies.	Provide technical assistance, training, information and education to consumers, students and trade allies to increase their awareness and adoption of energy efficiency products and practices.	SmartLiving® Centers serve as high profile, centrally located facilities for educational tours, training sessions and other special events.
Low-Income* (UI HELPS)	Low-income residents.	Full cost of conservation measures.	Provides weatherization, efficient lighting and refrigerators to low-income residential customers. Coordinates community agencies funding and service.
eesmarts™* (K-12 Education)	Grades K-12 throughout UI's service territory.	Free curriculum, complete with teacher's guide and student resources. Includes train-the-trainer seminars.	Offers a complete, ready to use curriculum for professional educators to teach students the fundamentals of energy efficiency while incorporating math and science skill requirements.
Community Based Program*	Shelton, Ansonia and Derby with continued support of Hamden.	Incentives are those offered via UI's other C&LM programs.	The program increases the community's adoption of energy efficiency measures and educates and encourages citizens to make wise energy decisions.

Call 1-877-WISE-USE for additional information.

* Joint Program

UI C&LM Program Summary for 2004 - COMMERCIAL & INDUSTRIAL PROGRAMS

Programs	Target Market	Incentive	Program Features
Energy Blueprint (EB)*	Commercial, industrial, institutional and governmental building projects	Cash incentives up to 90% of incremental costs	Program encourages builders, owners and developers to install energy-efficient lighting, HVAC and envelope measures that exceed current building codes.
Energy Opportunities (EO)	Commercial, industrial, institutional, and governmental customers	Cash incentives up to 30% of project cost	Program encourages customer to retrofit their facilities with cost effective energy-efficient equipment and technologies. Services are designed to meet the needs of the individual customer.
Small Business Energy Advantage*	All C&I customers up to 100 kW of average peak demand	Prescriptive incentives up to 50% for lighting, refrigeration controls and other measures; zero-percent financing available to qualified customers.	Direct services that include energy assessment and installations measures by third party program participants.
C&I RFP*	Residential and C&I projects with a total savings greater than 100 kW or 100,000 kWh.	Bidders request incentive as part of competitive process.	Competitive procurement of bids from customers, ESCO's and trade allies for studies and project implementation.
O&M RFP*	Large C&I Customers	Based on specific nature of each proposal. Company will favor cost sharing with other parties.	Improvement to maintenance or building operations using effective means or new approaches.
Municipal Energy	Municipal Buildings	Energy Blueprint and Energy Opportunity Program incentives are used.	Program features are similar to EB and EO, but are specifically directed at the obstacles confronting municipal customers.
Demand Reduction*	All C&I customers	Cash incentives up to \$500/kW for reducing peak demand.	Program incentives are offered through the existing EB, EO framework. Incentives are available for installing load reducing technologies such as thermal storage, dimmable ballasts and building automation systems. Program contains an educational component emphasizing the benefits of changing consumption patterns and time-of-use rates.
ISO-NE Load Response Program Support*	All C&I customers with at least 100 kW of curtailable load.	Supplemental Payments made to Demand Response enrollment located in SWCT.	Maintain the ability of existing participants to reduce load during periods of system capacity deficiency.

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* Joint Program

Energy Conservation Management Board

Goals and Objectives

The ECMB has worked to link expenditures of program funds to important public policy goals such as reducing electricity demand, improving air quality and promoting economic development.

The overall goal of the State's conservation efforts is to advance the efficient use of energy, reduce air pollution and negative environmental impacts and to promote economic development and energy security in Connecticut.

- ▶ The Legislature created the Energy Conservation Management Board. CGS § 16-245m.
- ▶ The ECMB advises the Department of Public Utility Control and the State's electric distribution companies in their formulation of energy conservation and load management programs as well as market transformation plans.
- ▶ Under the Act, electric customers of The Connecticut Light and Power Company and The United Illuminating Company fund these programs in Connecticut through a 0.3 cents per kWh charge on their electric bills.
- ▶ The statutory mission of the ECMB is to advise and assist CL&P and UI in the development and implementation of comprehensive and cost-effective energy conservation and market transformation programs. CL&P and UI administer the programs under the guidance of the ECMB with the DPUC having final approval of program plans and budgets.

From its genesis, the ECMB has recognized that these are consumer funds, imposing a special obligation of care on their expenditure. The ECMB has worked to link expenditures of program funds to important public policy goals such as reducing electricity demand, improving air quality and promoting economic development.

Energy Conservation Management Board

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