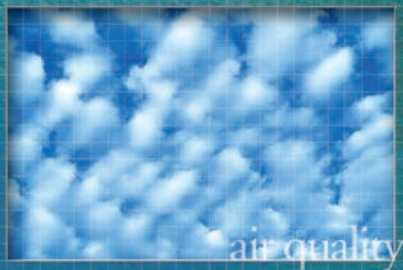
Energy Efficiency: Investing in Connecticut's Future



Report of the Energy Conservation Management Board

Year 2002 Programs and Operations

January 31, 2003

Prepared for the
Connecticut Legislature
Energy & Technology
Committee
Environment Committee

Pursuant to PA 98-28
CGS § 16-245m
An Act Concerning
Electric Restructuring

Consumers, businesses, retailers and environmental agencies speak about Connecticut's Conservation Fund programs and services…

What is Energy Star®?

Energy Star was introduced by the US Environmental Protection Agency (EPA) in 1992 as a voluntary labeling program designed to identify and promote energy-efficient products in order to reduce carbon dioxide emissions. EPA partnered with the US Department of Energy (DOE) in 1996 to promote the Energy Star label, with each agency taking responsibility for particular product categories. Energy Star has expanded to cover new homes, most of the buildings sector, residential heating and cooling equipment, major appliances, office equipment, lighting, and consumer electronics.

US ENVIRONMENTAL PROTECTION AGENCY:

"Change starts with simple, everyday action. The Connecticut Conservation Fund is a great example of how an entire state can come together to make a difference. EPA commends the Connecticut Conservation Fund for its support of energy efficiency programs that have saved consumers energy and money and added up to cleaner air for the entire community."

Wendy Reed

EPA OFFICIAL AND Energy Star SPOKESPERSON

Energy Star NATIONAL PARTNER:

"Sears is committed to training associates, educating consumers and providing the largest, most innovative assortment of Energy Star qualified appliances. The cooperative efforts between Sears and Connecticut's conservation efforts through the Conservation Fund have been a win for consumers, Connecticut utilities and Sears. Funding such as this allows Sears to be pro-active to specific local or state initiatives. The high caliber of the men and women supporting energy efficiency programs in Connecticut makes this state one of Sears best partners in Energy Star."

Susan M. Komornik

PROJECT OPERATIONS MANAGER
SEARS, ROBUCK & COMPANY
HOFFMAN ESTATES, IL

Energy Star PARTNER:

"We provide our customers with a large assortment of light bulbs and carry compact fluorescents (CFLs) anyway, so the Energy Star lighting promotion fit in with what we at Big Y Foods – provide our customers with excellent products and added value."

Jan Winn

BIG Y FOODS, DIRECTOR OF HEALTH, BEAUTY,
COSMETICS AND GENERAL MERCHANDISE

Energy Star HOMES BUILDER:

"I must say that making the decision to go Energy Star was not an easy one. It would of been much easier to build as we were building and not bother with the details involved by being an Energy Star builder. However, I cannot mention enough how much that decision has made for our business. It has made me and my employees feel better by constructing a more energy efficient home and I know our buyers feel better as well. I also believe it makes us more competitive, makes us greater profits and brings us goodwill, which we as developers constantly struggle with. We have made a commitment to take that big step. I know the program is really gaining momentum because more Connecticut builders are joining the Energy Star team. Keep up the good work!"

Dean Fiske

PRESIDENT, RAVENSWOOD HOMES HAMDEN, CT

Energy Star HOMEOWNER:

"For me the best thing is the economics. Our Energy Star home costs so little to run and we have the best air quality you can imagine. You don't notice any drafts, it's real quiet. The initial investment is well worth the benefits."

Barbara Berggren

PORTLAND, CT

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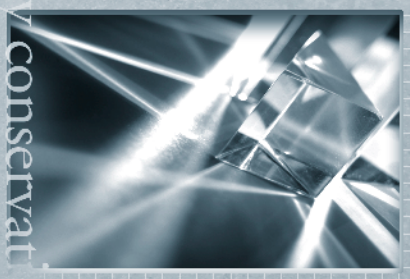
Numbers for 2002 in this report are preliminary



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.

Executive Summary-I

Connecticut State Energy Conservation And Load Management Fund – 2002 Achievements

The Connecticut State Energy Conservation and Load Management Fund was created by the State Legislature in accordance with Public Act 98-28 (CGS Sect. 16-245m), An Act Concerning Electric Restructuring, to provide cost-effective energy conservation programs and market transformation initiatives. 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 Connecticut Light and Power (CL&P) contribute to the fund through a conservation charge on their electric bills. In 2002, UI and CL&P customers contributed over $87 million to the fund. Over the lifetime of the energy conservation measures installed, customers will save $373 million dollars in energy costs or 4.3 times their original investment.

UI and CL&P administer the State's energy conservation programs. These programs are 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 2002, program achievements include:

- ENERGY AND COST SAVINGS: Connecticut residents and businesses achieved energy savings of approximately 246,000,000 kWh in 2002. This energy savings is enough to supply energy to approximately 31,300 average homes in Connecticut with electricity for a year. At the average price of $0.10 per kWh, this amounts to an energy cost savings of nearly $25 million annually, and a projected long-term savings of approximately $373 million over the lifetime of the installed measures.
- CUSTOMERS SERVED: There were more than 500,000 instances of participation in the State's energy efficiency programs in 2002. 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

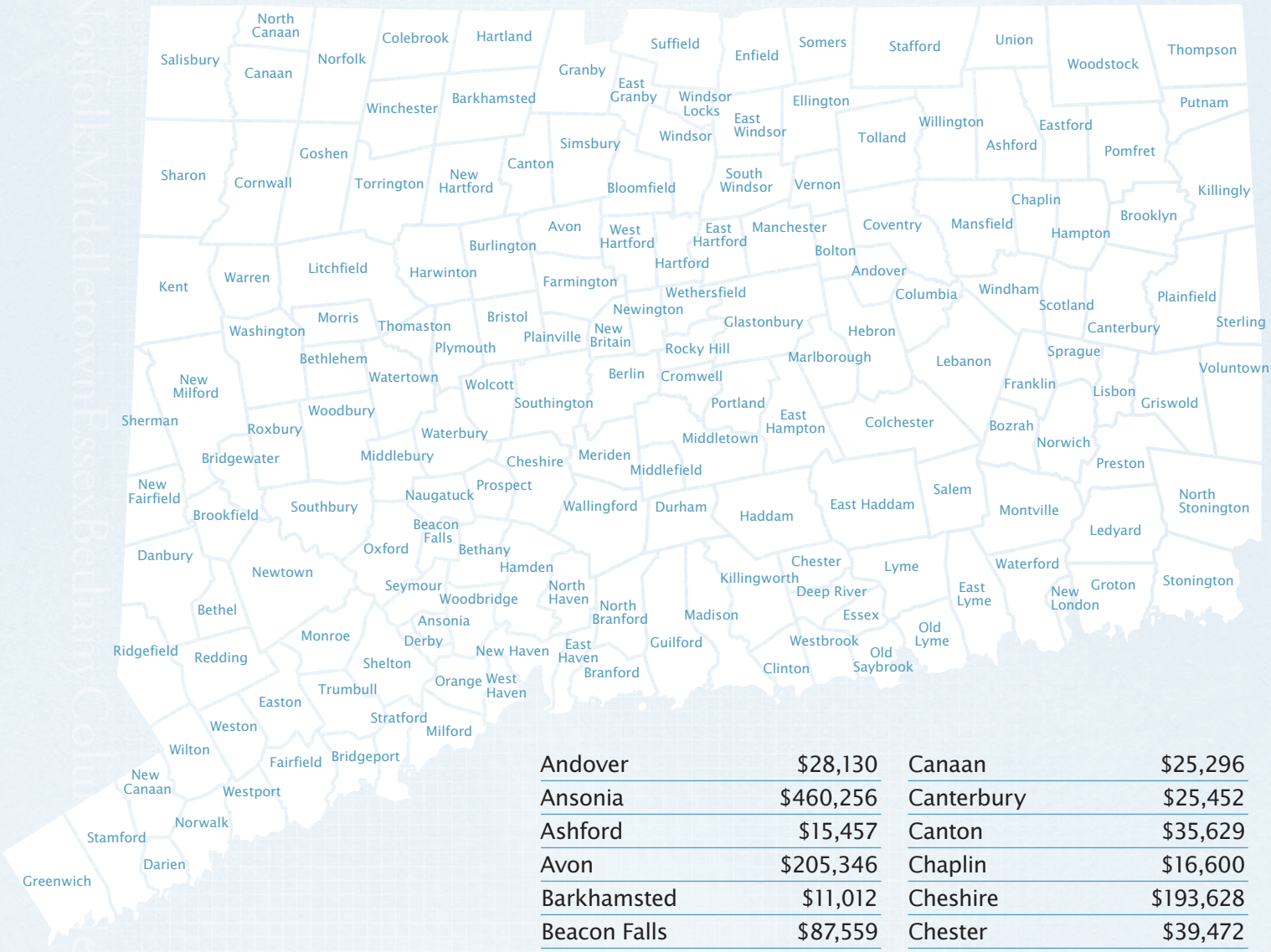
Executive Summary-2

and customers with low incomes. Educational institutions, manufacturers, small retailers, non-profit organizations and some 13,100 low-income customers, for example, reduced energy consumption and costs.

- 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 2002 will reduce the potential levels of pollutant emissions (SOx and NOx) in Connecticut by 996 tons per year. The carbon dioxide emissions avoided will be an additional 183,000 tons per year.
- 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 is 98,578 kW. This reduction will serve to relieve stressed transmission lines in the State and may reduce market prices during peak demand periods.
- ECONOMIC BENEFITS: Approximately $5.2 million was awarded in 2002 for Research, Development and Demonstration projects to study energy efficiency and distributed generation. Over 3,100 small businesses and hundreds of medium and large businesses participated in the State's conservation programs. Conservation activities utilize the services of Connecticut retailers, energy services companies, architects, engineers, mechanical and electrical contractors and construction companies throughout the State.

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	$28,130	Canaan	$25,296
Ansonia	$460,256	Canterbury	$25,452
Ashford	$15,457	Canton	$35,629
Avon	$205,346	Chaplin	$16,600
Barkhamsted	$11,012	Cheshire	$193,628
Beacon Falls	$87,559	Chester	$39,472
Berlin	$835,542	Clinton	$209,658
Bethany	$13,712	Colchester	$359,870
Bethel	$271,581	Colebrook	$6,792
Bethlehem	$7,452	Columbia	$20,036
Bloomfield	$1,576,656	Cornwall	$30,797
Bolton	$38,346	Coventry	$81,657
Branford	$354,479	Cromwell	$65,702
Bridgeport	$1,855,715	Danbury	$1,282,054
Bridgewater	$2,687	Darien	$113,720
Bristol	$719,542	Deep River	$122,991
Brookfield	$241,558	Derby	$398,987
Brooklyn	$32,743	Durham	$29,504
Burlington	$59,055	East Granby	$191,813

**All figures are approximate and based on 2001 data*

East Haddam	$51,720
East Hampton	$55,982
East Hartford	$790,547
East Haven	$94,288
East Lyme	$192,723
East Windsor	$291,097
Eastford	$11,462
Easton	$9,991
Ellington	$103,978
Enfield	$1,221,817
Essex	$97,671
Fairfield	$268,108
Farmington	$600,421
Franklin	$69,424
Glastonbury	$207,487
Goshen	$12,499
Granby	$126,698
Greenwich	$275,460
Griswold	$46,781
Groton	$53,730
Guilford	$103,544
Haddam	$43,822
Hamden	$507,775
Hampton	$14,701
Hartford	$1,667,149
Hartland	$4,860
Harwinton	$31,803
Hebron	$34,600
Kent	$8,570
Killingly	$523,361
Killingworth	$21,210
Lebanon	$35,565
Ledyard	$80,375
Lisbon	$164,374
Litchfield	$93,744
Lyme	$13,137
Madison	$54,847
Manchester	$1,629,824
Mansfield	$907,069
Marlborough	$40,974
Meriden	$891,646
Middlebury	$133,046
Middlefield	$196,949
Middletown	$621,155
Milford	$674,841
Monroe	$276,264
Montville	$198,747
Morris	$7,182
North Stonington	$27,473
Naugatuck	$350,180
New Britain	$993,360
New Canaan	$99,269
New Fairfield	$24,489
New Hartford	$30,094
New Haven	$2,667,523
New London	$839,508
New Milford	$400,228
Newington	$390,795
Newtown	$156,193
Norfolk	$5,468
North Branford	$55,600
North Canaan	$210,442
North Haven	$981,444
North Stonington	$25,463
Norwalk	$821,941
Norwich	$12,544
Old Lyme	$48,292
Old Saybrook	$111,451
Orange	$518,741
Oxford	$101,605
Plainfield	$143,347
Plainville	$278,993
Plymouth	$212,282
Pomfret	$126,087
Portland	$212,872
Preston	$35,920
Prospect	$20,455
Putnam	$102,726
Redding	$30,815
Ridgefield	$87,955
Rocky Hill	$279,320
Roxbury	$4,140
Salem	$26,037
Salisbury	$139,090
Scotland	$2,748
Seymour	$168,200
Sharon	$3,902
Shelton	$380,351
Sherman	$37,356
Simsbury	$317,515
Somers	$75,157
South Windsor	$620,093
Southbury	$160,890
Southington	$1,071,903
Sprague	$82,475
Stafford	$206,719
Stamford	$2,080,056
Sterling	$12,341
Stonington	$464,813
Stratford	$617,921
Suffield	$115,814
Thomaston	$190,749
Thompson	$143,704
Tolland	$106,393
Torrington	$870,142
Trumbull	$204,414
Union	$1,855
Vernon	$836,043
Voluntown	$33,726
Wallingford	$17,944
Warren	$6,049
Washington	$10,172
Waterbury	$1,600,102
Waterford	$172,977
Watertown	$637,926
West Hartford	$861,826
West Haven	$1,121,928
Westbrook	$29,169
Weston	$24,111
Westport	$413,270
Wethersfield	$125,068
Willington	$37,142
Wilton	$181,841
Winchester	$107,461
Windham	$275,581
Windsor	$1,130,411
Windsor Locks	$219,607
Wolcott	$163,647
Woodbridge	$221,724
Woodbury	$94,187
Woodstock	$56,062

**All figures are approximate and based on 2001 data.*

Economic Benefits-I

- Research, Development and Demonstration activities of the fund are creating a core competency in Connecticut for energy efficiency and environmentally-friendly distributed generation. Approximately $5.2 million was awarded in 2002. A list of RD&D projects is provided on page 16.
- Hundreds of Connecticut medium to large businesses also receive services and a sample listing of these companies is on page 7. Over $24.8 million was awarded to these businesses in 2002.
- Businesses hoping to locate in Connecticut can run their production more energy efficiently than could be possible in other states.
- Each year, some 4,700 commercial and industrial customers participate in the conservation programs. As a result, they improve manufacturing efficiency and reduce the energy consumption of their facilities.
- Approximately 3,100 CT small businesses received services to improve their operating costs.
- Conservation programs use the services of dozens of CT businesses like energy services companies, architects, engineers, mechanical and electrical contractors, and construction companies in the provision of energy conservation services.
- Hundreds of retailers in CT participate in the programs especially for Energy Star products which are also promoted nationally by the U. S. Department of Energy and the Environmental Protection Agency (EPA).

RESEARCH, DEVELOPMENT AND DEMONSTRATION PROGRAM:

The Connecticut Conservation & Load Management Fund (C&LM) has provided GenCell Corporation with the ability to broaden the horizons of next-generation fuel cell technologies. The funding GenCell has received from C&LM has allowed us to make great strides that, in turn, have attracted the interests and involvement of numerous parties including the Connecticut Clean Energy Fund, DOE and the Connecticut Global Fuel Cell Center. Our involvement with the C&LM Fund has directly resulted in twelve high-quality full time positions here at GenCell Corporation. Our near term plans include expanding our staff to seventeen by 2004 and accelerating that rate of increase significantly into 2005 as we build on past success and further expand financial investments in our efforts.

Jeffrey P. Allen
PRESIDENT
GENCELL CORPORATION

Economic Benefits- 2

2002 Sample List of Customers Served

3M Spec Optical Fibers
Ahlstrom Windsor Locks
AIG Financial
Aiken Elementary School
Alloy Engineering Company
American Polyfilm, Inc.
Andrew Avenue School
Ansonia Copper Brass
Ansonia Public Works
Ansonia Steel
Anthem Blue Cross Blue Shield
Autotote Enterprse, Inc.
Avon Old Farms School
BKM Corp.
Bayer Corporation
Becton Dickinson
Bic Corporation
Big Y Food Store
BMW of Darien
Brennan Construction
Bridgeport Fittings
Bridgeport Hospital
Bridgeport Board of Education Bassick High
Burlington Senior Housing
Camp Jewell
Canterbury Grange
Canton Police Department
Carla's Pasta
Charlotte Hungerford
Christmas Tree Shops
Citizens Bank
Clinton Child Care Services
Cold Form
Coleytown Middle School
Connecticut Freezer, Inc.
Cornwall Patterson
Cragin Library
Credit Bureau Connecticut, Inc.
Cromwell High School
Cycle Performance, Inc.
DCF High Meadows
Deitsch Plastic Co, Inc.
Derecktor Shipyards
Donald T. Bergin C.I.
Doncasters Turbo Products
Dresser Equip Group, Inc.
Eagle Leasing Company
East Hampton High School
Eckert Manufacturing
Ecolochem
Elim Park Place Nursing
Elm City Jewelers, Inc.
Euro Motors
ExxonMobil Chemical
Fairfield University
Fairfield, Public Works Dept.
Farmington Upper Elementary
Fermont Company
Fidelco Guide Dog Foundation
Filene's
Firing Circuits
Foodtech International
Fortin Electric
Franklin Mushroom Farm
General Drafting Design
General Electric Corp.
Glastonbury Town Hall
Glenwood Condo Milford
Global Wire Inc. Wyre Wynd
Golden Age of Trucking
Gold's Gym
Goodrich Corp.
Goodwill Industries
Grandma's Place
Graphite Die Mold
Greenwich Hospital
Grillo Organic, Inc.
Guilford, Town of
Hamden, Town of
Hartland Town Offices
Hasler Incorporated
Heim Bearings Division
Hi Tech Profiles
Hines
Holiday Inn
Home Depot
Hoover Precision
Hospital of St. Raphael
Hotchkiss School
Hoya Lens of America
Jarvis Products
Jewish Community Center
Jo-Ann Fabrics
Joel Barlow High School
Kennedy Center
Latex Foam International
Lawrence & Memorial Medical
Lebanon Elem School
Leed-Himmel Industries
Lordship Comm. Church
Lyme Consolidated School
Magna Steel Sales, Inc.
Martin-Brower
McLean Healthcare
Merritt Canteen, Inc.
Messiah Baptist Church
Middlesex Hospital
Mile Creek School
Milford Housing Authority
Modern Metal Finishing
Mohawk Tool Die
Nadel Industries
Nathan Hale Elementary
National Die
New Britain High School
New Fair Food Center
New Haven, City of
New London High School
New Milford Hospital
Nielson Hardware
Northeast Electronics
Northwest Connecticut Community Technical
Norwalk Town Hall
Ocean State Job Lot
Omega-Genesis Soundview
Orange Cong. Church
Oronoque Pharmacy, Inc.
Owens-Brockway
Pager Express
Palmer Brothers
Park City Primary Care
People's Bank
Pez Manufacturing Corp.
Pitney Bowes, Inc.
Plainfield Fire Dept.
Plainville Municipal Center
Porricelli's Food Mart
Praxair Surface Tech
Preston Plains School
Pro Tech Service
Pumpkin Hill Marketplace
Putnam Elementary School
Rand-Whitney
Remington Products
Rham High School
Riccardos Music Center
Ridgefield Middle School
Rocky Hill Town Hall
Rogers Corporation
SNET
Sargent Company
Scasco, Inc.
Seaboard, Inc.
Seymour High School
Shaw's Supermarket
Shelton Medical Center
Shelton, City of
Shop Rite
Sikorsky Aircraft
Silgan Plastics
Smurfit-Stone Container
Southern Connecticut State University
South Kent School
Southbury Hilton
Specialty Minerals
Spongex International Ltd.
Sprague Paperboard, Inc.
St. Michaels Church
St. Regis Health Center
St. Vincents Medical Center
Stamford Government Center
Staples
Sterling Public Library
Stolt Sea Farm
Stop & Shop
Storage Depot
Subway
Taft School
The Home Depot
Thomaston Town Hall
Thompson Middle School
Tilcon Connecticut, Inc.
Tolland Elderly Housing
Trident
Tube Bends, Inc.
Tuxis Lumber
U. S. Surgical Corp.
UCONN
Ultimate Fitness
Unilever - HPC
United Abrasives, Inc.
University of Bridgeport
University of New Haven
Vernon Center Middle School
Vitek Corporation
Walgreens
Wal-Mart
Waterbury Hospital
Waterford High School
Webster Bank
Westbrook Fire Department
Wethersfield Police Division
Whelen Engineering
Whitney Medical Center
Windsay Farm
Windsor High School
World Fitness Center
Yale University
Yale-New Haven Medical Center

Economic Benefits-3

CL&P Case Studies

Small Business Energy Advantage

Fabric Place in Cromwell is part of a family-owned chain of New England fabric stores. The Cromwell store has the areas largest selection of fabrics for clothing and home fashions. A CL&P Project Administrator identified the store as an excellent candidate for the Small Business Energy Advantage Program. The fixtures had not been upgraded in more than 10 years and replacement bulbs were of varying colors. Store Manager Barbara Simone was concerned about the cost of a lighting upgrade but when Barbara realized that CL&P would pay her for saving energy, she jumped at the offer. Following an energy assessment, CL&P retrofitted 566 fixtures, installed occupancy sensors and installed energy-saving compact fluorescent lights.

"The entire store is now well lit" Barbara remarked. But just as important was the ease with which it was accomplished. "I was able to concentrate on my business. All the paperwork, the whole nine yards, was handled by CL&P. All I had to do was sign my name," she added.

CL&P's Energy Efficiency Team helped Fabric Place:

- Save $14,000 and more than 154,430 kilowatt hours (kWh) annually
- Enjoy a $15,700 incentive, zero percent financing and a "seamless" lighting retrofit

The Small Business Energy Advantage Program Benefits include:

- No up-front costs
- CL&P pays up to 50% of the cost for retrofit lighting measures
- Zero percent financing available

Energy Conscious Construction

At a time when local municipalities across Connecticut are feeling a budget crunch and looking to trim expenses, the Town of East Lyme has found a way to save energy and money while enhancing the educational environment of the new East Lyme Middle School. By working with CL&P through its Energy Conscious Construction (ECC) program, the shoreline community will save nearly $1 million and 10 million kilowatt hours over the lifetime of the conservation measures installed in the new facility. That's approximately a 30 percent savings on the school's future energy costs. It's also enough energy to power about 1,300 typical Connecticut homes for one year. In addition, for deciding to install highly efficient lighting systems, occupancy sensors and HVAC motors and equipment rather than standard systems, the town qualified for a one-time incentive of $123,489.50 to cover the project's incremental costs. Those are funds that can be funneled back into the education budget. The entire process was described by East Lyme's First Selectman Wayne Fraser as "extremely successful." "From day one CL&P was involved with our architects in designing this project and it turned out more successful than I ever dreamed… (it) represents a tremendous investment in East Lyme's future," First Selectman Fraser added.

Energy Blueprint and Energy Opportunities

Latex Foam builds 21st Century technology into new manufacturing plant.

Exactly a year and a day after its Ansonia plant was destroyed by fire in May 2001, Latex Foam International (LFI) opened a new 208,000 sq. ft. world-class facility in the former Emhart Fastening Teknologies plant in Shelton. LFI is the only manufacturer in the Western Hemisphere of latex foam mattress cores, pillows and cosmetic applicators.

Jack Rapo, LFI Plant Engineer, points out that, awful as the fire was, it gave LFI a chance to reinvent itself, update its manufacturing processes, and improve quality and service. "We turned crisis into an opportunity to rebuild from the ground up," he said. "Our goal is a 100% integrated operation—from suppliers' deliveries of raw material to shipping the finished product to customers."

Installing variable speed drives, as well as a highly efficient chiller system, qualified LFI for a $100,000 Energy Blueprint incentive. "The potential energy savings here are considerable," said UI Lead Engineer Pat Reavey. "They could be using approximately 5 million kWh a year; instead they will use around 2.8 million kWh. In approximate dollar amounts, that's $233,000 versus $500,000."

LFI also qualified for a $50,000 Energy Opportunities incentive by having ESCO Inc., an energy services company, install an energy-efficient lighting system using T8 fluorescent bulbs with reflectors and electronic ballasts.

"This reduces usage by more than 650,000 kWh—or $16,000 in savings a year—compared to the facility's old lighting system before the retrofit," Reavey said. "A lighting retrofit typically cuts costs by 33%, so LFI's lighting costs will go down to $32,000."

Small Business Energy Advantage

Energy conservation cuts natural food store's 6-month energy costs by $9,500.

Peter Dodge, owner of Edge of the Woods natural food store in New Haven, said his store's electric use was reduced by 98,000 kWh in the first six months after installing energy-efficient lighting and refrigeration controls under the Small Business Energy Advantage Program.

"This reduced energy consumption translates into electric bill savings of $19,000 per year," Dodge said, "And under the program, UI paid us a $17,980 incentive from the State Conservation Fund to undertake this energy-saving project."

Tomasko Electric of Windsor, CT, a participating vendor, performed the refrigeration and lighting improvements.

The refrigeration job consisted of three energy management measures:

- Installing door heater controls so the amount of energy needed to keep the glass doors of the reach-in coolers free of condensation never exceeds the electricity demand at any given time.
- Installing temperature controls on the air circulating evaporator fans so that instead of operating 24/7, the fans turn on or off depending on when the interior air needs to be circulated
- Installing a night shut-off control on the soda coolers so they don't operate when the store is closed.

The lighting improvements consisted of replacing 400W metal halide with fluorescent star fixtures and substituting the existing 150/200W incandescent fixtures with four-foot T8 fluorescents. Besides saving energy, the new lighting makes the store more cheery for shoppers and gives the fresh fruits and vegetables a tastier eye-appeal.

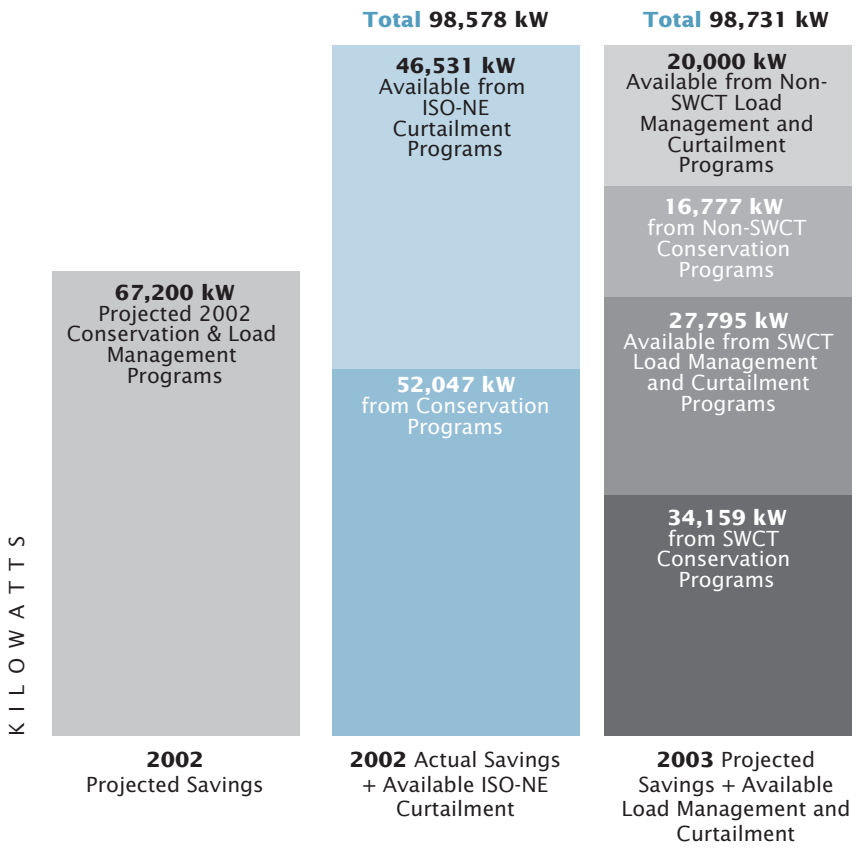
"I'm surprised more small businesses haven't taken advantage of this terrific program," Dodge said. "Anything that helps the environment by lessening the need to build more power plants is something that's absolutely essential in this day and age."

Peak Demand Impact

In 2002, the ECMB and the Companies joined together to help address what could have been a problem in the southwestern part of the State.

CHART A

Peak Demand Savings Available from Conservation and Load Management Funds in kW



PEAK DEMAND SAVINGS

Reductions from conservation activities make a valuable contribution to electric system reliability during peak periods, like hot summer days, when energy supplies are at or near capacity.

- Conservation activities reduce the amount of power needed during the peak demand period.
- Peak demand often coincides with days of poor air quality. Without conservation measures implemented, generating units often emit much higher levels of air pollution on peak days.
- Plans for load management and curtailment programs will provide temporary relief in areas constrained by capacity for transmission and distribution of electricity.
- The projected total 2003 savings in Chart A above is the equivalent electrical consumption of approximately 20,000 average air conditioned homes in Connecticut.

Southwestern Connecticut (SWCT) Focus

In 2002, the ECMB and the Companies joined together to help address what could have been a problem in the southwestern part of the State. In the spring of 2002, the Department of Public Utility Control (DPUC) directed UI and CL&P to add a special conservation and load management emphasis on SWCT to help address the potential for shortfalls in supply of electricity in the area. Because of bottlenecks in the transmission system which delivers electricity to SWCT, there is a potential for too little supply in the area for several years until remedies are found. This is especially true at times of peak demand for electricity, such as during summer afternoons when the use of air conditioning is high.

Thus, special efforts were made to increase efficiency and potentially shed the use of equipment in SWCT that could aid in reducing the demand for electricity in peak times. For example, there were efforts to increase the efficiency of air conditioning equipment for both residential and 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 gets adequate power.

Because this constraint is expected to continue for several years, the plans for 2003 increase the amount of emphasis that is going to SWCT. For example, for CL&P approximately 37 percent of the contributions into the fund come from SWCT, while the plan is for 53 percent of the program budget to be allocated to SWCT. For UI, approximately 41 percent of the contributions come from the most critical towns in its area, while the plan is for 53 percent of the program budget to go into those towns in 2003.

Activities of the Companies to focus on special needs in SWCT

- Cool Zone Program focused on SWCT which provided cash incentives for homeowners who upgraded air conditioning equipment to high efficiency models. Customers could receive financial assistance, both for room air conditioners and central air conditioners.
- Cash incentives to businesses which agreed to shut down equipment during peak periods of electricity demand. Through these incentives, 18.48 megawatts (MW) of load were made available for SWCT for ISO-NE to curtail as necessary to meet the grid stability demands.
- Special emphasis to 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 Advanatge Programs to increase the energy efficiency in small businesses
- Initiation of a Pool Pump Timer pilot program to add equipment to swimming pool pumps to encourage use during off peak times rather than during the peak time of the day
- Neighborhood canvasing through the Low Income program targeted customers in the critical towns to increase the energy efficiency of their homes

Connecticut residents and businesses receive benefits that are 4 times their initial investment from conservation activities.

Overall Benefits to Customers-1

Dollars and Energy

In 2002, customers of CL&P and UI contributed over $87 million into the Conservation Fund. Over the life of the measures installed through the programs, they will save approximately $373 million.

"One of the best short-term opportunities for the legislature to influence the overall energy situation in the State is through efforts related to energy conservation, including both improved efficiency and curtailment of consumption." Source: Legislative Program Review & Investigations Committee Report "Energy Availability in Connecticut" February 2002.

Conservation Activities Save Energy and Money for Customers

The conservation measures installed by programs in 2002 will save enough energy in a year to serve approximately 31,300 average homes in Connecticut for an entire year.

CHART B

Energy Savings from Energy Efficiency Programs
(IN MILLIONS OF kWh)

Type of Savings	2002 Projected	2002 Actual	2003 Projected
Annual kWh	219	246	235
Lifetime kWh	3,254	3,719	3,484

Overall Benefits to Customers-2

Dollars and Energy

CHART C

Summary of Energy Savings by Customer Class (IN MILLIONS OF kWh)

Customer Sector	Annual Savings		Lifetime Savings	
	2002	2003*	2002	2003*
Low-Income	14.2	10.2	199.8	146.8
Residential (Non Low-Income)	59.4	46.1	793.4	527.1
Commercial & Industrial	172.2	178.3	2,725.8	2,810.5
TOTALS	**245.8**	**234.6**	**3,719**	**3,484.4**

** These are preliminary estimates of energy savings*

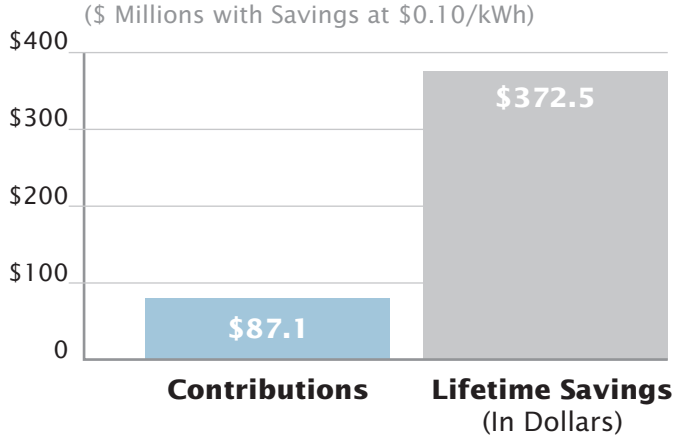
Customer benefits are distributed across all customer classes

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 2002, there were more than 500,000 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 D

Contributions and Dollars Saved

($ Millions with Savings at $0.10/kWh)



environmental stewardship

Environmental Benefits to Connecticut

The ECMB is very interested in environmental stewardship. The actions taken in 2002, over their lifetime, will have the following results:

CHART E

Reduction in Criteria Pollutants and Carbon Dioxide (IN TONS)

	Year 2002	2002 Lifetime	Year 2003 (Projected)	2003 Lifetime (Projected)
SO_x	762	11,529	727	10,802
NO_x	234	3,533	223	3,310
CO_2	182,875	2,766,951	174,542	2,592,394

Estimates are the product of kWh savings and ISO New England emission rates.

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.

Sulfur dioxide 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 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, and global warming and climate change.

Benefits to Low-Income Customers Were Widespread

Saving energy and reducing energy bills

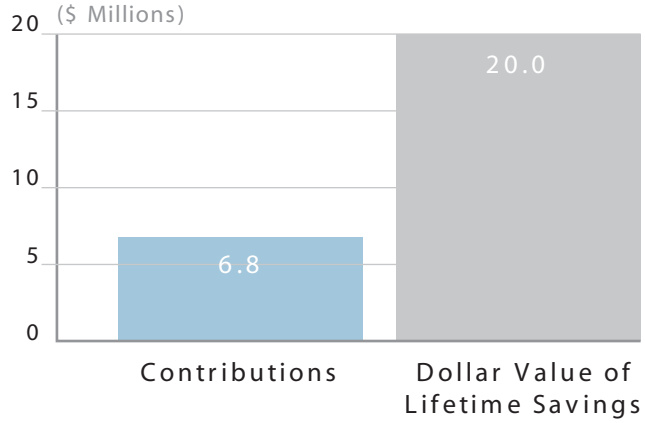
In 2002, emphasis on assisting low-income customers continued. They were served with measures to save energy in their homes and reduce their energy bills which comprise a large percentage of their household expenses.

- The C&LM Fund provides outreach and assistance for the special needs customer. Customers with limited incomes, disabilities or other unique needs are served by these programs.
- The Companies partner with Connecticut social service groups to provide conservation services.
- Approximately 13,100 low-income customers received services.
- In 2002, low-income customers saved 200 million lifetime kWh. Even at a conservative 10 cents per kWh savings, this equates to $20 million.

CHART F

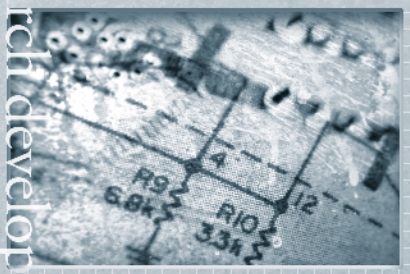
2002 Low-Income Customer Contributions vs. Lifetime Dollars Saved

($ Millions)



"I would like to express my sincere thanks and appreciation for the wonderful program. I consider myself fortunate and thrilled to have received valuable energy-saving products and services. The Conservation Fund has really helped me and I look forward to many more 'bright' years."

Jennie Maraucci
HAMDEN, CT



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

The Research, Development and Demonstration (RD&D) program solicits proposals for projects of 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. Ten new RD&D projects were approved in 2002 by the ECMB:

1. Multi-Year Fuel Cell Technology Development Program

GenCell Corp. *(Formerly Allen Engineering Co., Inc.),* Southbury, CT — **$2,900,000**

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

2. Centralized Wireless Two-Way Energy Monitoring & Load Management System

NXEGEN Inc., Middletown, CT — **$425,000**

Demonstration of a real time energy monitoring system and wireless load control devices to control targeted loads for 35 small to middle commercial, industrial, and municipal market segments. This technology will allow centralized management of aggregated energy loads on a real-time basis and provide real-time energy use information – which will promote energy efficiency.

3. Wireless Dual Technology (Infrared & Microphonic) Occupancy Sensors for Energy-Efficient Commercial Lighting Control

TIAX *(Formerly Arthur D. Little, Inc.),* Cambridge, MA — **$413,000**

Development and verification of wireless dual technology occupancy sensor, i.e., (passive infrared to "see" & microphonic to "listen"), for energy-efficient control of lighting in commercial applications where hard wired sensor systems are difficult and expensive to install.

4. Residential Heat Pump Clothes Dryer – Phase I

Self Propelled, R&D, LLC, East Hartford, CT — **$300,000**

Development of an alpha level prototype residential heat pump clothes dryer that will offer faster dry cycle times, improved efficiencies and lower electric costs. This is the first phase of a multi-phase project to develop and demonstrate a competitive high-end heat pump clothes dryer that is highly efficient and be the first clothes dryer qualified to attain an Energy Star rating.

5. High Efficiency Illuminated Signage – Phase II

Gerber Scientific, South Windsor, CT — **$295,000**

Development and demonstration of new light emitting diode (LED) signage systems that will offer the functionality of neon signs but use much less electric energy. This project will develop the (LED) signage system, and the necessary software & tooling to support fabrication by electric sign builders.

6. Field Evaluation of WatterSaver™ Heat Pump Water Heater (HPWH)

Steven Winters Associates, Norwalk, CT — **$262,600**

Demonstrate and monitor 50-Gal WatterSaver™ Heat Pump Water Heaters installed in twenty (20) Connecticut Residences. This technology will provide reduced electrical consumption and dehumidification of adjacent areas (basement).

7. Cold Climate Air Source Heat Pump (CCHP) – Phase II

Shaw Engineering, LLC, Rocky Hill, CT — **$200,000**

Development and demonstration of a cold climate air source heat pump designed to achieve improved efficiencies and lower electric costs while operating at low outside ambient temps prevalent during winter in northern areas. Phase II will accommodate a full-year of field testing at four (4) Connecticut residential demonstration sites in addition to independent ARI testing & certification, and independent endurance testing. An independent engineering group will assemble all CCHP design documents and establish a design basis package for potential licensee(s).

8. Plasma Converted Gas (PCG™) Characterization and Bench Scale Testing of a StarCell Hydrogen Separator (Commercial & Industrial Customers)

Startech Environmental Corp, Bristol, CT — **$174,000**

Development and testing of a filtering device (known as StarCell) for separating hydrogen from other gases in the exhaust stream of a plasma jet (a beam of electrons that can break molecules into their constituent atoms) waste disposal device (the Plasma Converter System). This project will characterize the Plasma Converted Gas (PCGTM) from three diverse waste materials processed in an optimized Plasma converter system, and refine and prove-out the bench-scale StarCell Membrane in the lab on synthetic PCGTM blends. The three surrogate waste materials are Scrap tires; Municipal Solid Waste; and Medical Waste. Note: This project has matching co-funding participation by the Connecticut Clean Energy Fund (CCEF).

9. Development and Demonstration of Small Scale Wind Energy in Connecticut

AWS Scientific Inc., Albany, NY — **$108,200**

In collaboration with Connecticut Farm Bureau, this project will initiate a preliminary market development & demonstration program that will lead to installation, monitoring and evaluation of two 10-kW wind energy systems. Both wind systems will be sited in "high-value" Connecticut Agricultural applications – with at least one unit sited in Southwest Connecticut. Proposed tower heights for both 10-kW turbines are 80 to 120 feet. Note: This project has matching co-funding participation by the Connecticut Clean Energy Fund (CCEF).

10. Internet Enabled Two-Way Paging System for Load Management (Residential & Small Commercial Customers) – Phase II

Power Web Technologies, Inc., Media, PA — **$97,500**

Demonstration of the two-way paging system developed under Phase I by installing and operating twenty-five (25) internet-controllable thermostats located in Southwest Connecticut Residences over a one-year period to validate the technology. This technology will provide end users with an internet capable energy management device to save electrical energy and provide the utility an accurate and verifiable means to curtail loads during volatile market and grid conditions.

Energy efficiency programs contribute to Connecticut's economic competitiveness, directly benefiting businesses and individual consumers.

Issues for 2003

The ECMB views the C&LM fund as an investment in Connecticut's future. We have sought to ensure the most effective expenditure of funds with this investment concept as an overarching principle.

Energy efficiency programs contribute to Connecticut's economic competitiveness, directly benefiting businesses and individual consumers. Such programs create jobs and help ensure stronger communities.

Since it is possible to make reasonable estimates of the amount of C&LM funds to be raised in the future, many cost-effective investments are made that involve multi-year efforts and contracting. It is critical to long-term efficiency goals that funding continue without sudden changes in the level available to the programs. In addition to reducing potential benefits, transfers from the fund can impact cost-effective conservation programs for small businesses, residential and low-income customers and other special needs customers served by the fund.

Due to a potential electricity reliability issue in Southwestern Connecticut (SWCT), the ECMB's plan for 2003 and 2004 is to invest

significantly more of the budget in C&LM for SWCT than is actually contributed to the fund by customers in that part of the State. However, with the implementation of locational marginal pricing by ISO-NE in March of 2003, all Connecticut customers will see higher congestion bills resulting from the congestion situation in Southwest Connecticut.

The ECMB does strive 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.

Low-income concerns: The ECMB continues to be concerned that C&LM fund expenditures for low-income households could be made more effective through coordination with State agencies serving these households. The ECMB will continue to facilitate coordination with State agencies to achieve maximum results. Our goal is to benefit needy customers.

CL&P 2003 Proposed Budget Summary

CL&P C&LM Budget ($000)	2002 Actuals (Preliminary)	Proposed 2003 (5%)
STRATEGIC ALLOCATION		
MARKET TRANSFORMATION & LOST OPPORTUNITES		
Residential		
Residential Retail Lighting*	$ 3,183	$ 2,770
SmartLiving Catalog*	2,286	2,000
Energy Star Appliances*	1,528	1,500
Energy Star Homes*	1,280	2,460
Hot Shot HPWHs*	592	120
Residential HVAC*	630	—
New Construction GeoX	371	—
Refrigerator Early Retirement Program*	—	900
Residential Heating & Cooling*	407	2,700
Commercial / Industrial		
New Construction / Energy Blueprint*	$ 8,256	$ 7,400
Custom Services	8,016	8,600
Express Service	1,105	1,500
Small Business Energy Advantage*	2,812	4,535
Sub Total Market Transformation	**$ 30,467**	**$ 34,485**
MARKET DEVELOPMENT		
RFP Program*	$ 4,269	$ 6,000
Sub Total Market Development	**$ 4,269**	**$ 6,000**
SPECIAL NEEDS		
eesmarts* (K - 12 Education)	$ 215	$ 210
Energy Conservation Loan Program	258	225
Low Income (Energy Care & WRAP) / UI Helps*	4,716	4,750
Community Based Program*	507	300
State Buildings	1,032	825
Municipal Buildings	2,637	2,000
Sub Total Special Needs	**$ 9,365**	**$ 8,310**
TECHNICAL ASSISTANCE, INFO AND OUTREACH		
Residential		
SPECTRUM Program	$ —	$ —
Combined - SPECTRUM/Audits	1,103	—
Tech Center (SmartLiving Center)*	510	630
General Non-Program Communication*	226	—
Residential Audits-Non WRAP	$ —	$ 40
Commercial/Industrial		
General Non-Program Communication*	$ 155	$ —
O&M Services, O&M RFP*	621	$1,680
Sub Total Technical Assistance	**$ 2,614**	**$ 2,350**
OTHER PROGRAMS		
Load Management	$ 1,595	$ 6,250
Research, Development & Demonstration*	3,943	4,410
Sub Total Other Programs	**$ 5,538**	**$ 10,660**
Sub Total Residential Programs	**$ 17,812**	**$ 18,605**
Sub Total Commercial/Industrial Programs	**$ 28,904**	**$ 32,540**
Sub Total Joint Programs	**$ 36,137**	**$ 42,590**
Sub Total Other (Load Management, RD&D)	**$ 5,538**	**$ 10,660**
PROGRAM TOTAL	**$ 52,254**	**$ 61,805**
Other Expenditures		
Administration	$ 973	$ 920
Planning and Evaluation	1,301	1,745
ECMB	58	330
Information Technology	1,253	1,070
Institute for Sustainable Energy at ECSU	1,200	1,200
Estimated 2002 Carrying Charges	—	(300)
Conversion of 2000 Load Mgt Loan Fund	—	(250)
Sub Total Other Expenditures	**$ 4,785**	**$ 4,715**
TOTAL EXPENDITURES	**$ 57,039**	**$ 66,520**
Performance Management Fee (PMF)	**$ 3,508**	**$ 3,326**
GRAND TOTAL	**$ 60,547**	**$ 69,846**
ACT 01-9 Section 13	**$ 9,600**	**$ —**
	$ 70,147	**$ —**

** Joint Program*

Totals vary due to rounding

UI 2003 Proposed Budget Summary

UI C&LM Budget ($000)	2002 Actuals (Preliminary)	Proposed 2003 (5%)
STRATEGIC ALLOCATION		
MARKET TRANSFORMATION & LOST OPPORTUNITIES		
Residential Programs		
Residential Retail Lighting*	$ 792	$ 670
SmartLiving Catalog*	922	286
Energy Star Appliances*	511	551
Refrigerator Retirement*	—	219
Energy Star Homes*	520	523
Hot Shot HPWHs*	47	—
Residential Heating & Cooling*	111	493
Residential HVAC*	176	—
Commercial / Industrial		
Energy Blueprint/New Construction*	$ 2,018	$ 2,615
Energy Opportunities	1,271	2,690
Small Business Energy Advantage*	997	1,501
Sub Total Market Transformation	**$ 7,365**	**$ 9,548**
MARKET DEVELOPMENT		
RFP Program*	$ 88	$ 410
O&M Services (RFP, BOC, Training)*	—	$ 167
Sub Total Market Development	**$ 88**	**$ 577**
SPECIAL NEEDS		
eesmarts* (K-12 Education)	$ 855	$ 550
Energy Conservation Loan Program	66	75
Low Income (UI Helps)*	1,168	1,267
Community Based Program*	125	239
State Buildings Non-DPW	—	225
Municipal Energy	775	816
Sub Total Special Needs	**$ 2,989**	**$ 3,172**
TECHNICAL ASSISTANCE, INFORMATION AND OUTREACH		
SmartLiving Center*	$ 392	$ 531
UI/CLP Joint General Awareness Advertising	99	—
Sub Total Technical Assistance	**$ 491**	**$ 531**
OTHER PROGRAMS		
ISO Load Response	$ 424	$ 147
Time of Use Program	—	268
Pool Timers	99	—
Research, Development & Demonstration*	198	522
Load Reduction kW Incentives	—	1,500
Emergency Response	205	—
Institute for Sustainable Energy (ECSU)	300	300
Sub Total Other Programs	**$ 1,226**	**$ 2,737**
Sub Total Residential Programs	**$ 5,846**	**$ 5,672**
Sub Total Commercial/Industrial Programs	**$ 5,976**	**$ 10,593**
Sub Total Joint Programs	**$ 6,161**	**$ 6,645**
Sub Total Other Programs	**$ 926**	**$ 2,437**
PROGRAM TOTAL	**$ 12,159**	**$ 16,565**
Other Expenditures		
Administration	$ 576	$ 404
Planning and Evaluation	355	797
ECMB Costs	93	150
Information Technology	311	360
Internet/Enernet Development	2	—
CLM Residential Opportunities	(54)	—
SWCT Customer Education	17	—
Sub Total Other Expenditures	**$ 1,300**	**$ 1,711**
TOTAL EXPENDITURES	**$ 13,459**	**$ 18,276**
Performance Management Fee	**$ 1,085**	**$ 869**
Act 01-9 Section 13 (DPW)	**$ 2,400**	**$ —**
GRAND TOTAL	**$ 16,944**	**$ 19,145**

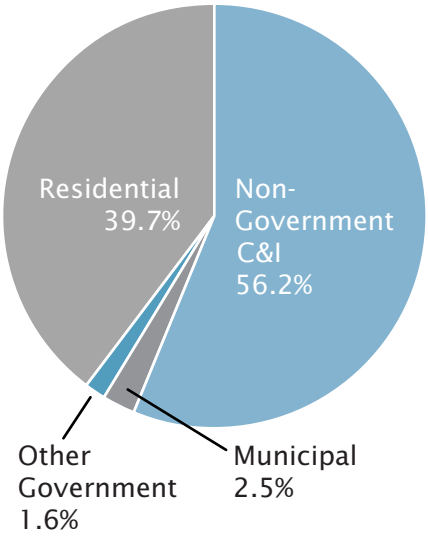
** Joint Program*

Totals vary due to rounding

2003 Program Revenues and Budget by Sector

CHART G1

CL&P 2003 Projected Revenues



Non-Government C&I Distribution:

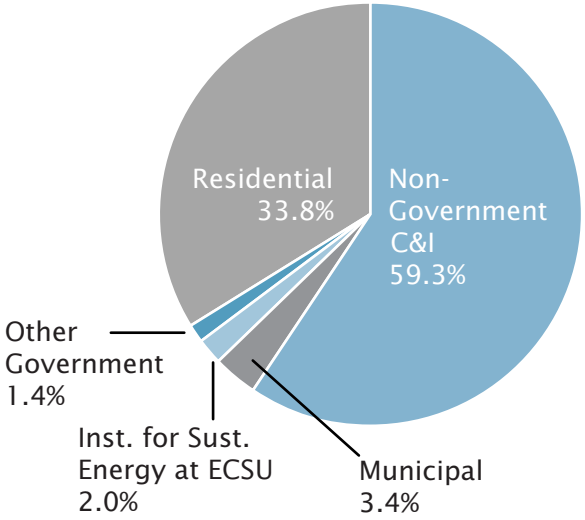
Small/Medium:	45.4%
Large:	54.6%

Residential Distribution:

Low Income:	20.0%
Other:	80.0%

CHART G2

CL&P 2003 Proposed Budget



Non-Government C&I Distribution:

Small/Medium:	45.5%
Large:	54.5%

Residential Distribution:

Low Income:	27.2%
Other:	72.8%

CHART H1

UI 2003 Projected Revenues

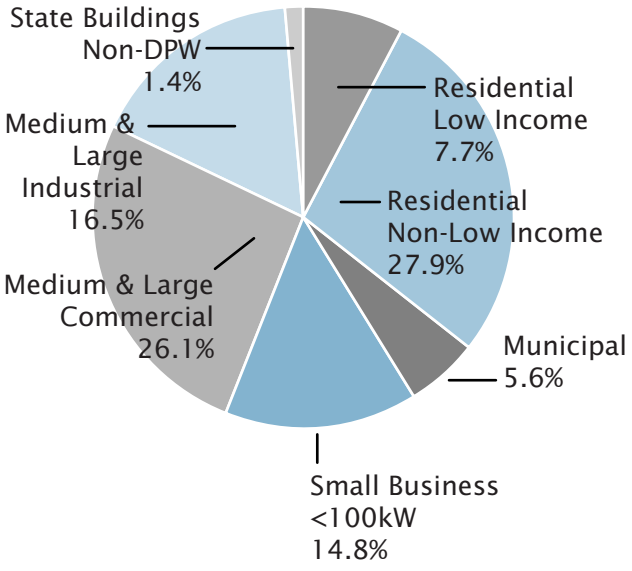
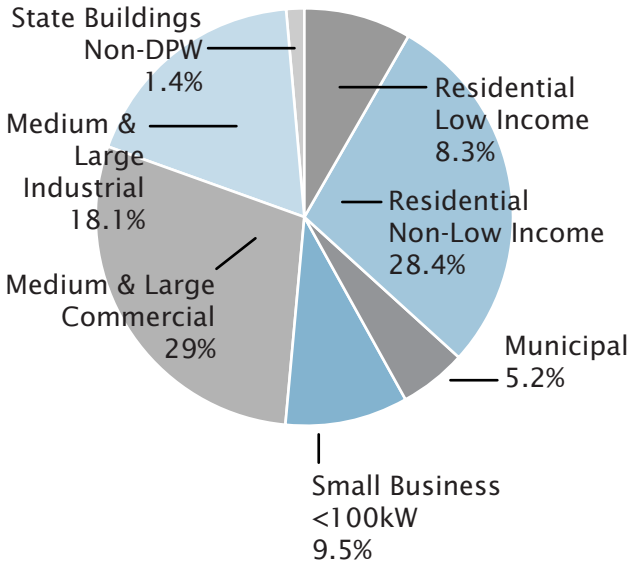


CHART H2

UI 2003 Proposed Budget



Totals may vary due to rounding

2003 Program Benefit/Cost Ratios*

RESIDENTIAL				
	CL&P Benefit/Cost Electric System Test	**UI** Benefit/Cost Electric System Test	**CL&P** Benefit/Cost Total Resource Test	**UI** Benefit/Cost Total Resource Test
Residential Retail Lighting	3.6	3.0	3.4	3.0
SmartLiving Catalog	1.3	1.4	1.3	1.3
Energy Star Appliances	3.0	3.1	1.9	1.7
Refrigerator Early Retirement Program	1.5	1.2	1.7	1.5
Energy Star Homes	0.7	1.1	1.5	0.7
Residential Heating & Cooling	1.7	1.6	1.2	1.3
Energy Conservation Loan Program	0.1	—	0.1	—
Low Income	1.0	0.9	1.7	1.0
Time of Use	—	3.9	—	3.9
All Residential Programs	1.6	1.7	1.7	1.5
COMMERCIAL & INDUSTRIAL				
	CL&P Benefit/Cost Electric System Test	**UI** Benefit/Cost Electric System Test	**CL&P** Benefit/Cost Total Resource Test	**UI** Benefit/Cost Total Resource Test
New Construction / Energy Blueprint	4.2	5.3	4.6	6.1
Energy Opportunities (UI Program)	—	5.6	—	2.0
Custom Services (CL&P Program)	2.4	—	1.9	—
Express Services (CL&P Program)	5.4	—	2.4	—
Small Business Energy Advantage	2.9	3.2	1.5	1.6
RFP Program	4.8	5.2	2.7	1.6
State Buildings	2.3	—	2.5	—
Municipal	1.2	4.5	1.3	3.1
O&M Services, O&M RFP	1.1	0.9	1.0	1.3
All Commercial & Industrial Programs	3.3	4.9	2.4	2.6
Load Management	7.7	—	7.7	—
ISO Load Response	—	4.9	—	—

**All 2003 numbers are preliminary*

CL&P C&LM Program Summary for 2002

Residential Programs

Programs	Target Market	Incentive	Program Features
Combined SPECTRUM Electric Heat/ Audits/ Pilot *Rossella Clark 860-832-4987*	All residential customers in 1-4 family dwellings regardless of heating fuel type. Pilot in Vernon	For electrically heated homes: full cost of all lighting products, instrumented blowerdoor tests and all measures that are cost effective for thermal and domestic hot water. Pilot for fossil homes receive energy-efficient lighting and blower door testing	Blower door assisted weatherization, insulation, domestic hot water conservation services in single family electrically heated homes. Pilot homes receive efficient lighting, blower door test and can arrange for needed insulation work.
Energy Star Appliances* *Rossella Clark 860-832-4987*	All residential customers	Incentive for Energy Star Room A/C, Clothes Washers, Dishwashers & Refrigerators. Dealer Marketing Support	Promotion and education of Energy Star appliances to residential customers and retailers
Energy Star Homes* *Norman Barry 860-832-4753*	Newly constructed homes, including fossil fuel heated homes	Free Energy Star lighting fixtures. Incentives for Energy Star Appliances. Free review of house plan, Blower Door Test and Energy Star Certification	Builder training and home inspections to certify proper installation of Energy Star standards
Hot Shot Heat Pump Water Heater* *Richard Sattler 860-832-4982*	Homes with electric water heating	Customer received Hot Shot and discounted installation costs during the first two quarters. Marketing and installation were put on hold for the third and fourth quarters.	Heat pump water heater designed to be attached to the existing electric hot water tanks to reduce electric consumption for hot water production. The Company plans to explore the use of new integrated units
Residential HVAC* *Buck Taylor 860-832-4829*	All residential customers	Prescriptive incentives for installing SEER12 & SEER13 energy-efficient central air conditioners and heat pumps	Equipment incentives for installation of energy-efficient central air conditioning or air source heat pumps
GeoExchange Program *Buck Taylor 860-832-4829*	Newly constructed homes installing GeoExchange systems	Customer receives per ton incentives toward installation of the loop and must build the rest of the house to Energy Star Standards in order to access same incentives as Energy Star Homes Program	Detailed review of heating and cooling systems, as well as benefits of Energy Star homes Program
Residential Retail Lighting* *Rossella Clark 860-832-4987*	All residential customers	Point of sale coupons to influence customer buying decisions combined with special promotions with manufacturers and local retailers	Promotion and education of Energy Star lighting fixtures to residential customers and retailers
SmartLiving™ Catalog* *Jonna Chokas 860-832-4758*	All residential customers	Subsidized lighting products with a focus on energy-efficient Energy Star labeled products	Mail order catalog service featuring Energy Star products, unsubsidized earth-friendly and healthy home products and energy conservation education
Low Income (WRAP)* *Norman Barry 860-832-4753*	Existing low-income residents	Full incremental cost of conservation measures	Provides thermal weatherization, efficient lighting & replacement of high use refrigerators to low-income single and multi-family residential customers and also coordinates community agencies funding and services
Energy Conservation Loan Program *Bette Giordano 860-832-4803*	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 measure installations

** Joint Program*

CL&P C&LM Program Summary for 2002

Commercial / Industrial Programs

Programs	Target Market	Incentive	Program Features
New Construction* *David Bebrin* *860-832-4712*	New commercial & industrial buildings, planned remodeling, large renovation projects	Between 50% - 100% of incremental cost	Equipment and design incentives for installation of energy-efficient electric measures.
Custom Services *Richard Schondelmeier* *860-832-4945*	All C / I customers	Typically 100% of incremental cost (prescriptive or Upgrade incentives) or 50% of installed cost (Add-On incentives)	On-site energy audit or more detailed analyses with implementation assistance.
Express Services *Tino Dangelo* *860-832-4744*	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 incremental cost	Simple expeditious application process.
Small Business Energy Advantage* *Mathew James* *860-832-4806*	All C / I customers – up to 100 KW of average peak demand	Lighting: Capped at 50% of installed cost Non-lighting: 50% - 100% of installed cost	On-site assessment and installation of cost-effective electric energy measures. 0% loan available to qualified customers for customer costs.
O&M Services *Tino Dangelo* *860-832-4744*	All C / I customers	Up to 50% of installed cost	On-site analysis of operations and maintenance approaches for improved energy efficiency with implementation assistance. Seminar series on O&M practices.
State Buildings *Mathew James* *860-832-4806*	All Connecticut State owned or leased facilities	Between 50% - 100% of installed cost.	Installation of all cost-effective electric energy conservation measures
Municipal Buildings *Li Zhao* *860-832-4980*	All Connecticut municipal buildings in Urban Act towns	Between 50% - 100% of installed cost.	Installation of all cost-effective electric energy conservation measures
RFP Program* *Joseph Flynn* *860-832-4728*	All C / I customers greater than 350 kW	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.
Research, Development and Demonstration* *Sharon Flannery* *860-832-4976*	All customers	Up to 100% funding of winning proposals	Solicitation of proposals for new energy-efficient and distributed resource technologies and products.
Load Management *John Mutchler* *860-832-4972*	All customers	Up to 100% of installed cost	Facilitate customer's ability to reduce load during periods of system capacity deficiency
O&M RFP* *Tino Dangelo* *860-832-4744*	All C / I customers	New Program - to be determined	New Program - to be determined

** Joint Program*

UI C&LM Program Summary for 2002

Residential Programs

Programs	Target Market	Incentive	Program Features
Energy Star Appliances* *Chris Ehlert* *203-499-2965*	All residential customers	Mail-in rebates for the purchase of qualifying Energy Star clothes washers, dishwashers, refrigerators, and room AC	Promotion, training and education on energy-efficient appliances to retailers and consumers
Energy Star Homes* *Bob Bartone* *203-499-3676*	New Homes	Free Energy Star lighting fixtures, incentives for Energy Star appliances, and HVAC Custom builder incentives	National energy efficiency campaign to help home builders and buyers design and construct homes that use less energy
"Hot Shot" Heat Pump Water Heater* *(Program not available in 2003)*	New and existing homes with electric water heaters	UI offers substantial incentives to reduce customer contribution to $150	HPWH's extract heat from ambient air in unconditioned space and use it to heat water for domestic purposes, thereby lowering electric usage substantially.
Residential HVAC Program* *Tom Turco* *203-499-2111*	All residential customers	Prescriptive incentives for installing SEER 12 & SEER 13 energy-efficient central air conditioners and heat pumps	Equipment incentives for installation of energy-efficient central air conditioning and heat pumps
Residential Retail Lighting* *Chris Ehlert* *203-499-2965*	All residential customers	Instant rebate coupons to influence customer buying decisions at point of purchase	Promotion and education of Energy Star lighting products to residential customers and retailers
SmartLiving™ Center* *Patty Kaiser* *203-499-2347*	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-efficient products and practices	SmartLiving™ Centers serve as high profile, centrally located facilities for educational tours, training sessions and other special events.
SmartLiving™ Catalog* *Patty Kaiser* *203-499-2347*	All residential customers	A point of sale subsidy provided by mail	Appeals to large segments of the residential market that shop through catalog or internet
Low Income (UI HELPS)* *Rita Fortino* *203-499-3802*	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)* *Tyfannie Mack* *203-499-2035*	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.
Energy Conservation Loan Program *CT Housing Investment Fund* *(800) 992-3665*	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 measure installations

** Joint Program*

UI C&LM Program Summary for 2002

Commercial / Industrial Programs

Programs	Target Market	Incentive	Program Features
Energy Blueprint* *Roy Haller* *203-499-2025*	Commercial, industrial and government 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 *Roy Haller* *203-499-2025*	Commercial, industrial, government and institutional 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.
RFP* *Paul Desiderio* *203-499-2039*	All C / I Customers greater than 350 kW	Bidders request incentive as part of competitive process.	Competitive procurement of bids from customers, ESCO's and trade allies for studies and implementation
Small Business Energy Advantage* *Dennis O'Connor* *203-499-3715*	All C / I customers up to 100 kW of average peak demand	Prescriptive incentives up to 50% for lighting, refrigeration controls and other measures.	Direct services that include energy assessment and installations measures by third party program participants.
O&M RFP* *Paul Desiderio* *203-499-2039*	All C / I customers	New Program - to be determined	New Program - to be determined
Municipal Energy *Roy Haller* *203-499-2025*	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.
Community Based Program* *Tom Turco* *203-499-2111*	Town of Hamden. Other towns to be addressed in future.	Incentives are equivalent to 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.
Research, Development and Demonstration* *Tom Buffa* *203-499-2771*	All customers	Up to 100% funding of winning proposals	Solicitation of proposals for new energy-efficient and distributed resource technologies and products.

** Joint Program*

Energy Conservation Management Board Goals and Objectives

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 pursuant to Section 33 of PA 98-28 (CGS § 16-245m), An Act Concerning Electric Restructuring.
- The Board 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 Board is to advise and assist CL&P and UI in development and implementation of comprehensive and cost-effective energy conservation and market transformation programs.

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.

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