



**Connecticut  
Light & Power**

**The Northeast Utilities System**

**Energy Efficiency  
Plan for a  
Restructured  
Industry**

**Year 2001**

**Prepared by:**

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JOINT PROGRAMS WITH UI

Bound Separately

## **CHAPTER ONE: OVERVIEW**

Connecticut Public Act 98-28, signed into law by Governor John G. Rowland on April 29, 1998, significantly altered the shape and nature of regulation of the electric utility industry in Connecticut. The Act provided for retail choice of electricity supply and opened the generation segment of the industry to the forces of competition beginning in the year 2000. Recognizing the important role energy conservation can play in this restructured industry, the Connecticut General Assembly provided increased funding for utility-sponsored conservation and load management (“C&LM”) efforts. This plan sets forth a strategic proposal for The Connecticut Light and Power Company (“CL&P or Company”) to continue moving into the restructured electric industry in a way that encourages the efficient use of energy and promotes a cleaner environment for Connecticut.

This is the second plan since the restructuring legislation. The first plan was developed for the year 2000 in conjunction with the Energy Conservation Management Board (“ECMB”), which was established by Public Act 98-28. The Plan for 2000 was submitted to and reviewed by the Department of Public Utility Control (the Department) in Docket No. 99-09-30, and a Final Decision was issued on May 10, 2000 (Decision). This Plan for 2001 builds on the strengths of the Plan for 2000, but modifies the earlier plan with the newest strategic information developed by the Company and the ECMB and with the Department’s directives for 2001. This plan for 2001 reflects significant work undertaken to address the Department’s directives from its Docket No. 99-09-30 review of the 2000 plan:

- Pursuant to the directive on page 1 of the Decision, CL&P developed identical residential and small commercial and industrial (C/I) programs with the United Illuminating Company (UI), collectively referred to as the “Companies”. A process was utilized over five months to develop joint programs, and these were then provided to the ECMB and outside parties for their review. The Companies were successful in developing identical residential and small C/I programs for 2001, and they were also able to develop two additional identical C/I programs for 2001: continuation of the Request for Proposal (RFP) program initiated as a pilot in 2000; and a new RFP program for C/I Operations and Maintenance. Further, the Companies committed to take a “half-step” in 2001 to implement their C/I new construction programs such that they will be more similar for the year 2001 than they were in 2000. Plans are to have the C/I new construction programs identical in 2002. The joint programs with UI are described in a separately bound document sponsored both by UI and CL&P.
- Pursuant to the directive on page 53 of the Decision, The Company explored third party C&LM program planning and delivery with the ECMB and with UI. The

consultants to the ECMB recommended several new programs/program enhancements which the Company has adopted. For example, the Company has proposed two new programs in direct response to working with the ECMB consultants: a Community Based Program and an RFP Operations and Maintenance Program. In addition, for 2001 the Company expanded the RFP pilot initiated in 2000. The Company will also explore the issue of a residential financing mechanism in 2001 for implementation in 2001. These programs and initiatives are described in the separately bound document with joint programs.. The Company also engaged a national expert to research the issue of third party programs, and this research is attached as Appendix One to the Testimony of Michael Townsley.

- Pursuant to the directive on page 50 of the Decision – in conjunction with UI, the ECMB and the ECMB consultants -- the Company also addressed alternative performance incentive indicators and incentives schemes. This plan summarizes the results of those efforts in Chapter VI.
- In addition, to address the Department’s directives, this plan describes initiatives to: (1) enhance CL&P efforts for Connecticut school children (pages 21-22 of Decision); (2) initiate a residential Heating, Ventilation and Air Conditioning (HVAC) program (page 21 of Decision and DPUC Investigation into Electric Capacity and Distribution, Docket No. 99-08-01, Decision July 26, 2000 at page 13); (3) implement rebates on additional residential appliances (page 21 of Decision); and (4) modify the geothermal exchange program (pages 17-18 of Decision) These initiatives are described in the separate volume on joint programs..

### **Overall Goal, Objectives and Benefits**

The overall goal of this plan is to advance the efficient use of energy, reduce air pollution and negative environmental impacts, and promote economic development in Connecticut.

Specific objectives to achieve goal include the following:

- Lower energy costs and increase aggregate productivity through cost-effective C&LM initiatives;
- Create an energy efficiency “ethic” through communication of the economic and environmental value of efficient energy use;
- Increase measurable energy efficiency to strongly position Connecticut businesses and organizations for success in the global economy;
- Provide a high quality program that meets customers’ needs and that addresses market barriers to energy efficiency, especially for special needs groups;

- Allocate C&LM resources in an equitable manner across all customer sectors;
- Pursue uniform statewide programs between CL&P and UI;
- Pursue increased use of third party planning and delivery of programs;
- Demonstrate measurable success in achieving energy efficiency goals, in terms of environmental and economic betterment; and
- Seek linkages to other funds and environmental initiatives.

### Benefits

The primary benefit to Connecticut of the Company's C&LM program is the electric energy savings, although a more energy efficient Connecticut produces many benefits. For example, the installation of energy efficiency measures results in energy savings for customers which, in turn, translates into savings on electric bills. These energy savings also reduce air pollution, enhancing public health and protecting the environment.

The Company's primary focus is on providing benefits of energy efficiency to Connecticut's economy. In particular, energy efficiency contributes to more productive methods and processes for thousands of businesses each year. This is made possible by program activities aimed at improving the efficiency of those methods and processes. Thus, the Company's proposed C&LM programs increase the economic viability of the state's businesses and organizations, which makes the Connecticut economy more competitive in local, regional, national and international markets.

Energy efficiency is one of the benefits that CL&P uses when addressing organizations with special requirements such as companies relocating into the area, expanding, or reducing costs to avoid relocating. The Company will also offer new load management and distributed resources pilot program initiatives that will take advantage of the emerging competitive electricity market through increasing load factors, aggregating customers' load to be bid into the ISO market for interruptible power; or locating more reliable and cost-effective resource options. These efforts will increase system reliability, mitigate price volatility for participating customers, and reduce pollution.

There are also direct benefits to third party C&LM providers and traditional energy service companies (ESCOs), trade allies, equipment vendors, and others, who implement energy efficiency programs.

Further, C&LM programs specifically designed for special needs groups such as low-income customers, small towns, distressed cities, state buildings, and small businesses, allow for substantial energy and financial savings. By focusing on special needs markets, such as municipal governments and state buildings, the programs improve specialized infrastructures that are utilized to support the state's economy. Reducing costs for these types of customers allows them to better provide services in other areas. Providing

C&LM and education services to low-income customers, in particular, results in more money being available for other basic needs, as well as energy conservation.

Finally, this plan anticipates research and development projects that will benefit the State of Connecticut. The research alone is likely to aid existing companies in the state and spawn additional research firms. But the results of the research are to be primarily aimed at improving the energy efficiency and the environment of the state.

### **Strategic Allocation Recommendations and Objectives**

Public Act 98-28 takes a broad view on what activities and initiatives could be addressed with the conservation surcharge funds. The Company believes that these resources should continue to be strategically allocated to provide long term benefits to Connecticut and its citizens.

The Company proposes that C&LM funds continue to be allocated among the following six broad strategic initiatives:

- Market Transformation and Lost Opportunities
- Technical Assistance, Information and Outreach
- Special Needs Markets; *i.e.*, low income, state and municipal buildings
- Economic and Competitive Market Development
- System Reliability; *i.e.* load management, distributed resources
- Research, Development and Demonstrations

### **Market Transformation and Lost Opportunities**

Market transformation efforts are strategic initiatives to induce lasting structural and behavioral changes in the marketplace that result in increased adoption and penetration of energy-efficient technologies and practices. Long-lasting, sustainable changes can be achieved by reducing barriers to the adoption of energy efficiency measures to the point where further publicly-funded intervention is no longer necessary in that specific market. CL&P's C&LM programs will cause enduring, positive changes in markets for energy-efficient products and services.

Market transformation efforts are also designed to minimize "lost opportunities" by fostering more efficient use of energy when it is most practical and least expensive to do so such as during new construction, renovation, or equipment replacement or purchase. Such opportunities would often be "lost" forever or until the next major building project or equipment purchase. Programs aimed at reducing lost opportunities are typically more cost-effective than traditional retrofit programs because the investment in efficiency is only the increment above the investment in equipment of standard efficiency, instead of the total cost of the project or system.

Strategies to promote market transformation and minimize lost opportunities include the following:

- Providing technical and financial assistance to customers who would not otherwise easily obtain such assistance through existing market channels;
- Promoting permanent changes in customers' purchasing behavior through customer education, training, demonstration of new technologies, and assistance in overcoming transactional barriers;
- Developing relationships with manufacturers; trade allies; business associations; state, regional and national advocacy groups; and government agencies;
- Reducing market barriers to the point where ratepayer funding is no longer needed for many technologies and practices;
- Working to upgrade building code and appliance efficiency standards so that energy efficiency becomes standard practice; and
- Modifying the type and extent of intervention by the Company as market conditions change.

### **Technical Assistance, Information and Outreach**

In an effort to create an “energy efficiency ethic” in Connecticut, the Company plans to continue a broad-based, coordinated advertising and marketing campaign that will raise customer awareness of the value of energy efficiency. Pursuant to directives from the Department, CL&P will coordinate its efforts for general advertising with UI. Within specific C&LM programs, the Company will provide customers with the technical and financial information necessary to make informed decisions on selecting energy efficiency measures, acquiring energy efficient equipment and services, and incorporating energy efficiency as a value-added component of equipment selection, new construction practices, and substantial retrofit activities. CL&P's current programs incorporate technical assistance, information and outreach; these efforts will be continued and in some instances expanded to be consistent with the increased programmatic expenditures and the market transformation objective.

Strategies to provide technical assistance, information and outreach include the following:

- Providing up-to-date technical and financial information to customers on an ongoing basis so that when they are ready to build, remodel, renovate, or purchase new equipment they factor energy efficiency as a primary criterion into their decision-making process;
- Providing a clear source of communication, including such items as phone line and website;
- Conducting outreach efforts and providing energy-efficiency information to trade allies, retailers, designers, architects, builders, and others to promote the sale and use of energy efficient goods and materials;

- “Cross marketing” all programs, including economic development packages, in order to increase cost-effectiveness and derive the maximum effect from each program; and
- Creating greater Energy Star awareness.

### **Special Needs Markets**

While all customer classes, sectors, and geographic areas will receive substantial benefits as a result of CL&P’s various C&LM programs, some resources will be targeted toward energy-using sectors least likely to be served as a result of the industry’s transition to a retail competitive market. These sectors include state government, municipal governments – including distressed cities – and low-income customers. Targeting resources to these sectors not only benefits them directly, it also provides real value to all customers and to all citizens of Connecticut.

By lowering energy costs for the state, cities, and towns, for instance, energy efficiency efforts free up money that can be used to provide other services – such as road repairs, school improvements, and police and fire protection. Low-income consumers benefit directly by having more money available for food and other necessities; a safer, healthier, more comfortable home; fewer lost days from work; and greater ability to pay their energy bills. By lowering energy bills for low-income customers, the Company – and, therefore, all its ratepayers – saves on the costs of arrearages, bill collection, disconnects, reconnects, lost contribution to utility-company costs, and administrative costs.

Strategies to serve special needs markets include the following:

- Leveraging public funding, if any, for state and municipal buildings, and Low Income Home Energy Assistance Program and weatherization funding for low-income consumers;
- Expanding the Energy Care Program to provide outreach, education, coordination, budget planning and energy efficiency services to low-income customers through human services agencies;
- Providing weatherization and energy conservation measures for existing housing stock, and energy education to low-income consumers;
- Evaluating possibilities of efficiency improvements to emergency housing shelters; and
- Enhancing the State Buildings and Distressed Cities programs to provide comprehensive energy efficiency services to the state and to municipalities.

### **Economic and Competitive Market Development**

A major focus of past CL&P C&LM activities has been to provide economic development benefits to the state economy. A significant portion of historic expenditures

was invested in commercial and industrial markets, and most of the Company's economic development packages for customers have included C&LM initiatives. The deregulation of the electricity market places greater emphasis on the use of C&LM activities for economic and competitive market development for the business community in Connecticut.

Pursuant to Department directives, the Company has been working with the ECMB and its consultants to develop third party C&LM provider industry initiatives and programs. While CL&P's programs already stimulate the energy services industry by utilizing vendors to deliver C&LM programs, additional activities will supplement the successful RFP program developed by the Company in 2000. The Company has sponsored research by a national expert on third parties and plans to explore this research in more detail with the ECMB in 2001.

The Company will also increase its emphasis on incorporating energy efficiency in new construction and major renovation occurring in the state, when the opportunity to do so is economically feasible. By helping new organizations and existing customers use electricity as productively as possible, the Company will enhance the competitive position of Connecticut's business community. Simply put, the failure to take advantage of the economics of energy efficiency during construction projects would represent a true "lost opportunity" for the entire state.

Strategies to promote economic and competitive market development include the following:

- Fostering programs that will utilize the expertise of existing and new third party C&LM providers in the state;
- Fostering the development of third party C&LM provider industry through new and innovative initiatives in niche markets, custom projects, ongoing programs, Research, Development and Demonstration programs, and market transformation efforts;
- Increasing opportunities to promote new market entrants as third party C&LM providers to serve as integral participants in market transformation efforts and assisting them with opportunities to serve many of the C&LM needs of customers currently being met by distribution companies;
- Promoting energy efficiency in all new design and construction projects through marketing, training, seminars, demonstrations, and incentives;
- Establishing technical specifications and standards for eligible efficiency measures so that businesses have clear expectations; and
- Promoting the concept of integrating efficient energy use into customers' decisions to purchase energy commodities.

## **System Reliability**

The deregulation of wholesale power markets throughout the northeast region has caused price signals for power purchased from neighboring utilities and other power suppliers to be much more unpredictable than in the past. Prices for power purchased during constrained periods has proven to be much higher than those prices set through regulation in New England. As a result, in the future the Distribution Company and its customers could face significant price increases for the power purchased to meet temporary shortages. In this context, Load Management programs have many benefits in many areas: customers; the T&D system; the community at large and the environment. The Company began three multi-year pilots for Load Management in 2000 and plans to continue these for 2001. The Company's focus is to be a "enabler" to the evolution of price sensitive load. The Company's activities in Load Management in 2000 and plans for 2001 are presented in Chapter III.

Due to an increase in emphasis among policy makers on system reliability from C&LM in the restructured industry, CL&P is also evaluating and supporting distributed resources projects in the RD&D program.

Strategies for system reliability include the following:

- Assisting customers to increase load factor in order to take advantage of lower unit costs in new energy markets;
- Lowering capacity costs for customers by promoting load management systems;
- Mitigating constraints and increasing reliability of the transmission and distribution system by targeting load management efforts;
- Promoting demand side bidding and working with the ISO and with customers to take full advantage of the new market for interruptible capacity as it develops;
- Integrating regional conservation efforts and ozone management; and

Examining opportunities to promote distributed resources pilot programs to decrease electric system operating costs and increase system reliability.

## **Research, Development and Demonstrations**

P.A. 98-28 recognizes the public benefit of providing funding for innovative research, development and demonstration ("RD&D") projects related to energy efficiency and the environment. The Company's RD&D efforts are fostering the development of new technologies and facilitating the movement of these technologies into Connecticut markets through field testing, evaluation, information dissemination, and innovative strategies to promote private sector involvement. As new technologies are developed and tested, they will be incorporated into the Company's various C&LM programs.

The Company has been very successful in initiating the RD&D program. In 2000, the Company assembled its staff and external advisory policy working group; issued its first

RFP for RD&D projects; evaluated the projects; and made funding commitments. These activities and the plans for 2001 are presented in Chapter IV.

Strategies for RD&D include the following:

- Conducting basic research, field testing, and demonstrations of energy efficient technologies and practices;
- Targeting business development opportunities for Connecticut;
- Identifying research initiatives that have the potential to protect or enhance the environment; and
- Leveraging research and development funds through collaborative efforts and sharing intellectual property rights.

### **Proposed CL&P Year 2001 Conservation and Load Management Budget**

The following table (Table A) provides a summary of the 2000 C&LM budget approved by the ECMB for the year 2000 and a proposed budget for C&LM programs for the year 2001. The year 2001 budget allocates expenses to programs within the six broad categories discussed above. Included in the administrative portion of the budget are the fully loaded costs of NUSCO employees working directly on C&LM programs. These costs include, but are not limited to, pension, benefits and medical costs. Table B provides the same total CL&P 2001 budget, but in a different format. The format in Table B is common with what UI has used in that Company's plan for 2001 and is provided for ease of comparison between the two Companies. Table C provides the 2001 CL&P program budget broken down by category of expenditures.

**Proposed CL&P Year 2001 C&LM Budget  
Table A**

<b>CL&amp;P C&amp;LM BUDGET (\$000)</b>	<b>2000 Budget</b>	<b>2001 Budget</b>	<b>Notes</b>
<b>Program Name</b>			
<b>MARKET TRANSFORMATION</b>			
<b>Residential</b>			
SmartLiving Catalog*	2,371	2,676	
Retail Lighting*	1,052	2,463	
Tumble Wash*	1,188	823	
Energy Star Appliances*	276	276	
Energy Star New Construction*	1,049	1,315	
Hot Shot HPWHs*	2,324	1,923	
Residential HVAC*	0	500	
New Construction GeoX	436	530	
<b>Commercial/Industrial</b>			
New Construction	7,770	7,770	
Custom Services	7,413	7,413	
Express Service	1,999	1,500	
Express Service—Medium and Small Customers*	1,525	2450	
<b>Sub Total Market Transformation</b>	<b>27,402</b>	<b>28,839</b>	
<b>RFP Program *</b>	<b>4,500</b>	<b>5700</b>	
<b>O&amp;M RFP*</b>	<b>0</b>	<b>200</b>	
<b>LOAD MANAGEMENT</b>	<b>3,000</b>	<b>2,750</b>	
<b>RESEARCH, DEVELOPMENT &amp; DEMONSTRATION*</b>	<b>5,000</b>	<b>5533</b>	
<b>SPECIAL NEEDS</b>			
Schools*	0	200	
Energy Conservation Loan Program	300	300	
Low Income (Energy Care & WRAP)*	5,000	5,000	
Community Based Program*	0	250	
State Buildings Program	2,500	1,000	
Municipal Buildings Program	3,204	3,200	
<b>Sub Total Special Needs</b>	<b>11,004</b>	<b>9,950</b>	
<b>TECHNICAL ASSISTANCE, INFO AND OUTREACH</b>			
<b>Residential</b>			
SPECTRUM Program	1,625	1,225	
Energy Value Water Heating	1	0	
Tech Centers (SmartLiving Center)*	1,048	1,048	
General Non-Program Communication	650	700	
Residential Audits-Non WRAP	32	32	
<b>Commercial/Industrial</b>			
Committed EAP	0	0	
General Non-Program Communication	400	300	
O&M Services	3,600	2421	
<b>Sub Total Technical Assistance</b>	<b>7,356</b>	<b>6,226</b>	
<b>Sub Total Residential Program</b>	<b>17,351</b>	<b>18,961</b>	
<b>Sub Total Commercial/Industrial Program</b>	<b>32,911</b>	<b>32,254</b>	
<b>Sub Total Joint Programs for 2001*</b>	<b>---</b>	<b>28,024</b>	
<b>Sub Total Other (Load Management, RD&amp;D)</b>	<b>8,000</b>	<b>8,400</b>	
<b>PROGRAM TOTAL</b>	<b>58,262</b>	<b>59,615</b>	
<b>Other Expenditures</b>			
Administration	1,081	1,018	
Planning and Evaluation	1,934	1,700	
ECMB	250	250	
Information Technology	800	1,200	
<b>Sub Total Other Expenditures</b>	<b>4,065</b>	<b>4,168</b>	
<b>TOTAL EXPENDITURES</b>	<b>62,328</b>	<b>63,783</b>	
<b>Performance Management Fee (8 percent of Total)</b>	<b>4,986</b>	<b>5,103</b>	
<b>GRAND TOTAL</b>	<b>67,314</b>	<b>68,886</b>	





## **CHAPTER TWO: CL&P C&LM PROGRAMS (NOT JOINT WITH UI)**

### **COMMERCIAL AND INDUSTRIAL PROGRAMS**

#### **C&I Custom Services**

**Objective:** The major goal is to effect energy efficiency by being involved in the initial energy using equipment purchase decisions. To this end, the Company will endeavor to identify and support the implementation of all available cost-effective measures for every conceivable end-use by offering services tailored to customers' individualized, specific needs.

**Target Market:** Existing C&I customers of all sizes the means of identifying specific electric energy-efficiency opportunities, as well as financial assistance for the installation of cost-effective measures.

PRIME audits are available to industrial customers in the SIC classification range of 3100 to 3300. PRIME provides a productivity audit to achieve greater manufacturing efficiencies through more efficient, streamlined processes and waste minimization.

**Services Offered:** The Company provides technical energy audits for customers who are not certain which measures they want to install as well as 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.

CL&P offers the Tailored HVAC component of Custom Services to customers that are considering either replacement or installation of new large-scale heating, ventilation, and/or air conditioning equipment. Technical expertise and incremental cost-based incentives are available for Tailored HVAC. The primary target of the service are projects with packaged HVAC equipment totaling generally over 30 tons, or any size chilled-water system. Smaller packaged equipment projects are typically addressed using either Express HVAC Services or the Prescriptive Area of Custom or New Construction and Major Renovation Services (NC&MR). HVAC systems in large new construction and major renovation projects are addressed in the Comprehensive Area of NC&MR with approaches similar to Tailored HVAC.

The Company continues to expand the scope and role of the traditional energy audit within the manufacturing sector to include environmental, production, and process issues through PRIME. Through this program CL&P continues to work directly with industrial customers to improve the energy efficiency of various processes, both existing and planned. Financial assistance is available.

Marketing Strategy:

This program will be marketed to customers, trade allies, industry professionals, and ESCOs.

For trade allies the Company will increase personal contacts and presentations at meetings. The Company will also utilize additional print ads in trade ally publications. The Company will obtain mailing lists of professionals and send direct mail pieces to them.

For customers, the Company will tie this marketing effort to cooperative advertising with trade allies and link it to general advertising.

Incentive Strategy:

Prescriptive and non-prescriptive incentives are offered. Prescriptive incentives are intended to pay for 100% of the incremental cost. Non-prescriptive incentives for into one of two categories; "Add-On" or "Up-Grade".

An "Add-On" measure is defined as adding an optional piece of equipment to a system which improves electrical efficiency. Such equipment is not essential to the current operation of that system. Examples are energy management systems or variable frequency drives on existing injection molding machines. The incentive for an "Add-On" measure is intended to pay 50% of the installed cost subject to cost-effectiveness constraints. An "Upgrade" measure is defined as replacing a piece of equipment that is essential to the current operation with an energy efficient piece of equipment instead of that of standard efficiency. The incentive for an "Upgrade" is intended to pay up to 100%, but not less than 50%, of the incremental cost subject to cost-effectiveness constraints.

Reimbursement for Energy Audit: A payment of 50% of the study cost will be paid when the customer installs EEMs which were listed in the final report and which provide at least 50% of the total estimated lifetime kWh savings. The value of the EEMs must exceed the customer's cost of the study. If the value is less than the cost of the study, the customer will be reimbursed up to the value of the installed measures.

Reimbursement for Focused Study: a payment equal to 50% - 80% of total energy audit of the focused study cost is made to the customer when 50% - 80% of the cost-effective EEMs identified in the study are actually installed. If > than 80% is installed, then the incentive is 100%.

Measures of Success: Energy Savings.

## **C&I New Construction and Major Renovation Program**

**Objective:** Minimize lost opportunities in new construction and renovation and introduce energy efficiency concepts to architect/engineering firms, trade allies, building contractors, commercial Realtors, customers etc. Demonstrate the benefits of selecting efficient options during the design stage and convince the design community that there is more to be gained for customers than “designing to full load.”

**Target Market:** C&I New construction and major renovation projects. This program offers a series of services and incentives based upon the proposed building’s complexity, energy savings potential, scope of work, and the desire of the owner and his design team to participate.

There are two tracks – the Prescriptive Area program and the Comprehensive Area program. The Prescriptive program is generally for smaller, nonresidential buildings-usually less than 50,000 sq. feet in size or smaller projects with limited conservation opportunities. The Comprehensive Area is generally available for larger, nonresidential buildings in early design stages with numerous conservation opportunities. The Comprehensive Area focuses on larger facilities with more complex energy-efficiency options.

**Services Offered:** Technical and financial assistance from design through construction. Technical specialists provide options and recommendations. Implementation is by the customer. In 2001, the Company plans to undertake demonstration projects with case studies consistent with the Design Light Consortium’s *knowhow Series*.

**Marketing Strategy:** This program will be marketed both to professionals in the construction business and to customers. It is expected that efforts to customers will focus on the prescriptive component of the program, while the efforts to reach professionals will focus on the comprehensive portions of the program.

For architects, engineers, and construction managers the Company will step up personal contacts and presentations at professional meetings. The Company will also utilize additional print ads in professional publications. The Company will obtain mailing lists of professionals and send direct mail pieces to them. Using reports of construction

activity, the Company will also contact designers or other construction business professionals at the early stage of a project when it is timely to incorporate energy efficiency at the design stage.

Lost opportunities will also be the subject of more general radio and television advertising the company undertakes.

Identical Program  
Issues

The Companies intend to make their two programs more similar in 2001 and identical in 2002.

Incentive Strategy:

Incentives are based on the difference between a less efficient measure that could have been installed (with no utility involvement) and the more efficient measure which will be installed (with utility involvement). In these situations, CL&P will pay between 50% and 100% of the incremental cost subject to cost-effectiveness constraints. Further, such incentives can be prescriptive or non-prescriptive.

Brainstorming Honorarium: The participating design team is eligible for an incentive for completing a brainstorming process as outlined in the Agreement with Design professional.

Design Incentives: The design team is eligible to receive incentives based on a percentage of the approved professional's estimated incremental cost for each (non-prescriptive) improved energy-efficient design measure included in the signed Letter of Agreement with the owner. This incentive is offered when plans are submitted to C&LM personnel prior to commencement of the contractor bidding process. Further, the sum of the installation incentive and the design incentive must be cost-effective.

Measures of Success:

Energy Savings.

## **C&I Express Services**

Objective:	The major goal is to effect energy efficiency by being involved in the initial energy using equipment purchase decisions in order to identify and support the implementation of selected cost effective measures.
Target Market:	All C&I customers
Services Offered:	Lighting Rebate: For customers whose demand is up to 350 kW  Motor Rebate: For new or replacement 3-phase motors from 1-200 horsepower  HVAC Program: For new or replacement rooftop, split systems, terminal A/C units and heat pumps with up to 30 tons of cooling capacity  Contractors, distributors, and trade allies, as well as CL&P, will deliver this program. Installation has traditionally been by the customer, but the Company may institute a direct-install component for small customers.
Marketing Strategy:	This program will be marketed both to trade allies and to customers in a mass marketing approach where trade allies are encouraged to “upsell” energy efficient measures to customers.  For trade allies the Company will step up personal contacts, presentations at meetings, and booths at trade shows. The Company will also utilize additional print ads in trade ally publications. The Company will obtain mailing lists of professionals and send direct mail pieces to them. The motors and HVAC components are promoted through NEEP initiatives.  For customers, the Company will tie this marketing effort with cooperative advertising with trade allies and link to general advertising and advertising with NEEP
Incentive Strategy:	Incentives are prescriptive and are intended to pay for up to 100% of the incremental cost of installing an energy efficient piece of equipment versus that of standard efficiency subject to cost-effectiveness constraints.
Measures of Success:	Energy Savings.

## **Commercial & Industrial Operation & Maintenance Program**

Objective:	To improve the operating efficiency of C&I customer equipment to bring about energy savings
Target Market:	All C&I customers
Services Offered:	Audits and incentives for energy saving operation and maintenance (O&M) practices. Examples of some of the technologies covered by O&M services include compressed air system leak repairs, addition or correction of control components for efficient operation, and the cleaning of HVAC condenser/evaporator coils. CL&P provides O&M evaluation and recommendations. Implemented by customer.
Marketing Strategy:	Training seminars, mailings, and direct contact by Account Executives.
Incentive Strategy:	<p>Incentives are intended to pay 50% of the customer's cost in preparing a detailed report specifying all available energy conservation measures. If the customer completes the installation of the identified measures meeting specific program objectives, CL&amp;P will pay up to 100% of the installed cost. Additionally, CL&amp;P will reimburse the customer their portion of the initial cost of the engineering study.</p> <p>If the customer elects not to install EEMs, there will be no 50% study reimbursement. If cost-effective energy savings measures cannot be identified, CL&amp;P will pay up to 100% of the engineering study.</p>
Measures of Success:	Energy Savings.

## **State Buildings Program**

**Objective:** Improve the energy efficiency in state owned facilities

**Target Market:** State owned and leased facilities

**Services Offered:** Technical and financial assistance to identify and implement cost effective energy efficiency measures. CL&P administers the program under the oversight of the Department of Public Works (DPW). Independent contractors provide quality assurance reviews.

The State Buildings Program was initiated as a result of Public Act 90-221 requiring the state's electric utilities to initiate conservation investments in state buildings in order to yield electric savings of \$4 million.

Since its inception in 1990, the State Buildings Program has installed about \$25.5 million in energy efficiency lighting and HVAC measures resulting in \$27.7 million in savings to the State of Connecticut. Given the comprehensiveness of CL&P's efforts, much of the available cost-effective potential for energy efficiency measures has been achieved. Therefore, CL&P is revising its efforts to devote more resources to O&M procedures and other strategies to maximize the benefits achieved from the different measures.

Program bond funding by the state ended December 31, 1999. CL&P will continue the program at 100 percent funding where it is cost-effective to do so. If it is not cost-effective at 100 percent funding, the Company will allow the state to contribute a portion of the total installed cost, up to 50 percent of the installed cost.

**Marketing Strategy:** Target state buildings as identified by the Connecticut Department of Public Works.

**Incentive Strategy:** Incentives are intended to pay up to 100%, but not less than 50%, of the installed cost within cost-effectiveness constraints. If a project is not cost-effective at 100% funding, the Company will allow the project to go forward if the State Agency contributes a share of the costs. The State Agency's share, however, will be no more than 50% of the cost of the project.

**Measures of Success:** Energy Savings.

## **Municipal Program**

**Objective:** To provide benefits of increased energy efficiency to cities and towns in Connecticut which result in benefits to taxpayers.

**Target Market:** Prior to 2000, the Company aimed its municipal energy efficiency programs primarily towards seven “economically distressed” cities as a result of a decision rendered by the Department of Public Utility Control (DPUC) in 1992 (Rate Case No. 92-11-11). In 2000, a renewed commitment was made towards enticing other municipalities in the CL&P service territory to avail themselves of the opportunities associated with the Company’s Energy Efficiency Plan. However, the Company continued to work with the designated “economically distressed” cities within its service area, as per Public Act 98-28.

For 2001, the Company plans to continue to market its municipal program to all Urban Act municipalities, including the Distressed Cities. **Services Offered:** Municipalities use substantial amounts of electricity to light streets and provide power to schools, public safety entities, office buildings, wastewater treatment plants and other public facilities. With these energy needs in mind, turn-key technical and financial assistance are offered to municipalities with thoughtful and well-designed plans for energy efficient retrofit improvements to their existing buildings.

CL&P pays 100 percent of the costs associated with implementing selected, relevant energy-efficiency measures within cost-effectiveness constraints. If a project is not cost-effective at 100 percent funding, the Company allows the project to go forward if the municipality agrees to contribute the remaining balance of the project. The municipality’s share, however, can be no more than 50 percent of the cost of the project.

**Marketing Strategy:** The process of successfully marketing a utility program to municipalities requires a dramatically different approach from that of a marketing effort aimed towards businesses or residential programs. Such an effort needs to utilize relationships and regular communications between program administrators and municipal general government personnel as well as technical professional experts.

Meaningful energy efficiency improvement projects at the municipal level are often put on hold indefinitely, or are abandoned altogether, because of the high market barriers (costs) often associated with those improvements. The Company intends to overcome these concerns and objections through an aggressive, forward-thinking outreach effort utilizing field (customer account) personnel and managerial-level direction to identify municipalities with priority projects.

Selection for participation in the program will hinge upon several criteria, including the following:

1. In order to participate in the program the municipality must sign a memorandum of understanding which broadly summarizes their responsibilities for involvement.
2. The municipality must then work with the Company to specify particular measures to be installed and funding responsibilities.
3. The municipality must have designated a single point-of-contact for the Company on all matters involving the project who is well-acquainted with the project and who is readily accessible to Company staff for communications and liaison activities.
4. The project application must be specified in adequate detail to determine the cost-effectiveness of the program measures.

Participation in this program will not preclude a municipality from applying for incremental financing incentives offered through any of the Company's other energy efficiency DSM programs such as the New Construction and Major Renovation Program, Express Service, etc. Up to 10 percent of the program's funds can be utilized to match incentives in other CL&P Commercial & Industrial programs.

In addition, the Company plans to work with the Rebuild America program to assess possibilities for coordination.

Incentive Strategy: Incentives are intended to pay up to 100%, but not less than 50%, of the installed cost within cost-effectiveness constraints. If a project is not cost-effective at 100% funding, the Company will allow the project to go forward if the municipality contributes a share of the costs. The municipality's share, however, will be no more than 50% of the cost of the project.

Measures of Success: Energy Savings.

## **Small Industrial Conservation Loan Program**

**Objective:** To provide financing for customers who would otherwise find it difficult to fund C&LM measures

**Target Market:** Smaller industrial customers within SIC 3100 - 3399

**Services Offered:** Interest-free loan up to a maximum of \$100,000 per customer for energy efficient equipment replacements only. Financial arrangements are made through Account Executives; implementation is done by the customer. CL&P provides quality assurance.

This program will continue as a revolving loan fund with the possibility of an increase in volume.

**Marketing Strategy:** Encourage a higher market penetration of energy-efficient equipment by providing financing which supplements other program incentives for smaller industrial customers.

## **Connecticut Hospitals Association Loan Program**

**Objective:** To provide financing to hospitals which would otherwise find it difficult to fund C&LM measures.

**Target Market:** The 31 acute care hospitals in Connecticut

**Services Offered:** No-interest loans for energy-efficiency projects. CL&P provides financial assistance through a \$4 million fund. CL&P provides the evaluation of energy efficiency opportunities, options and recommendations; all projects are implemented and controlled by each hospital. Independent contractors provide quality assurance.

Eligible energy efficiency projects will not include any load management projects which specifically limit use of HVAC equipment that might place elderly or vulnerable patients at risk should curtailment of HVAC operation occur.

**Marketing Strategy:** Work with CHA to provide technical and financial assistance to encourage retrofit of existing equipment with more electric energy-efficient equipment.

## RESIDENTIAL PROGRAMS

### Spectrum Program

**Objective:** Historically the SPECTRUM single family program was targeted to high use electrically heated homes. This restricted market is limited and diminishing since the Company has served more than 30,000 homes through this program. In 2001, a pilot will be conducted for a program that reaches out to any household with “high” usage, defined as 10,000 kWh and above.

**Target Market:** All single and multifamily homes with high electricity usage.

**Services Offered:** The SPECTRUM program offers customers a broad range of services, including the following:

- Blower door test to reduce infiltration through air-sealing;
- Insulation upgrades;
- Energy efficient water heating measures, including low-flow shower heads, and low-flow faucet aerators;
- Energy efficient lighting;
- New thermostats;
- Customer education on energy use and a copy of the SmartLiving Catalog;
- Water bed covers;
- Torchiere exchange; and
- Referral to other DSM programs where appropriate, such as heat pump water heaters.

When a residential customer returns a response card from an invitation mailed by the Company, a trained energy efficiency contractor visits the house to assess energy needs and to provide any of the products and services deemed cost-effective, as well as education on energy use and recommendations about further steps the customer can take to enhance energy savings. When appropriate, more extensive services are scheduled.

**Marketing Strategy:** Services under the SPECTRUM program will be marketed through direct mail, referral through other CL&P programs, the SmartLiving Center, the SmartLiving Catalog, and customer call-ins for billing assistance or information on energy conservation.

Incentive Strategy: Incentives are designed to pay for 100% of all measures that are cost effective. Measures included for incentives include insulation, weatherization products, and lighting. Customers are allowed to contribute towards the cost of measures that do not pass the cost effectiveness screening. New technologies that help the customer lower their energy consumption will be considered for inclusion in the program.

Measures of Success: Energy Savings.

## **Residential Audits**

**Objective:** The goal of the program is to provide quality audit services to customers while educating them about energy saving measures and practices.

**Target Market:** Non Low-Income Residential Customers using electric or oil heat. Since the service has been operating for two decades, the Company plans to look at internet/home computer tools in order to better serve those households that have a full schedule and cannot, therefore, arrange to be home for an on-site audit.

**Services Offered:** A direct descendant of the CONN SAVE program, which was disbanded in 1990, this program provides on-site home energy audits, including low cost, unbiased information on ways to lower energy consumption, and installation of electric water heating measures including water heater tank wraps, pipe wraps, and low-flow shower heads. Weatherization, water heating conservation measures, and lighting measures which are determined to be cost-effective are also installed at the time of the audit, depending on the electricity usage at the unit

A contractor goes to homes of customers requesting audits. The audit generates a home energy rating; then the contractor performing the audit offers energy-saving advice and technical assistance to enable the customer to implement conservation measures.

In addition, the joint program section of this document explains that a new on-line or mail-in audit is planned for 2001 to be available at the Companies' websites.

**Marketing Strategy:** The program is marketed to interested customers through customer service centers and at the SmartLiving Center.

## **Residential Energy Conservation Loan Program**

**Objective:** To provide financing to customers who would otherwise find it difficult to fund C&LM measures.

**Target Market:** Owners of residential single and multifamily buildings with an average annual income below 150 percent of the median income in Connecticut.

**Program Description:** This is a state mandated program subsidized by Connecticut utilities that offers favorable interest rates for loans designed for energy conservation. This program is available for all fuel types. Interest rates are based on the annual income of the owner, family size, and the town in which the house exists. Owners of one-to-four unit dwellings can receive loans of up to \$15,000. Owners of multifamily properties of five or more units can receive loans of up to \$2000 per dwelling with a cap of \$60,000 per building through the Multifamily Energy Loan Program (MEL). CL&P subsidizes these loans so that low interest rates (1, 3, 6, and 9.75 percent, depending on income) are available.

CHIF administers the program for the State of Connecticut. Homeowners meet with their CHIF loan officer then customers arrange for the measures to be installed using moneys secured through the loan.

**Marketing Strategy:** The state Department of Economic and Community Development (DECD) and Connecticut Housing Investment Fund (CHIF) are the primary marketers of this program. In addition, CL&P markets this program to all new service hookups and at the SmartLiving Center.

## GENERAL COMMUNICATION

**Objective:** Continue to create, promote and foster an “energy efficiency ethic” for all customers: (1) for residential customers it means promoting a lifestyle that advocates comfort efficiency through living life at home in an efficient, stylish, economical and environmentally-friendly manner; (2) for commercial and industrial customers it means adding value to area business through cost savings, environmental stewardship and improved productivity and competitiveness.

Through this communications strategy, the Company will continue to focus on public issues - - energy efficiency and its benefit to the environment- - and stimulate action through communications programs that will both educate and inform, and make a measurable difference in homes and businesses across Connecticut.

The Company’s general communication activities are only one of a nested set of communication efforts. They are required to increase customer awareness of conservation programs, and they are supplemented by additional more targeted communication efforts which are more specifically geared toward helping customers take specific conservation actions. As examples, there are also brochures for each type of program, there are advertisements for specific programs, and there are personal contacts.

**Target Market:**

- Residential customers in CT
- Business customers in CT
- Employees
- Shareholders
- Opinion leaders

**Services Offered:**

The Company will continue to utilize mass media to reach primary and secondary target audiences: residential customers and commercial and industrial customers. Vehicles will include network and cable television, radio, print, and other collateral (including direct mail brochures, bill inserts and bill messages, special newsletters and Web site promotions). These communications will be in addition to specific program marketing efforts mentioned in program descriptions above and will endeavor to:

- Engage all audiences.
- Keep messages clear and focused.
- Respond to market feedback.
- Build on energy efficiency attributes.

Planned Tactics for 2001 include:

- Television: 1, 30-second ad (1 for residential) on all major network stations, along with cable in Fairfield and Hartford counties.
- Radio: 2, 30-second ads (1 for residential, 1 for business) on all major radio stations. Will run as a 60-second radio spot playing two 30-second spots back to back.
- Newspaper: 2, OpEd, page-dominant ads in major dailies, (1 for residential, 1 for business) various weeklies and the Connecticut section of The New York Times on Sundays.
- Various high profile, high interest programming opportunities, i.e. Ads in publications, etc.

The planned schedule is for the Campaign to run February-May and September-November 2001, with media vehicles alternately spread across the year for continuous coverage and presence.

## **CHAPTER THREE: LOAD MANAGEMENT**

### **Importance and Benefits of Load Management**

The deregulation of wholesale power markets across the Northeast has caused price signals for power purchased from neighboring utilities and other power suppliers to be much more variable than in the past. Prices for power purchased during tight load-resource balance periods have proven to be much higher than those prices set through regional regulation in New England during similar situations. Therefore, some of the Distribution Company's customers could face significant price increases for the power purchased to meet temporary shortages. The 1998 summer experiences in the Midwest are examples of the very high prices that can develop in the short term when reliability is at risk. Similarly, the summer price spikes of 1999 in New England and of 1999 and 2000 in California are indicative of the risks facing ratepayers during periods of short supply.

When customers' demand exceeds supply, the first line of defense is to ask some customers (usually the largest ones and/or ones with on-site emergency generation) to reduce their loads. If customers' response fails to provide adequate load relief, the next line of defense is to employ a series of measures that could strain utility-customer relationships and may ultimately drive delivery prices upward. The last "control" approach is where the utility "sheds" or "drops" load during emergency times on an involuntary basis, which is what happened in California in summer 2000.

In this context, the Company is attempting to play the role of an enabler to develop what might be called "price responsive loads." The Company is attempting to develop programs (markets) to solicit and cultivate price responsive loads for any time period, not just emergency situations. The Company is attempting to gain customer participation in such markets based upon the customers' willingness to reduce load in return for compensation at desired prices.

The role of the Company in facilitating this new and beneficial type of interruptible-load supply (ILS) programs is crucial, since electricity markets and associated infrastructures and technologies are still "developing" rather than mature. The benefits to be expected from successful development of markets for price responsive loads are worth pursuing. Such benefits include: (1) increased system reliability, (2) reduced price volatility, (3) a more elastic demand curve for electricity, (4) market power mitigation, (5) delayed need for new power supply and (6) lesser environmental impacts. These benefits can accrue to all segments of society.

### **Customer Benefits**

As the New England ISO power market matures, customers will begin to learn to purchase energy in response to market prices. When the hour by hour changes in energy costs become significant, it will be in a customer's economic interest to optimize energy

purchases by lowering demand in peak periods when prices are high and possibly increasing demand in periods when prices are low. As market volatility rises, customers' desire for more interactive management of energy use will increase.

For customers where the energy costs are a significant portion of operating expenses, load management is an economically rational way to increase the Company's overall profitability. Further, traditional electricity rates have offered customers lower average prices for improved load factors. The restructured environment will also provide benefits to customers with high load factor, and it will extend this concept to reward *flexible* load shapes. Suppliers recognize that customers with flexible load shapes – or those who are able to manage load -- cost less to serve, and present a lower price risk to serve. Thus, a supplier can offer customer lower rates.

### **Benefits to the Environment**

When the demand for electricity peaks and the supply system is constrained or limited, suppliers are likely to bring on line less efficient resources with relatively high emission rates, e.g., oil-fired combustion turbines. While generally needed for only a short time, such peaking facilities SO<sub>x</sub> and NO<sub>x</sub> and particulate emissions at high rates. Moreover, the increase in emission rates tends to occur during the high-load hours of summer afternoons when ambient air quality is at its worst. By developing load management resources, the Company strategically positions itself to help alleviate this environmental burden.

### **Delivery System Reliability: Benefits to the Transmission System**

Load management strategies that reduce load temporarily or shift on-peak demand to off-peak periods are expected to play an increasingly important role in facilitating the operational efficiency and reliability of the system particularly in areas experiencing transmission transfer capability limitations. Among the immediate transmission benefits are a lowering of congestion costs and charges, increased service reliability and in the long run lower firm transmission right.

### **CL&P Experience in 2000**

CL&P made progress in the Year 2000 with respect to its Load Management pilots. The Company indicated to the Department in its Plan for 2000 that it envisioned a multi-year time horizon for its pilots. CL&P still believes it is appropriate to continue its pilots into 2001. This conclusion is based on the Company's experience in 2000 which is highlighted next.

#### **1. The 2000 Residential Pilot:**

In the summer of 2000, CL&P implemented a residential pilot that gained national recognition. While there have been successful residential load management programs

where utilities shed residential load during system emergencies, the CL&P pilot residential program for 2000 was an attempt to implement a “bilateral” arrangement through which customers participated in the decision-making process to cycle central air conditioners. Certain communications problems dampened the effectiveness of the pilot. The Company believes it is appropriate to continue on with a residential pilot for 2001 using a different technology for communications.

## 2. The Commercial and Industrial Load Management Cooperative:

In 2000, the Company clearly made an impact in starting to initiate the Load Management Cooperative for commercial and industrial (C/I) customers with the Independent System Operator for New England (ISO-NE). While it has proven challenging to get all the parties to participate in the pilot, CL&P believes the barriers it uncovered in 2000 underscore the need for its role as the enabler to initiating and nurturing a market for price-responsive load interruptions. The Company plans to continue its efforts in 2001.

## 3. Development of a Measurement and Verification Strategy and Tools:

The Company also made significant progress in developing an effective measurement and verification (M&V) strategy for price-responsive load interruption programs. This strategy was communicated to ISO-NE and received favorable response. The Company continues to work on developing a mechanism that will enable the quantification and verification of participating customer load interruption claims at individual customer levels and at aggregated levels.

## 4. Load Management Market Research Studies:

In the Year 2000, the Company conducted assessments of the residential and the commercial and industrial (C/I) markets for load management. The results of this research efforts have been helpful in developing program designs for 2000 and 2001. The C/I market assessment indicated that a substantial portion of customers’ peak load is available for curtailment. The study assessed the sensitivity of the overall load available for curtailment with respect to the incentive price and the following variables:

- Notification lead time
- Duration of curtailment, and
- Number of curtailments per season

One of the significant finds was that almost without exception, customers could not estimate what a reasonable curtailment incentive should be. This points to the need for continued educational efforts in the area. Many commercial retail customers indicated the ability to drop relatively small levels of load for short periods of time for several days of the year. Industrial customers could drop significant levels of load for longer periods of time, but for fewer interruptions.

The residential market assessment quantified the size of the residential cooling load and potential for peak load management. The results indicate there is growing cooling load in the Northeast and that the majority of the customers would be willing to participate in some type of peak load management. It was also found that, if CL&P can work effectively as a conduit to deliver a price signal, cooling load would be responsive to peak load management,

5. C/I Pilot Loan Assistance:

In 2000, the Company initiated the C/I Pilot Loan Assistance Funds program. The pilot consisted of: (1) training for commercial and industrial customers about load management issues and technologies; (2) an interest-free assistance fund for customers to implement load management projects; and (3) on-site load management opportunity assessments. CL&P will continue these efforts in 2001. The Company also plans to implement in 2001 additional training for architects and engineers on lost opportunities for load management equipment, which could be incorporated in new building designs.

## **Load Management Programs**

In order to acquire the capability for the market to deliver effective price responsive load management, the Company proposes to implement **pilot** load management programs to determine, under actual conditions, what strategies will produce economic and practical resources. By placing emphasis on developing the required market information, full implementation of the load management capabilities can be more rapidly executed during a multi-year time horizon.

## **C&I Load Management Pilot Cooperative**

**Target Market:** The target market is all CL&P commercial and industrial customers who have the capacity to curtail electric consumption during pre-specified periods. The first tier customers will have a maximum demand over 500 kW. CL&P has over 1,000 customers that meet this criterion. The second tier customers will include chain accounts that can be aggregated through a single agent with a maximum demand over 100 kW. CL&P has an additional 4,500 accounts with demand between 100 kW and 500 kW.

**Services Offered:** The program will test and demonstrate the viability of a market for customer-provided dispatchable load in the New England region. CL&P will establish a customer-side dispatchable load program acceptable to the ISO, assess the customer benefits, develop M&V procedures and protocols, implement a pilot offering of the program, and develop materials and trade relationships for a full-scale launch in 2002.

The Pilot Cooperative Program is designed to identify and minimize market barriers that inhibit full realization of all technical and economic opportunities for load control. These barriers are believed to include:

- Complex and unresolved rules for demand-side dispatchable load,
- Uncertainty about the amount and reliability of load control,
- Lack of information about financial and technical options and procedures,
- Unavailability of accepted and familiar technology for load control,
- Lack of accepted methods of measurement and verification, and
- Competing interests in market rule development

This program may include some incentives or subsidies for real time load characteristic hardware and software for customers, thereby enabling them to participate in the pilot.

**Marketing:** This program will be offered through general advertising, trade associations and face-to-face meetings involving Account Executives, independent market agents and customers. The

Custom Services Program and the Load Management Fund will be used as feeder programs into this pilot.

Method of Delivery: The Company, through independent agents, will be responsible for installing a communication system to monitor and manage the load curtailment activities of each participating customer, taking bids from such customers, aggregating received offers, marketing the aggregated offers to wholesale buyers in the ISO-NE, and managing the financial activities of the participating customers and cooperative groups. The Company will also test and demonstrate the M&V procedures for certifying each facilities' kW demand reductions.

The Pilot Cooperative Program will involve the following tasks:

1. Establish Appropriate M&V Procedures
2. Run the Pilot in an Experimental Mode
3. Assess the Pilot Program
4. Recruit Market Players to Help Launch Full-Scale Implementation of the Program
5. Help Develop Program Materials for Full-Scale Implementation

### **Task 1. Establish Appropriate M&V Procedures**

This task will develop suitable procedures for measuring and verifying customer compliance with dispatch signals in a retail market dispatchable load program. It is relatively straightforward to measure the output of a power plant. It is more difficult to estimate the energy that was not used by a retail market participant.

### **Task 2. Run the Pilot in Experimental Mode**

In this task, the Company will run an experimental version of the retail market dispatchable load program with about 25 large commercial and/or industrial customers. The participants are expected to include several multiple-location chain accounts with suitable infrastructure in place for controlling their loads. The pilot would be designed to test, refine and demonstrate the program, to assess customer response to the program, to evaluate the participant's willingness to interrupt its load, and to show the ISO that the resource is reliable, verifiable and economically practical. To accomplish these goals, CL&P will observe a sufficient number of interruptions under various circumstances.

### **Task 3. Assess the Pilot Program**

The pilot will be evaluated in terms of:

- Customer response to the program
- Reliability of the demand and energy resource created by the program
- Accuracy of the M&V methodology
- Cost of the program
- Value of the resource created by the program

#### **Task 4. Recruit Market Players to Help Launch the Program**

The next two tasks will build on the information from the preceding steps to lay the foundation for a larger-scale implementation of the program. It is expected that a larger launch will be implemented with assistance from several load aggregators or power marketers. The first of these tasks will be to identify the most suitable market players to reach different segments of the market. Although this task is scheduled late in the program, CL&P expects to work with some of these players throughout the program to take full advantage of their expertise, to build a strong working relationship with them, and to ensure that the Company's efforts are designed to facilitate the transition to a privately-delivered program.

#### **Task 5. Develop Program Materials for Full-Scale Implementation**

The purpose of this task is to provide assistance to develop materials for marketing the program.

##### **Exit Strategy:**

At the conclusion of the pilot, the final tasks are expected to lay the foundation for a larger-scale implementation of the program through load aggregators, power marketers and other trade allies. It is assumed that the Company will continue to support the common infrastructure required by the program, including communication software and M & E activities. However, CL&P will phase out of active program marketing and implementation.

## **C&I Load Management Pilot Assistance Fund**

Target Market: All CL&P commercial and industrial customers

Services Offered: Technology workshops, educational seminars, and direct services including technical energy-use audits, metering and sub-metering services. In addition, the Company will increase the \$1,000,000 revolving loan fund that was established in 2000 to purchase load management related equipment and services.

Given the changing market rules in Connecticut, a considerable amount of education may still be needed in 2001 in the C&I marketplace to increase customer understanding of load management activities and encourage voluntary curtailment. Further, CL&P plans to implement “lost opportunity” training on load management equipment for architects and engineers involved in the design and construction of new buildings.

The Load Management Assistance Fund is also intended as a financial resource for C&I customers who otherwise would not have the ability to procure the necessary equipment to enable commitment to providing dispatchable load at their facility.

This program may include funding of feasibility studies for particular load management equipment for customers.

Marketing: This program will be communicated through general advertising, trade associations and in face-to-face meetings with Customers. In addition, Company-sponsored workshops and educational seminars will provide the opportunities to directly market the revolving loan fund. Also, customers contacted for the C&I Energy Cooperative will be directed to this program for load management support services. Finally, participants in other energy efficiency programs, e.g., Custom Services and New Construction, will be directed to this program as well.

## **Residential Load Management Services Pilot Program**

- Target Market:** The target market would consist of all residential customers, but would require customers to take energy from a supplier who offers a TOU rate.
- The Company provides service to nearly 1,000,000 residential customers who collectively contribute over 2,400 MW to system demand. However, since the program features sophisticated equipment (representing a substantial fixed cost) participation should be limited to those customers with enough coincident controllable load to justify installing the equipment. This could be done on an end-use specific basis (i.e., customers with central air conditioning, electric water heating, electric heating, pool pumps, etc.), or on a connected load basis (i.e., apply an appropriate coincidence factor to the customer's seasonal or annual energy use to develop an estimate of connected load).
- Services Offered:** The program will test a communication systems that allows participants to interact and manage their energy consumption in relation to price. The load control module can be preprogrammed to shed specific appliance loads in response to multi-tiered price signals provided by CL&P or the customer's Energy Service Provider.
- When a customer chooses to participate in the program, communication and control equipment would be installed on the customer's home. At this time the customer would be put on a new electric rate. The bill reductions that result from the rate would provide the incentive to the customer and the modification of the customer's load shape would benefit all ratepayers.
- Marketing:** The program would be marketed by appealing to consumers' concerns about the environment and their desire to save money by participating in the program. Customers would need to accept some lifestyle changes in order to shift energy use.
- The pilot program would be marketed through bill inserts, trade allies, general advertising, the SmartLiving catalog and press releases. The program would include an educational campaign to inform customers how they can reduce their energy bills by participating in the pilot.

## **CHAPTER FOUR: RESEARCH, DEVELOPMENT AND DEMONSTRATION Goals and Objectives**

Sustainable progress in C&LM in Connecticut will include the vigorous support of RD&D efforts to develop new technologies and related efforts to facilitate the movement of state-of-the-art technologies into Connecticut markets through field testing, evaluation, information dissemination, and innovative strategies to promote private sector involvement. The RD&D component of CL&P's C&LM programs is strategically linked to each of the other program components, which focus on broader-scale initiatives using commercially available technologies and systems. As new technologies become available, they will be incorporated into the other C&LM programs. Both CL&P and UI are participating in the one common RD&D program. Based upon the Department's directive in Docket No. 99-09-30 and input from the ECMB and the Policy Working Group ("PWG") of the RD&D program, the Company has added an emphasis on distributed resources for 2000 and beyond.

The RD&D program provides an opportunity for CL&P to effectively support the development of C&LM technologies that can provide broad benefits to Connecticut's electric customers, but would not otherwise be undertaken adequately by private market participants because of long, uncertain, or diffuse economic returns. Public benefits of the RD&D program will include enhanced environmental quality, reduced energy consumption, improved system reliability, and sustainable reductions in energy costs to ratepayers across all customer classes. In addition, the program advances economic development in Connecticut, by directly supporting and encouraging the growth of research activities within the state and through public-private partnership demonstration programs which can enhance the energy efficiency, productivity and competitiveness of commercial and industrial facilities in the state.

In addition to coordinating with CL&P's other C&LM programs and other activities in Connecticut, the RD&D program will offer an opportunity for organizations to leverage funds with relevant federal, state and other research initiatives on technologies that would provide significant benefits to Connecticut customers. The U.S. Environmental Protection Agency, the U.S. Department of Energy, the New York State Energy Research and Development Authority (NYSERDA), Energy Center of Wisconsin (ECW) and the California Energy Commission (CEC) are all actively involved in supporting research that could be valuable in assisting companies and electric customers in Connecticut. Examples of coordination of these efforts include:

- CL&P issued a letter of intent to fund \$250,000 towards an advanced welding system as part of \$1.3M proposal to the DOE.
- CL&P's membership in the Association of State Energy Research and Technology Transfer Institutions (ASERTTI) helps identify leveraging opportunities while reducing the potential for duplication of effort.

- CL&P utilized experience from the DOE, NYSERDA, CEC and ECW during the preparation of the standard terms and conditions and strategy for the 2000 RD&D Request for Proposal.

### **Benefits of a Connecticut RD&D Program**

The benefits of this RD&D program can accrue to the wide range of Connecticut electric customers and users. Benefits may include the following:

- Creation of new valuable products and services for use by Connecticut citizens
- Reduced electric bills to Connecticut consumers
- Strengthening of energy efficient industries in Connecticut, including greater exports
- Increased competitiveness of business and industry in the state
- Transition to more sustainable energy use and technology development
- Promotion of a cleaner environment
- Improved system reliability
- Enhanced ability of Connecticut businesses and consumers to comply with future regulatory requirements
- Creation of an environment more likely to attract new business to the state

### **Creation of an RD&D Portfolio**

A diversity of proposals was received in response to the Company's first solicitation for proposals. Thus, it is expected that the CL&P energy conservation and load management RD&D program will have a well-balanced portfolio of RD&D projects chosen to address a variety of Connecticut's needs. The responses consisted of RD&D projects that:

- Advance technologies and processes that benefit each customer segment
- Provide a balance of short, medium and long-term technology and associated solutions
- Include both low risk projects with lower payoffs and higher risk projects with potentially high rewards
- Accelerate the commercialization process for technologies deemed to offer particular value to Connecticut ratepayers, businesses, the environment and/or specific interests
- Include a balance of technology hardware, software and process research
- Promise to create sufficient returns on investment to be cost-effective and sustainable
- Strike an appropriate balance between technology research at one end of the spectrum and product commercialization at the other

- Provide a fair return to electric customers in each customer segment who have funded the initiative through their electric bills
- Address a variety of end uses, including electric space conditioning and water heating, that benefit electric customers through lower electric bills and enhanced local environmental conditions

## **RD&D Progress in 2000**

CL&P's efforts in 2000 focused on identifying energy efficiency categories in need of RD&D, setting up the CL&P RD&D organization, implementing an independent advisory group, issuing a request for proposal, establishing predetermined criteria for selection of projects, evaluating proposals on a consensus basis using the predetermined criteria, developing strategy for leveraging the use of the RD&D funds, and awarding contracts for a broad range RD&D projects. A brief description of each of these follows.

### CL&P RD&D Organization

In 2000, CL&P assembled a team of professionals who have been effective in starting-up the program and who will implement the program in the years to come. The Company brought a Team Lead, a Senior Engineer and an Administrator to the RD&D effort. For the evaluation phase of the cycle, these individuals were supplemented with consultants; in the future the Company is ready to support the RD&D team with additional consulting expertise, as required.

### Advisory Network

In the first half of 2000 a PWG was established to support R&D efforts. The PWG met on a regular once a month basis and more frequently during the proposal review period. The PWG will continue to work at a minimum of six days per year and perform their work as a public service.

The PWG members represent a wide range of constituencies including:

- Environmental Advocates (Law/Environmental expert)
- Federal Government (Department of Energy)
- Renewables (Connecticut Innovations Inc.)
- Energy Efficiency experts (Northeast Utilities, Connecticut Energy Cooperative)
- Statewide Partnering (United Illuminating)
- New Business specialist (Rensselaer Polytechnic Institute)
- Economist (University of Connecticut)
- Connecticut Economic Development (Connecticut Department of Economic and Community Development)

The policy working group plays several critical roles that help ensure the success of the RD&D projects.

- Ensure that the best projects are funded, based on:
  - Pre-approved screening criteria
  - Consideration of public interest
  - Utilizing industry knowledge and experience
  - Potential for commercialization
- Establish a mix of large and small project across customer classes
- Establish external credibility
- Establish RD&D policy priorities and strategic planning
- Establish and oversee Project working groups
- Balance the portfolio between research, development and demonstration projects
- Remain accountable to the ECMB
- Seek DPUC approval, as necessary

#### 2000 RD&D Request for Proposal (RFP)

A RD&D RFP was developed to solicit proposals for energy efficiency and distributed resources projects in pre-determined categories. The categories identified in CL&P's CL&M plan for 2000 were reviewed to ensure they were up to date. As a result of this review a reliability element was added to the project category selection criteria resulting in the addition of distributed resources to the RFP. This project category selection criteria was developed by Arthur D. Little and reviewed by the CL&P, the PWG and ECMB consultants.

CL&P's RFP solicited proposals for innovative electric energy efficiency and environmentally friendly distributed resources RD&D projects which demonstrate substantial energy savings to Connecticut electric customers and have environmental and economic development attributes. Innovative technologies or technical services in the following project categories were requested:

- Residential and Commercial Lighting
- Energy Management/Load Control Project Area
- Computer/Electronics
- Distributed Resources
- Electro-technologies
- Thermal Storage
- Space Conditioning
- Refrigeration
- Water Heating

The RFP explained that the following types of projects would not be covered by the RD&D fund:

- CL&P's standard RFP Program, Municipal Program, and Express Program
- Other energy efficiency products and processes that are already commercialized or readily available
- Technologies which CL&P is already supporting through rebates and technical assistance
- Non-renewable fossil fuel combustion processes if they are not as environmentally clean as the current Gas Fired Combined Cycle process
- New marketing packages (e.g., administrative, marketing and organizational procedures) for existing tested technology
- Training as a stand-alone service, but may be considered when it is proposed as an integral part of a new technology or technical service.

RD&D was defined in the RFP as follows:

Research project - A project in the conceptual stage aimed at the discovery and interpretation of facts, revision of accepted theories in light of new facts. However, the plan for such research must be well thought out and developed with specific milestones, success criteria and termination criteria.

Development project - A project designed to apply the results of a research project or other novel and proven processes as a pilot to create a working prototype. The goal is to identify any improvements to the concept required to obtain an efficient production method to enable the product to be economically commercialized.

Demonstration project - Implementation of a project that has already gone through the prototype stage but requires practical use in the field to gain technical confidence of its users and operating experience. This also includes projects that are technically viable but they have yet to be accepted in the marketplace and therefore require field implementation to gain public acceptance and wide spread use under local conditions.

## Project Selection Criteria

Proposals were reviewed based on a pre-determined evaluation criteria. The five elements used in selecting project categories were developed in more detail, reviewed by the PWG, ECMB consultant and other independent consultants and revised accordingly. The proposal evaluation criteria consisted of a two step process whereby an initial screening was performed to determine which proposals to warrant more in-depth and quantitative reviews.

In addition to RD&D portfolio considerations, factors which would be considered in the selection of specific projects for funding would be expected to include the following:

- Quantifiable benefits to Connecticut electric customers through lower electric bills and the wise use of funds from benefits charges
- A clear pathway to commercialization
- Environmental benefits in terms of pollution prevention, reduction or mitigation
- The portion of the proposed project activities that utilizes Connecticut-based companies, resources and/or research
- An appropriate plan for co-funding that reflects the fact that projects with relatively low risk and/or near term payback warrant higher cost sharing by selected participant groups who stand to benefit
- Value to Connecticut economic development by downstream manufacturers, research organizations and other groups
- Extent to which the project would lead to increased value of electricity usage through greater energy efficiency and productivity
- Sustainability of benefits that would accrue from the RD&D product, process and/or services in terms of reduced resource use
- Judicious use of strategic alliances that leverage funding and idea generation and increase the likelihood of project success
- Magnitude of potential market-specific applications and associated benefits
- Level of increase in energy efficiency and/or management of peak loads

## Leveraging Strategy

In 2000, the Company took initial steps to pursue joint funding possibilities. It plans to more actively pursue such efforts in the year 2001. Potential avenues for leveraging other resources include the DOE, the DEP and state organizations. Memberships to organizations initiated by the Company in 2000 will also be utilized for potential joint funding in 2001.

## RD&D Contracts Awarded in 2000

In conjunction with the PWG and with the approval of the ECMB, CL&P awarded 14 RD&D projects in 2000. Five of these were distributed resources projects and nine were non-distributed resources projects. The total value of the projects was approximately \$4 million, with approximately \$1.9 million for non-distributed resource projects and approximately \$2.1 million for distributed resource projects. There was an allocation of projects across all three categories of research, development and demonstration.

## Plans for 2001

The Company believes it was very successful in start-up of the RD&D efforts in 2000, and it plans to build off its foundation for the year 2001. Assembling the RD&D team, initiation of a PWG, issuance of the first RFP, and selection of initial portfolio of projects all form the basis of a strong start, and the Company plans to build off this strong start in 2001. The staff will continue, the PWG will continue and the Company will continue to evaluate and select projects. For 2001, the Company will fund the RD&D effort by an increased percent of its total budget. Further, UI will allocate a significant budget to the RD&D program for 2001.

The Company takes note of the fact that the largest single category of responses to the RFP was for projects in the distributed resources category. While the Company intends to continue requesting proposals and funding projects in "typical" efficiency categories, plans are to pursue a role in DR research, development, and demonstration if projects can be identified which address high-value markets with cost-effective technologies.

In 2001, the Company plans to conduct a strategic plan for continuing to implement the RD&D effort and will develop include a plan for DR projects. The Company also plans to explore suitable performance indicators and incentive metrics for RD&D in 2001.

The Company also intends to continue addressing the issue of intellectual property rights in 2001. Developing and implementing a strategy for the fiduciary responsibilities for program administration are an appropriate will be explored during the contracting phase of the first round of projects. It is imperative that the Company utilize the funds prudently, and that extends to the intellectual property rights. While it is not a goal of the Company to profit from RD&D activities, it is important to get accountability from bidders and researchers and to get some returns, perhaps as royalties, licenses, patent rights or equity for ratepayers. The Company will work with the ECMB, the Department, and the PWG to explore this issue, including how to allocate any funds received. The Company's will only expect to receive property rights for the portions of projects which they fund. If they co-fund a project, for example, the property rights would not be for the entire project.

The Department indicated that the Company should complement rather than duplicate efforts of the Clean Air Fund. One member of the PWG is from the group which administers that fund. Further, the many DR projects and the increased focus on DR for 2001 both indicate that the Company is being responsive to the Department's directive.

## CHAPTER FIVE: COST-BENEFIT ANALYSIS

### Background

Connecticut Public Act 98-28 requires that energy efficiency programs be “screened through cost-effectiveness testing which compares the value and payback period of program benefits to program costs to ensure that programs are designed to obtain energy savings whose value is greater than the costs of the programs.”

In its decision on May 10, 2000, in Docket No. 99-09-30, on page 38, the Department reiterated its endorsement of the Electric System Test as the preferred method to evaluate the cost effectiveness of energy efficiency programs. In addition, the Department recognized the need to evaluate savings for non-electric measures as a supplement to the Electric System Test, but at the same time expressed reservations concerning the subjectivity entailed by the use of externality adders in the Societal Test.

The Company accordingly conducted two tests of the cost-effectiveness of 2001 programs as described below. The primary test is the Electric System Test. The Total Resource Test was also employed in order to evaluate the savings of non-electric measures.

### Methodology

Two different tests were conducted, the Electric System Test and the Total Resource Test. The *Electric System Test* is identical in composition to the Utility Test, in that it includes costs and savings that are realized in the electric bills of the customers of the electric distribution company. The nomenclature has been changed to reflect the fact that the cost of electric service will include costs borne by non-utility suppliers.

The *Total Resource Test* includes all identifiable and directly quantifiable economic costs and benefits of the programs. In addition to the utility costs to implement the programs, it includes the cost of the efficiency investments made by participating customers. In addition to the electric benefits, this test includes other participant benefits. Examples are savings in other resources such as water, gas, or oil and the cost of equipment replacement avoided through the installation of equipment with a useful life longer than that of standard efficiency. Other benefits to participants that are directly quantifiable may also be included.

The components of the two tests are summarized as follows:

	<b>Electric System Test</b>	<b>Total Resource Test</b>
<b>Costs</b>		
Utility Costs	X	X
Participant Costs		X
<b>Benefits</b>		
Electric Generation Savings	X	X
Electric T&D Savings	X	X
Non-Electric Participant Savings		X
Other Savings*		X
Low Income Program Benefits*		X

\* Other benefits may be included if directly quantifiable.

## **Quantification of Costs and Benefits**

### Utility Costs

The Utility Costs consist of the direct implementation costs, including program administration, marketing, contractor services, customer incentives, and program evaluation costs.

### Participant Costs

The Participant Costs consist of the estimated amount of investment in efficiency measures contributed by customers participating in the programs, net of any program incentives.

### Electric Generation Savings

The Electric Generation Savings are the expected electric bill reductions associated with “unbundled” generation services. The savings were quantified by multiplying the projected future electric savings by the projected market price of generation services. The market price forecast employed in the analysis was issued by the Department on July 7, 1999 as part of its decision in Docket No. 99-02-05 Application of the Connecticut Light and Power Company for Calculation of Stranded Costs.

The Company has made one revision to the forecasted value of electric savings in order to reflect current information regarding the regional hourly market clearing price of energy. The relatively high prices that have occurred during periods when supply has been limited indicate a significant value of generation capacity that is not recognized in

the initial years of the market price forecast. Therefore the Company revised the capacity price component of the 2001-2004 forecast to account for the value of capacity during periods of peak demand.

### Electric T&D Savings

Electric T&D Savings represent the avoided cost of future transmission and distribution investments expected to result from electric savings achieved by the programs. The savings were quantified by multiplying the projected future electric demand savings by the projected cost per kW of transmission and distribution investment. While no distribution investment savings were included in previous years' analyses, because of uncertainty in the extent to which such investments could be avoided by efficiency programs, it is plausible that such savings should be realized in the long run. Also, the inclusion of both transmission and distribution savings in the Electric System Test appears to be a commonly accepted practice in program cost-benefit analysis.

### Non-Electric Participant Savings

In some cases measures promoted by the programs produce savings in addition to savings in the cost of electricity. Efficient washing machines save water and fossil fuels required to heat water for washing clothes. These savings have an economic value to participating customers based on the price of these resources. Efficient fluorescent lamps and ballasts have a longer useful life than standard incandescent lamps. The program participant realizes an economic benefit because future replacements of standard lamps are avoided over the longer useful life of the efficient lamps and ballasts. These savings were quantified by estimating the future amount of water, fossil fuels, or avoided replacements and multiplying the amounts by the market price of these commodities.

### Other Savings

Other benefits to customers may result from participation in energy efficiency programs. Examples include reduction in industrial waste disposal costs, manufacturing productivity improvements, and health and safety improvements to low-income housing. These savings are appropriate to include in the analysis if sufficient information exists to quantify the value.

### Discount Rate

In order to place future benefits on a comparable basis with current program costs, the future values of all benefits were discounted to a present value using an annual discount rate. The Electric System Test and the Total Resource Test utilized the Company cost of capital rate of 8.1 percent approved by the Department in Docket No. 98-01-02.

The results of the analysis are summarized in the following table.

All programs, except the state-mandated Energy Conservation Loan Program and the Residential Audits program, are cost-effective according to the Total Resource Test. Tumble Wash and WRAP do not pass the Electric System Test, even though they are cost-effective on the basis of the Total Resource Test. Failure to pass the EST is attributable to the fact that significant expenditures are directed toward measures that produce fossil fuel savings that are accounted for in the Total Resource Test. Overall, the programs are expected to produce benefits approximately twice the value of expenditures, equal to a net electric savings of \$62 M.

## Cost-Benefit Analysis

Program	Electric system B/C Ratio	Total Resource B/C Ratio
SmartLiving Catalog		
Retail Lighting		
Energy Star Appliances		
New Construction		
Hot Shot HPWH		
ECLP		
WRAP		
Spectrum (Electric Heat)		
RCS		
<b>Total Residential<sup>1</sup></b>		
C&I New Construction		
C&I Custom Services		
C&I Express Services		
C&I Express Medium/Small		
C&I O&M Services		
Competitive Market Dev.		
State Office Buildings		
Municipal Buildings		
<b>Total C&amp;I<sup>1</sup></b>		
Load Management <sup>2</sup>		
<b>Total Program<sup>3</sup></b>		

**Notes:**

- <sup>1</sup> Includes cost of general information and outreach with unspecified savings.
- <sup>2</sup> Assumes a market value of interruptible load of/kW-year.
- <sup>3</sup> Includes cost of general information and outreach and RD&D with unspecified savings.

## CHAPTER SIX: PERFORMANCE-BASED INCENTIVE

In its May 10, 2000, Decision in Docket No. 99-09-30, the Department approved a pre-tax performance incentive according to the following schedule:

Performance Index Achieved %	Pre-tax Incentive % of expenditures
70-74	2
75-79	3
80-89	4
90-99	5
100-109	6
110-119	7
120 and up	8

The Company proposes to continue the implementation of the approved schedule. The Department also directed the Company to “include a proposal to reflect customer awareness of C&LM programs in the management incentive fee” (Order 9 f) and to “propose methods other than kWh savings upon which to base a management performance incentive” (Order 9 g).

For 2001 the Company proposes to measure program performance according to the following metrics:

<b>Residential Programs</b>	<b>Wt</b>
1. Number of Energy Star lighting products rebated through all residential programs, with at least 14 percent being recessed cans and portable fixtures	5%
2. Market share of Energy Star homes completed or committed.	4.5%
3. Number of Low Income program participants.	5%
4. Total electric savings from all residential programs.	35%
5. Savings achieved through Community Based Program	0.5%
<b>Commercial/Industrial Programs</b>	
1. Total electric savings from all C/I programs.	49.5%
2. Savings achieved through Cool Choice Program	0.5%

The incentive metric goals, incentive amounts and performance indicators are summarized in Table D, following this page. Based upon the percent of the target goal achieved, the incentive amount will be adjusted up or down according to the incentive schedule presented above and the ratio of total actual expenditures to total budgeted expenditures.

The Company also proposes to develop an index of customer awareness of programs for measurement of program performance in 2002. During 2001, the Company will conduct baseline research on customer awareness of its programs in order to establish a benchmark to measure performance in 2002.