

The United Illuminating Company

Year 2000  
Conservation and  
Load Management Plan

October 15, 1999

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## Introduction

The United Illuminating Company (“UI” or “Company”) files these conservation and load management programs for 2000. This filing is a product of the UI transition plan implemented in 1998 - 1999, designed in response to Public Act 98-28 and described in Docket number 98-10-05.

UI is pleased that it can provide energy saving services and products to its diverse customer base through a variety of conservation and load management programs. This plan describes how the Company will implement strategies to achieve the overriding *objective*, which is to **promote and facilitate the wise and efficient use of energy**. Some resulting **benefits** are:

1. Reduced energy costs
  - Helping customers lower energy bills while maintaining comfort and productivity
2. Environmental stewardship
  - Reduction of air pollutant emissions
3. Economic development
  - Working with Connecticut businesses to improve their profits through reduced energy cost and efficient expansion/development projects
  - Reduced energy bills, which increase disposable income
  - Job creation resulting from an increased energy efficiency environment

UI has a corporate commitment to operational excellence in all of its programs, which focuses on quality, value and ease of participation. The goals of UI’s programs will be achieved in a manner consistent with UI’s corporate commitment and will be executed to our highest abilities and standards. These programs have been designed to provide hassle-free service to our customers and trade allies. Operating excellent programs also requires monitoring the effectiveness of activities, evaluating the results of those activities and enhancing or modifying programs as needed.

### Strategic Deployment

In order to achieve the primary program goals as stated in later sections of this filing, the Company will deploy a seven-point strategy.

1. Reduce market barriers to energy efficiency
  - Consumers do not automatically purchase and install energy efficient materials and equipment. Numerous market barriers prevent or discourage them from doing so. Program focus will be on reducing and/or eliminating market barriers, resulting in less energy consumption, lower bills and a cleaner environment. Some of the traditional market barriers encountered by our customers include: high information or search costs, performance uncertainties, access to financing, hassle or transaction costs, split incentives, and product/service availability. These

barriers are more persistent for some customer groups such as low-income and small businesses.

2. Create self-sustaining energy-efficiency markets
  - Utility intervention will focus on creating marketplace demand for energy efficient use, practices, and products while reducing dependence on direct subsidy programs. Strategic partnerships and collaboration with industry business groups and organizations will enhance this effort. Market transformation strategies will be used to execute this strategy.
3. Transform markets
  - Working in conjunction with regional allies and national initiatives UI will commit resources to transforming markets resulting in the adaptation of energy efficient standards and practices.
4. Achieve immediate and substantial reductions in energy use
  - Traditional conservation programs that have an immediate, substantial impact on energy use will be coordinated with those that transform markets. Not all markets will become self-sustaining and not all will become transformed. Therefore, a balanced approach will be used to ensure that cost-effective energy savings will be obtained even in the absence of market transforming capabilities.
5. Advance the development and use of efficient products and processes
  - Technologies and processes are continually evolving. The efficient practice of today will be replaced by the new innovations of tomorrow. These new innovations require research and development and a means to get to them to market. Funding will be used to champion or accelerate this process.
6. Form strategic partnerships with state, regional and national organizations
  - Leveraging dollars, economies of scale, clear consistent messages, and focused objectives, are primary reasons for strategic partnerships and alliances.
  - National initiatives, supported on a regional and state level, have long-term, positive impacts on sustaining energy efficiency practices and standards, which could not be achieved by a single entity.
7. Initiate innovative pilot programs
  - Develop and implement pilot programs that have potential, but as yet unproven ability to significantly impact energy savings and diminish persistent market barriers.

## **Response to Public Act 98-28 section 33**

UI has been actively working with the Energy Conservation Management Board (ECMB) to enhance existing energy efficiency programs, update previously administered programs, and adopt or develop new programs. In order to maintain consistency with the Act, UI has classified its programs according to the 5 areas of focus as stated in Sec. 33 of Public Act PA 98-28.

These foci include:

1. Market transformation
2. Energy conservation implementation (direct energy savings)
  - Retrofit programs
  - Lost opportunity/market driven programs
3. Low income
4. Education
5. Research and development

Each of these five foci is defined below. Program-specific rationale is provided within each program description in subsequent sections of this filing.

### *Market Transformation*

*A transformed market, according to a widely used definition, “means that the market barriers to the adoption of cost-effective energy-efficiency products and services have been reduced to the point where efficient goods and services are normal practice in appropriate applications. If these changes are self-sustaining over time (i.e., without the need for continued intervention), then the market has been fully transformed. In many cases, continued intervention (possibly very different in scale and scope from the initial intervention) will be warranted; i.e., it will be more appropriate to talk of markets that have only been partially transformed.”<sup>1</sup>*

The distinction between fully and partially transformed markets is an important one. Assuming that there will continue to be technological advances, markets will be in a constant state of transformation with the most efficient product of today potentially becoming the obsolete product of tomorrow.

It is also critical to distinguish between market transformation (MT) as a policy objective versus MT as a program objective. Not all programs will have MT as the primary objective but they will be designed to provide the framework within which MT can occur. In the current context it is also important to avoid having MT become a disproportionate policy objective. UI will strive to maintain a balance between programs

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<sup>1</sup> Ratepayer-Funded Energy-Efficiency Programs in a Restructured Electricity Industry: Issues and Options for Regulators and Legislators. Joseph Eto and Charles Goldman, Environmental Energy Technologies Division Ernest Orlando Lawrence Berkeley National Laboratory. May 1998

that will transform a market and programs that will offer extensive, immediate energy savings.

### Energy Conservation Implementation

Traditional reasons for energy conservation implementation will continue in the restructured environment, i.e. lower energy bills, environmental benefits, and resource management. As stated above, market transformation is a policy objective but it does not diminish the importance of cost-effectively reducing kWh consumption. The Company views its energy savings programs in two broad categories: 1) retrofit, and 2) lost opportunity/market driven.

*Retrofit* programs traditionally seek 1) to exchange functioning but inefficient equipment with higher efficiency equipment; 2) to improve building shell or facility performance; and 3) to improve energy use or management practices.

*Lost Opportunity* programs capture energy efficiency opportunities at the time of a naturally occurring market event, such as new construction, expansion, renovation, remodeling, and failed equipment replacement. These are time sensitive events and the programs are designed to minimize lost opportunities due to the inherent time constraints. In this broad category, market transformation initiatives become an integral component of program design.

### Low Income

The *Low-Income Program* serves UI's residential, low-income customers. Low-income customers will be the least likely served market segment in the restructured environment and the need for publicly funded intervention will continue into the future. Recognizing the continuing need for publicly funded intervention, the Company has allocated a significant portion of its 2000 C&LM budget to address the particular needs of our low-income customers.

### Education

Educational efforts are encouraged when they provide information, data, analysis and training that can have a positive impact on customer or trade ally decision-making. Therefore, adequate educational elements will be integrated into most energy efficiency programs. The efficacy of a *stand-alone* educational program defies measurement; however this does not diminish the potential impact of such a program. In 2000 the Company will provide an educational component in all programs and a public school-based energy efficiency education program.

### Research and Development

Included in this category is the research and development of more efficient products or processes, and the design, manufacture and commercialization of new products and processes. UI will leverage its RD&D dollars through association with other organizations and through collaboration with the RD&D efforts being implemented by Connecticut Light and Power Company (CL&P).

## **C&LM 2000 UI Program Ramp-up & Delivery Plan**

### Ramp-up Plan Objective

A primary objective of UI's ramp-up plan has been to develop tactics which ensure that UI secures and retains the appropriate staffing and other necessary resources to successfully meet the Company's C&LM obligations under PA 98-28. The developed tactics must maximize delivery efficiencies, increase program effectiveness, incorporate a high level of customer service, and add value to the current UI infrastructure. Outsource and contract labor will support UI staffing where available and when economically justified. The Company will rely on and strongly encourage participation from outside entities for effective program delivery.

### Plan Execution

For the past 18 months, since the enactment of PA 98-28, UI has been actively planning and creating a comprehensive conservation and load management program. As a road map, UI developed and implemented a 9-point planning process for success. The process is a high level overview that prioritizes the basic ingredients for completion of this plan. Specific focus on item 5, staffing and resource requirements, is provided following the overview.

- 1) Market Research
  - Understand the needs and segments of customers
- 2) Benchmark Efficiency Standards
  - Determine the range and availability of efficiency options
- 3) Establish Incentives
  - Close the gap between standard vs. efficient technologies and systems
- 4) Program Design & Delivery
  - Determine customer needs
  - Incorporate efficient practices
  - Include tactical implementation
- 5) Staffing
  - Determine & procure resource requirements
- 6) Marketing Plans
  - Develop distribution channels
  - Characterize market segments
  - Develop promotional strategies
- 7) Tracking Systems

- Develop information resource systems for implementation, monitoring, and reporting
- 8) Budgets
- 9) Program Monitoring & Evaluation
- Cooperative development of a mechanism that balances cost, energy savings, environment, business needs, and policy objectives

The resulting value and outcome of this process approach will be a refined level of overall quality, performance, and program acceptance.

Action Steps for Ramp-up & Staffing

1. The UI C&LM 2000 team developed detailed process maps and flow diagrams for all major program areas. In doing so, they created a graphic representation of the sequence of steps necessary to produce a completed project/unit within a program. Additionally, the creation of these flow diagrams allowed the team to uncover potential problems, bottlenecks, and unnecessary and/or duplicative steps in the process. It has become a versatile tool with applications in nearly every phase of program development. See Appendix VII for an example of this process, a work flow diagram of our Energy Opportunities Program.
2. Taking the flow diagrams a step further, each program action step was analyzed to determine the skill set needed to perform that function. Skill sets refer to the technical skills and abilities required to effectively carry out the duties required for each action. The skill sets were grouped and labeled. A matrix was developed to define these skill sets and apply them where appropriate throughout all other flow diagrams.
3. The next step in the process was to compare the skills across programs. In doing so the team was better able to match appropriate skill level with personnel and the respective C&LM program. The necessary skills were then aligned to coincide, when appropriate, with current UI job descriptions and assigned job titles.
4. This information enabled the team to identify potential opportunities to rely on the private sector and create strategic vendor partnerships. Below in the section titled *Description of Program Support Types*, is a comprehensive list of resources to be used for program delivery. This list includes dedicated C&LM department staff, other internal UI department support and a variety of trade ally support.
5. Using planned program marketing penetration goals, historical volume, etc., the percentage of people needed to perform each skill for each program function was determined. This effort indicated that for direct implementation and support of the 2000 plan, UI utilize an organization of 31 people across a variety of positions. The following plan maximizes efficiency by splitting support and administration functions from program delivery.

### Description of Program Support Types

#### 1. C&LM Department dedicated staffing

Ramping up from a \$3.3 million C&LM plan to \$16 million is a significant effort. UI has made progress towards this challenge by developing an organization dedicated to C&LM program success as described below:

- To implement the 2000 plan, 31 UI delivery and support positions are being filled.
- UI has already secured 17 internal staff positions that are dedicated to the C&LM area for the 2000 plan. This now accounts for 55% of the organization staffed and trained for 2000.
- The remaining 14 positions are currently being posted internally at UI and through external job postings. For the remaining positions unable to be filled internally, an external search will be conducted following job posting closing dates. We will continue to be aggressive, bring new people into the department and get them trained for program marketing, delivery, and support functions. UI anticipates being more than 90% staffed by January 1, 2000.

#### 2. Internal Support from other UI departments

UI considers the implementation of the 2000 C&LM plan a company-wide responsibility and therefore is coordinating cross-department activities and staff to generate leads, deliver services, and communicate with customers.

- Approximately 24 UI internal department positions will coordinate closely with the C&LM department. They are 12 Account Managers, 7 Economic Development Representatives, 2 Business Field Representatives, and 3 Community Outreach Representatives. Additional leads and information will also be channeled through UI's Client Relations Center, Credit and Collections, and Customer Engineering areas. The day to day work of these people includes heavy customer contact in regards to multiple needs. Their roles will allow them to work with customers and channel them through to the C&LM area for participation in various programs when they assess the customers needs.

#### 3. Trade Allies/Outside Resources

For years UI has devoted staff, time and resources to developing relationships with myriad energy service providers within the UI service territory. These working relationships benefit customers as they become participants in UI programs, benefit UI by providing leads and meeting energy goals, and benefit trade allies by enhancing their market-base and financial growth. UI's strategy to implement the 2000 plan is to continue the development of an array of providers capable of fulfilling the many program needs of the plan. A secondary benefit to this approach is support of the energy service provider industry.

- Direct services needed by UI to implement the plan, such as energy audit performances, direct installations, etc., will be obtained through the solicitation of bids through competitive bidding processes. These contractors will work directly for UI and execute their work according to agreed upon protocols.
- Implementation allies, not part of the direct services group, such as energy services providers and vendors, will be provided customer leads that have the

- potential of becoming completed projects. In the reverse, the Company will encourage energy services providers to bring potential projects to the Company.
- Vendor allies who sell or manufacture equipment will work with UI in their efforts to increase market share and acceptance of the energy efficient technologies they produce and sell.

UI takes its obligations under PA 98-28 seriously and has developed a strategic, workable plan to implement its 2000 C&LM plan. Clearly we have concerns about ramping up from a \$3.3 million program to a \$16 million effort. One concern beyond UI's control is the unprecedented condition of the states labor market. Recent unemployment rate figures are at a record low. This impacts the Company and its customers on many levels, such as higher labor costs, materials cost, search costs, and availability of services.

### **Strategic Partnerships**

One of the Company's strategic deployment efforts is to "form strategic partnerships." UI has been involved with strategic partnerships for three years and is continuing to build or form alliances including the following:

1. This year, at the ECMB's urging the Company has actively pursued coordinated efforts with CL&P. The two companies are involved in the joint administration of a number of conservation and load management programs. See Appendix V for further details of the companies' collaboration efforts.
2. Federally sponsored programs including The Department of Energy's *Rebuild America* program and the Environmental Protection Agency's Energy Star programs.
3. The Northeast Energy Efficiency Partnership (NEEP). NEEP is a non-profit 501 (c)(3) organization founded in response to public and private interest in regional initiatives for energy efficiency and market transformation. NEEP works with utilities (over 30 throughout the Northeast), regulators, environmental and consumer groups, government agencies, and the energy efficiency industry, as planners, strategists, conveners, educators and facilitators, to develop regional initiatives and regulatory support for their implementations. NEEP facilitates the coordination of multi-utility initiatives designed to have lasting impact on various energy efficiency market needs. UI will support 6 NEEP initiatives in 2000. CL&P is also supporting NEEP initiatives. See Appendix V for details.
4. In addition, UI will be joining the Joint Management Committee (JMC) of the regional Energy Star New Homes Initiative. The JMC consists of 12 New England utilities including CL&P. The JMC is facilitated via a non-profit organization and is focused on influencing the market place to adopt energy efficient building practices for new homes.

Working with regional initiatives via NEEP and the JMC is a strategy that enhances the Company's ability to serve customers. *These initiatives do not replace UI's involvement with and overall implementation of energy efficiency programs.* UI's approach is to use

regional and national initiatives like NEEP and Energy Star as platforms for local program marketing and/or delivery. In this approach UI leverages regional activities to influence equipment manufacturers. This focus on manufacturers and suppliers is referred to “up-stream marketing.” On its own, a utility the size of UI could have little impact on this up-stream market, which consists of national manufacturers of appliances, motors or other energy efficient products, and the broader levels of the distribution channels. Parallel to those efforts, UI Program Administrators work closely with end-use consumers and local distribution channels to market program advantages and encourage program participation. The Company’s work with customers is referred to as *downstream marketing*. This combination of activities will produce substantially greater benefits than either element independently.

It should also be noted that UI considers the area’s energy services companies and vendors to be some of its most important and valued alliances. Without a strong trade ally network program success would come at a much higher level of uncertainty. Allies are encouraged to work with the Company to leverage funds, provide energy saving services and products and serve customers.

### **Non-Electric Energy Savings**

- Customers consume a variety of fuels and quite often there is an interrelated dependence on different fuel types for a single end use. While on a visit at customer’s home or business UI field reps will identify non-electric energy savings opportunities that make good conservation sense to implement and work with the customer to take appropriate actions. Often, the only barrier to implementation is lack of technical expertise on the part of the customer or lack of capital to get the job done. This can only be done if the Company is able to invest a portion of the funds for non-electric measures or services. As part of its interpretation of PA 28-98, the ECMB has drafted an all fuels resolution that allows for up to 10% of the total budget to be used for non-electric incentives. See Appendix II for ECMB *All Fuels Resolution*. UI has initially allocated approximately 2.5% of the total budget for use on non-electric measures. In the course of refining program design, before they are implemented and during the course of implementation, additional monies will be targeted to non-electric savings opportunities where appropriate, not to exceed 10%. Because this is a departure from the traditional use of C&LM funds UI offers the following:
- Taking this approach is a learning process. UI wants to remain open to opportunities whereby the customer has the potential to impact all energy bills.
- UI will track non-electric expenditures throughout year 2000 and present findings to the ECMB and the Department upon completion of the evaluation process.

*Conservation & Load Management*  
**PROGRAM DESCRIPTIONS**

**Energy Blueprint**

**Energy Opportunities**

**Small Business Advantages**

**Residential Opportunities**

**Low Income Outreach**

**ENERGYBLUEPRINT**  
**A Lost Opportunity Program**

*Designed to capture energy efficiency opportunities  
at the time of a naturally occurring event.*

CUSTOMER PROFILE	TARGET OPPORTUNITIES	TECHNOLOGIES	SERVICES	BUDGET
<ul style="list-style-type: none"> <li>▪ All UI C&amp;I customers</li> <li>▪ Markets with unique needs: <ul style="list-style-type: none"> <li>Municipalities</li> <li>State Buildings</li> <li>Federal Buildings</li> <li>Economic Development</li> <li>Motors market</li> <li>HVAC market</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ C&amp;I Customers planning major construction</li> <li>▪ State of CT owned facilities planning major construction</li> <li>▪ C&amp;I customers replacing failed HVAC equipment &amp; motors</li> <li>▪ New businesses moving into UI service area</li> <li>▪ Municipalities planning major construction</li> <li>▪ Federal govt. buildings planning major construction</li> <li>▪ Design Professionals</li> <li>▪ Contractors, distributors and manufacturers who influence decision makers</li> <li>▪ Property owners/managers planning major construction</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lighting and lighting Controls</li> <li>▪ Process equipment &amp; System Optimization</li> <li>▪ HVAC equipment</li> <li>▪ Premium Efficiency Motors</li> <li>▪ Variable Speed Drives</li> <li>▪ Energy Management Systems</li> <li>▪ Chillers</li> <li>▪ Refrigeration</li> <li>▪ Compressed Air Systems</li> <li>▪ Envelope measures</li> <li>▪ Windows and treatments</li> <li>▪ Domestic Hot Water</li> <li>▪ Ultrasonic humidifiers</li> <li>▪ DDC (Direct-digital control system)</li> <li>▪ Custom Measures</li> </ul>	<ul style="list-style-type: none"> <li>▪ Design grants</li> <li>▪ Financial Incentives</li> <li>▪ Technical Assistance</li> <li>▪ Building Design Assistance (Systems Integration)</li> <li>▪ Commercial Lighting Design</li> <li>▪ Financing</li> <li>▪ Energy Audits</li> <li>▪ Pricing Reviews</li> <li>▪ Single Measure Analysis</li> <li>▪ Energy End-use Analysis</li> <li>▪ Vendor Proposal Review</li> </ul>	<ul style="list-style-type: none"> <li>▪ \$4.5 million</li> </ul>

# ***ENERGY BLUEPRINT***

## ***A Lost Opportunity Program***

***Designed to capture energy efficiency opportunities  
at the time of a naturally occurring event.***

**Objective:** Energy Blueprint is designed to capture energy efficiency opportunities at the time of a naturally occurring market event, such as new construction, expansion, renovation, remodeling and equipment replacement. In addition this program supports “Market Transformation” objectives by reducing or eliminating market barriers to energy efficiency in a lasting manner.

**Customer Profile:** Energy Blueprint targets commercial, industrial and institutional customers, as well as small businesses planning new construction projects, major renovations, tenant fit-out, and equipment replacement. This program also targets customer segments with unique needs, such as municipalities, federal and state buildings and new customers to the service territory.

**Program Description:** This program encourages the design and construction of energy-efficient building envelopes, lighting systems, HVAC systems, motors, renovations and tenant fit-outs and other energy components of commercial and industrial buildings. The program provides financial incentives to help C&I customers realize long-term energy savings, design grants to incorporate energy efficiency technologies prior to construction commencement, and technical assistance to create custom energy measures specifically designed to meet a customer's business needs.

The program’s other major objectives are to provide the building community with hands-on experience in energy efficient design and construction and to foster relationships with architectural and construction trade organizations. The program offers one-on-one customer assistance for design, financing and energy efficiency analysis.

Since new construction projects tend to take time to complete we expect this type of program to be a multi-year process.

**Marketing Strategy:** UI will tailor its marketing strategy to meet the needs of those individual groups who are looking for one specific energy efficiency opportunity or a wide range of opportunities all at once. Marketing approaches are designed to meet the needs of each unique customer group. With lost opportunity programs, timing can make the difference between a customer designing their facility with all the potential energy efficiency opportunities or none at all. Being there at the time of design, the time of equipment replacement or at the time of renovation is critical to long term energy savings. Therefore, this program is marketed through a variety of channels that impact how and when energy related decisions are made in this marketplace.

Marketing will be targeted to the local design community along with UI participation in participation and involvement with the design community influences engineers, architectural and design firms, building trade organizations, vendors, contractors and leads for this program.

Because Energy Blueprint can be a tremendous asset in the early planning stages of Blueprint exists. UI will market Energy Blueprint to a wide variety of customers as follows:

UI Energy Engineers and Account Managers will solicit customers and their design professionals. Other marketing efforts include informational mailings, face-to-face seminars, trade shows, vendor and energy services community programs and UI's Internet web page.

Marketing efforts are tailored to overcome the unique barriers associated with this customer base. Typical barriers to program participation by municipalities include:

- Long budget planning cycles
- Administrative changes due to elections
- No energy efficiency "champion" within the system
- Multiple decision makers

wastewater facilities, transportation facilities, housing authorities, and traffic signals systems in the 17 cities and towns within UI's territory. UI will inform municipalities

personnel, where materials presented include comprehensive informational packets and case studies. In addition, UI coordinates its marketing effort with Federal, State, and

implementation teams and determine appropriate actions during the decision-making process. The design, trade, vendor and energy service communities play important roles

#### *State Buildings*

This sub-program targets all State of Connecticut facilities within the UI service territory.

To overcome those barriers UI's program staff works directly with the State Department of Public Works (DPW) facilities personnel to determine appropriate State buildings for

similar data as presented to the Municipalities. Participation criteria and incentive levels are similar to those available to other C&I customers.

### *Economic Development*

The *Economic Development* sub-program (ED) is designed to deliver energy conservation services to existing customers who are expanding in UI's service area, businesses who are near financial distress, and new businesses that are locating in UI's service territory. This customer group receives all services and measures available under the Energy Blueprint program. Marketing approaches include face to face meetings, builder and buyer seminars and trade shows. UI will also work with the State and local government agencies to market this program.

The ED program will provide a suitable level of conservation services to meet the varied needs of this market. Services will include energy audits, energy system design consulting services relating to the efficiency of new or expanding facilities, and cash incentives for electric efficiency upgrades.

UI will manage and administer ED through a flexible combination of in-house personnel and outside resources. UI Account Management and Economic Development staff responsibilities currently include the growth and retention of existing customer businesses, the attraction of new businesses, and the identification of distressed businesses. Through these channels, project leads will be forwarded to Energy Services staff for qualification and implementation of projects.

### *Premium Motors Initiative<sup>1</sup>*

This regional initiative jointly markets to distributors and suppliers via a common implementation vendor. This supply side marketing is crucial to program success. A variety of mediums are employed including mailers, brochures, trade shows, advertising in trade publications and in-person visits by trained circuit riders. On a utility level, marketing is focused on the end user. At UI this is done via web site promotions, brochures, trade shows, CallNet<sup>2</sup> and one-on-one contact. The coordinated approach proves effective in promoting up-stream support for regional retailer initiatives and enables us to ensure conformity among regional retailers.

### *Comfort Zone*

HVAC contractors will be targeted with program benefit information since they are a crucial influence over the customer's ultimate decision. UI participates in the regional *Cool Choice* initiative, which works to affect the "upstream" efforts of market transformation. A common regional rebate form with common rebates among all

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<sup>1</sup> Detailed program descriptions for *Regional Initiatives, Premium Motors, Coal Devices, and Design Lights* are included in Appendix V.

<sup>2</sup> CallNet is UI's automated customer information system. When a customer calls for information about a particular program or service the request is entered into a computerized system. A report is automatically generated in the mailroom and a custom package is sent directly to the customer.

participating utilities strengthens the marketing of this program. Additionally, the program is marketed directly to end use customers through advertising campaigns that consist of direct mail, print, radio, and a variety of other media formats. Relationships with local distributors and contractors promote “downstream” support of the program and adoption of efficient equipment stocking practices.

*DesignLights Consortium (DLC)*

The DLC is a regional collaboration of 7 Northeast utilities and other organizations. The Consortium is coordinating its effort to influence commercial lighting design toward quality, comfort, and efficiency during remodeling, renovation, and new construction activities. To help inform the lighting market, the DLC completed three Lighting Design Guidelines (the *KnowHow* series) for the office, school, and small retail markets. DLC targets electrical contractors, electrical equipment distributors, lighting equipment manufacturers and property owners/managers. Marketing efforts include the following activities: training seminars for electrical contractors, demonstration projects and case projects for owners/managers, Internet access for all markets players and promotional material for other agencies and organizations.

<b>Budget for Energy Blueprint and associated sub-programs:</b>	<b>\$4,465,453</b>
<b>Annual Energy Savings:</b>	<b>20,015,994 kWh</b>

## ***ENERGY OPPORTUNITIES - Retrofit Program***

***Upgrading existing equipment and systems to capture energy savings.***

<b>CUSTOMER PROFILE</b>	<b>TARGET OPPORTUNITIES</b>	<b>TECHNOLOGIES</b>	<b>SERVICES</b>	<b>BUDGET</b>
<ul style="list-style-type: none"> <li>▪ All UI C&amp;I customers</li> <li>▪ Markets with unique needs:                             <ul style="list-style-type: none"> <li>Municipalities</li> <li>State Buildings</li> <li>Federal Buildings</li> <li>Boards of Education</li> <li>UI owned transmission/distribution system</li> <li>Customer owned transmission/distribution</li> <li>Economic Development</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ C&amp;I Customers retrofitting facilities</li> <li>▪ State of CT facilities planning retrofit projects</li> <li>▪ Municipalities planning retrofit projects and/or traffic signal system upgrades</li> <li>▪ Federal buildings planning retrofit projects</li> <li>▪ Contractors, distributors and manufacturers who influence decision makers</li> <li>▪ Property owners/managers, planning retrofit projects</li> <li>▪ School boards planning retrofit projects</li> <li>▪ UI customers on rider ED, rate CE or rate BR</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lighting and lighting Controls</li> <li>▪ HVAC equipment</li> <li>▪ HVAC Economizers</li> <li>▪ HVAC Optimization</li> <li>▪ Chillers</li> <li>▪ Energy Management Systems</li> <li>▪ Process equipment &amp; System Optimization</li> <li>▪ Premium Efficiency Motors</li> <li>▪ Variable Speed Drives</li> <li>▪ Refrigeration</li> <li>▪ Refrigerator system optimization</li> <li>▪ Compressed Air Systems</li> <li>▪ DDC(Direct-digital control system)</li> <li>▪ Envelope measures</li> <li>▪ Windows and treatments</li> <li>▪ Domestic Hot Water</li> <li>▪ LED Traffic Lights</li> <li>▪ Ultrasonic humidifiers</li> <li>▪ Custom Measures</li> </ul>	<ul style="list-style-type: none"> <li>▪ Financial Incentives</li> <li>▪ Technical Assistance</li> <li>▪ Financing</li> <li>▪ Energy Audits</li> <li>▪ Pricing Reviews</li> <li>▪ Energy End-use Analysis</li> <li>▪ Single Measure Analysis</li> <li>▪ Turn-key service</li> <li>▪ Energy Efficiency Education</li> <li>▪ Industrial Systems Optimization</li> <li>▪ Vendor Proposal Review</li> </ul>	<ul style="list-style-type: none"> <li>▪ \$4.2 million</li> </ul>

# ***ENERGY OPPORTUNITIES***

## ***A Retrofit Program***

***Upgrading existing equipment and systems to capture energy savings.***

**Objective:** This program captures energy efficiency opportunities by 1) exchanging functioning but inefficient equipment within commercial or industrial settings with higher efficiency equipment; 2) improving building shell or facility performance; 3) improving energy use or management practices; and 4) inducing efficiency where it was not previously present.

**Customer Profile:** Energy Opportunities targets all commercial, industrial, small business, and institutional customers planning projects to retrofit their facilities with UI approved energy conservation measures. This program also targets customer segments with unique needs, such as municipalities, federal and state buildings and new customers to the service territory.

**Program Description:** Energy Opportunities offers a comprehensive and highly flexible menu of energy consulting services to existing commercial and industrial customers in order to assist them in retrofitting their facilities with cost effective C&LM measures and technologies. The services provided by Energy Opportunities are varied and specifically designed to meet the needs of the individual customer. They include energy audits, single measure analyses, walk-through audits, energy and end-use analysis, energy pricing reviews, product reviews, reviews of proposals submitted by contractors or vendors, cash incentives, project financing, and co-funded energy studies for advanced technologies. Additionally, UI will consider a program component targeted at industrial process, designed to offer technical analysis of pollution prevention, productivity, and energy opportunities, and incentive and financing support to participating firms. The Company will also take advantage of existing organizations, such as ConnSTEP, to support the program.

**Marketing Strategy:** UI markets this program directly to customers through face to face meetings by UI Energy Engineers and Account Managers. UI personnel use tools such as comprehensive information packets, case studies, seminars and trade shows. UI integrates its marketing programs with Federal, State and Regional initiatives, as well as programs provided by the design, trade, vendor and energy services community. In addition, UI has program information available on its web-site.

UI delivers this program to customers through the use of UI customer representatives and engineers, vendors, contractors, and energy services companies.

### ***All C&I Customers in General***

UI works with all commercial & industrial customers with an average 12-month peak demand of 100 kW or greater. Customers with less energy use are serviced via *Small Business Advantages*. Program managers work directly with energy service providers to help establish projects, as their efforts are an extension of the UI sales staff. Marketing tools include seminars, trade shows, as well as vendor and energy services community programs.

### *Sub-programs Delivered Via Energy Opportunities*

There are several customer groups with unique characteristics that are served through sub-programs of Energy Opportunities. These include:

- Municipal
- State Buildings
- Economic Development

Descriptions of these customer groups have been provided in the previous section under Energy Blueprint.

### *Transmission and Distribution Efficiency*

This market channel targets transmission and distribution system energy savings opportunities in both customer owned and UI owned equipment.

As the Distribution Company, UI recognizes that the Company has a responsibility to plan and fund distribution system maintenance and upgrades that effect system reliability and capacity. The Company does not propose that funds collected for C&LM be used to support such projects. The Company does believe that there are energy saving opportunities within the distribution system that should be funded through C&LM, and that such projects will result in energy savings benefits for all UI customers.

UI currently has 34 low voltage substations that decrease voltage from 13,800 volts to 4,160 volts. To accommodate for local distribution needs, the voltage is further converted from 4,160 to 220 in many small local transformers. These substations do have sufficient capacity, and are reliable. However, this method produces high current losses on the system. System losses are a cost shared by all distribution system customers regardless of who supplies their generation. By upgrading these systems to those that convert 13,800 volts directly to 220 volts, energy savings is realized from reduced current loss.

UI has been planning and performing these system upgrades at a rate of approximately 2 substations a year. Under the current plan all substations will be completed in approximately 17 years. Increasing the rate of substation conversions will result in the savings beginning earlier, and to accruing for more years. The proposed project plan for 2000 would increase the number of projects from two to three. The estimated future savings of this increase are 1,070,000 kWh annually.

UI's Marketing Department will also work with UI's Customer Engineers and Account Managers to identify customers who have T&D efficiency opportunities within their facilities similar to those on UI's system. UI engineers would then help quantify and qualify the energy savings opportunity, and incentives would be paid for qualifying projects to encourage completion.

### *School Boards of Education*

UI plans to contract with a nationally recognized professional educational service to work with teachers, curriculum leaders and key UI personnel to implement a student education program.

The students identify potential energy saving retrofit opportunities at their school and present it to their Board of Education. Upon acceptance of the project, the project is handled by the Energy Opportunities program staff. UI offers a 100 % subsidy to the participating schools for the cost of the educational service. The energy efficiency improvements will be supported by the Energy Opportunities initiatives. Direct marketing materials include a comprehensive information packet.

*Resource- Efficient Building Operations and Maintenance Initiative*

The long-term goal of NEEP's Resource-Efficient O&M Initiative (See Appendix V for Program Description) is to establish resource-efficient building operation and maintenance as the industry standard for commercial and institutional building performance in the Northeast region. UI plans to become a member of this initiative in 2000. The initiative's objectives are:

- Increase building O&M personnel knowledge and skills to operate and maintain commercial and institutional buildings for comfort, safety and efficiency.
- Build market awareness of the benefits of improved building performance.
- Build market demand for resource-efficient O&M services.
- Distinguish resource-efficient practices, service providers and knowledgeable building operators in the market place.

<b>Budget for Energy Opportunities and associated sub-programs:</b>	<b>\$4,184,212</b>
<b>Annual Energy Savings:</b>	<b>15,923,114 kWh</b>

**SMALL BUSINESS ADVANTAGES**  
**Direct Energy Savings Program**

*Making energy efficiency improvements  
a profitable investment for small businesses.*

<b>CUSTOMER PROFILE</b>	<b>TARGET OPPORTUNITIES</b>	<b>TECHNOLOGIES</b>	<b>SERVICES</b>	<b>BUDGET</b>
<ul style="list-style-type: none"> <li>▪ UI small C&amp;I customers with an average 12-month peak demand of 100kW or less</li> </ul>	<ul style="list-style-type: none"> <li>▪ Small business owners with facilities that can be retrofitted with energy efficient measures</li> <li>▪ Vendors who conduct initial audits and provide installation work of energy measures</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lighting &amp; Lighting Controls</li> <li>▪ HVAC Optimization</li> <li>▪ Domestic Hot Water</li> <li>▪ Refrigeration Optimization</li> <li>▪ Premium Efficiency Motors</li> </ul>	<ul style="list-style-type: none"> <li>▪ Financial Incentives</li> <li>▪ Energy Audits</li> <li>▪ Vendor Proposal Review</li> <li>▪ Financing</li> <li>▪ Technical Assistance</li> <li>▪ Turn-key service</li> <li>▪ Energy Efficiency Education</li> <li>▪ Pre/post installation inspections</li> <li>▪ Approved vendor list</li> </ul>	<ul style="list-style-type: none"> <li>▪ \$1.6 million</li> </ul>

## ***Small Business Advantages***

***Making energy efficiency improvements  
a profitable investment for small businesses.***

**Objective:** This direct savings program captures energy savings by exchanging inefficient energy equipment and systems with higher efficient equipment. Additionally, the program is designed to make energy efficiency improvements a profitable investment for the local small business by shortening the payback period of electric conservation measures.

**Customer Profile:** The program targets small commercial and industrial customers with an average 12-month peak demand of 100 kW or less. Typical program participants have consisted of small Doctor's offices, convenience stores, delicatessens and small retailers established within strip malls.

**Program Description:** Small Business Advantages offers a range of loan payback options with interest free financing for credit approved customers. The program is designed to provide the small business customer with cash subsidies for retrofitting their existing facilities with energy efficient measures. The program offers an approved vendor list for a flexible turnkey installation service that includes a “no-cost no-obligation” computerized energy evaluation. For added convenience, loan payments are made via the customer’s monthly electric bill.

UI teams up with approved vendors to offer customers a free energy analysis of their current energy equipment. The vendor then provides the customer with a proposal for efficiency upgrades and turnkey services.

**Marketing Strategy:** The small business customer is typically a hands-on businessperson with a host of day-to-day issues to address that can impact his/her business tremendously. There are significant barriers for this customer group. National research shows that energy use is a low priority for most small businesses, ranking 29<sup>th</sup> out of 30 business concerns in 1999.<sup>1</sup> Getting them to focus on their energy usage, let alone schedule appointments is difficult at best. SBA is designed to overcome these barriers employing these features:

- Consume as little time as possible for the business customer
- Interest-free financing
- No up-front out of pocket expense
- Positive cash flow

The marketing strategy for Small Business Advantages is designed to target eligible small business customers, through direct mailings, telemarketing and face-to-face contacts by the vendor. Part of the strategy is to minimize the business customer’s time involved in the project. UI also participates in small business events where the opportunity to review the SBA program is available. The approved vendors work closely with UI to do joint marketing of the program.

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<sup>1</sup> The Forgotten Majority: Small Businesses, Hidden Opportunities, E Source, July 1999 SB - 1

Additionally, UI develops leads as necessary and provides them to the vendors on a rotating basis.

Program vendors will collect the data at the site, prepare the energy analysis, and interact with UI staff for project approval and present their findings to the business owner promptly and concisely. This method simplifies the program for the business customer and allows for a turnkey operation.

**Budget:** \$1,634,934

**Annual Energy Savings:** 6,417,920 kWh

**RESIDENTIAL OPPORTUNITIES**  
**Energy Savings and Market Transformation Programs**

*Initiatives to reduce or eliminate market barriers  
to energy efficiency as well as obtain direct savings.*

<b>CUSTOMER PROFILE</b>	<b>TARGET OPPORTUNITIES</b>	<b>TECHNOLOGIES</b>	<b>SERVICES</b>	<b>BUDGET</b>
<ul style="list-style-type: none"> <li>▪ All UI Residential Customers</li> <li>▪ Markets with unique needs:</li> <li>General electric use</li> <li>Electric hot water</li> <li>Electric heat</li> </ul>	<ul style="list-style-type: none"> <li>▪ Torchiere replacement</li> <li>▪ SmartLiving Catalogue coordination allows for a Statewide effort</li> <li>▪ Energy Star efforts are supported by the DOE/EPA</li> <li>▪ Builders</li> <li>▪ Realtors</li> <li>▪ Residential customers building new homes</li> <li>▪ Residential customers doing home improvements</li> <li>▪ Architects</li> <li>▪ Retailers of Energy Star products</li> <li>▪ Home remodelers</li> <li>▪ Regional initiatives in place to increase recognition of Energy Star products</li> </ul>	<ul style="list-style-type: none"> <li>▪ Energy Star appliances</li> <li>▪ Energy Star lighting</li> <li>▪ Torchiere compact fluorescent lighting fixtures</li> <li>▪ HVAC optimization and replacement</li> <li>▪ Efficient construction techniques</li> <li>▪ Personal Energy Profile (bill disaggregation program)</li> <li>▪ Home Energy Rating System (HERS)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rebates on Energy Star labeled Room AC, refrigerators, dishwashers, clothes washers</li> <li>▪ Rebates on Energy Star lighting</li> <li>▪ Point of Purchase instant rebates</li> <li>▪ In-store labeling of Energy Star products</li> <li>▪ Retailer education and support on the benefits of Energy Star product promotion</li> <li>▪ Customer education on the benefits of Energy Star products and energy efficiency in general</li> <li>▪ Energy Conservation Loan Fund assistance</li> <li>▪ SmartLiving catalogue discounts</li> <li>▪ Replacement of halogen torchiere</li> <li>▪ HVAC rebates</li> <li>▪ Analysis of home energy usage using actual bills</li> </ul>	<ul style="list-style-type: none"> <li>▪ \$2.9 million</li> </ul>

## ***RESIDENTIAL OPPORTUNITIES***

***Initiatives to reduce or eliminate market barriers to energy efficiency as well as obtain direct savings.***

**Objective:** This program is designed to sustain lasting changes in the structure, function, or behavior of the market, which results in increased awareness and use of energy efficient products, services and/or practices and to capture direct energy savings where possible. A major program component, Energy Star®, is sponsored by the Department of Energy/Environmental Protection Agency and promoted on a national level. UI's participation in and support of an Energy Star® program complements a strategic effort by regional utilities and other organizations to reduce market barriers to energy efficiency in a lasting manner.

**Customer Profile:** Residential Opportunities is directed at the entire residential sector of UI customers: 1) general electric usage, 2) electric domestic hot water 3) electric heat. The program can especially benefit residential customers purchasing air conditioning, refrigerators, clothes washers, dishwashers, and lighting as well as customers building or renovating their homes.

**Program Description:** Residential customers vary greatly in their need for energy efficient products and/or services. They purchase energy consuming products through a variety of channels, such as HVAC equipment through a licensed contractor or light bulbs at the grocery store. Customers' energy information needs are multi-faceted as well. Residential Opportunities is designed to reduce the unique market barriers that exist for residential customers and increase the availability of information and energy saving.

Regional NEEP initiatives focus mainly on the "upstream" affects, product manufacturers, distributors, etc. UI's efforts focus on the "downstream" market, or end user of the product. UI's efforts are targeted at customers, offering products, services and/ or information/ education that directly effect consumer energy use, buying decisions, or consumption habits.

**Marketing Strategies:** There are several market channels which can impact residential energy decisions. A customer may participate in one or more channels at any given time. The multi-marketing channels are:

### **Energy Star® Homes<sup>1</sup>**

UI, in cooperation with a regional initiative provides the following services and incentives:

- Home Certification/Home Energy Rating
- Incentives/rebates on appliances with the Energy Star® Label
- Incentives on energy efficient lighting fixtures
- Coordinated program promotion

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<sup>1</sup> Detailed program descriptions for *Energy Star Homes*, *Energy Star Appliances*, and *Energy Star Lights* are included in the Appendix under Commonality of UI and CL&P Programs.

The initiative works closely with builders and other trade allies to promote and support the Energy Star® Homes effort. UI strongly supports joint, regional efforts and advocates a coordinated effort throughout New England. The initiative is exceeding its 1999 5% penetration goal of Energy Star rated homes and is on track for a 9% penetration rate by the end of the year.

#### Energy Star® Appliances

UI, in conjunction with regional initiatives, provides the following services and incentives:

- In-store labeling of Energy Star® rated appliances
- Incentives/rebates on appliances with the Energy Star® Label
- Coordinated program promotion

UI and the initiative work closely with manufacturers and retailers to promote and support the Energy Star® Appliance effort.

UI participates in the Energy Star Appliance program, which is a NEEP regional market transformation initiative. There are 34 utilities involved in this initiative, covering CT, MA, RI, NH and VT.

#### Energy Star® Lights

UI, in cooperation with the Residential Lighting Partners (RLP) facilitated by the Northeast Energy Efficiency Partnership (NEEP), provides the following services and incentives:

- “Instant” point-of-purchase rebates on Energy Star® lighting products. These incentives are available directly through retailers and UI’s Smart Living catalog sent to customers semi-annually.
- Special promotions including Halogen Torchiere Replacements, and added incentives for compact fluorescent lights (CFL)
- Research and Development
- Coordinated program promotion

The RLP works closely with manufacturers and retailers to promote and support the Energy Star® Lighting effort.

#### Comfort Zone

HVAC contractors will be targeted with program benefit information since they are a crucial influence over the customer’s ultimate decision on what equipment to purchase and/or when to replace it. Customers are marketed via UI’s web-site, UI call center, mailings and home shows. By fostering relationships that start with equipment manufacture representatives, and continue with distributors, HVAC contractors, and customers, the program will impact all aspects of the unitary HVAC distribution channel.

#### Personal Energy Profile

The *Personal Energy Profile* (PEP) is a stand-alone product used to analyze and disaggregate residential customers’ monthly energy bills. The PEP is an effective education tool that enables customers to understand better their household energy costs. Customers can obtain information

on which home energy uses provide the greatest opportunity for savings and recommendations on how to achieve improved energy efficiency.

The PEP can be accessed online, by customers via the UI web-site, or by requesting a mail-in survey form through the UI call center. Customers answer a variety of questions relating to the physical structure and mechanical systems of their home, indoor and outdoor lighting, large and small appliances, and the energy consumption patterns associated with these systems. Regardless of the input mechanism, the PEP automatically references the customer's actual electric utility billing data for accurate, up to date audit profiles. Customers can opt to manually enter their own data for other energy costs such as, gas, fuel oil, and propane. If no other energy costs are provided by the customer the PEP calculates estimated energy costs for these fuel sources.


Customers receive a detailed report, which graphically demonstrates annual energy use data in the form of color bar charts. The report breaks down household energy use by several major systems including, heating, cooling, lighting, kitchen and laundry, and small appliances. In addition, the report identifies appropriate conservation measures or actions and calculates estimated annual energy savings.

Newspaper advertising, promotional brochures and home shows are the most used marketing tools.

#### *Energy Conservation Loan Fund*

The target market for the program is all low to moderate-income residential customers. UI contributes to the Energy Conservation Loan Fund as required by section 16a-40b(f) of the Connecticut General Statutes. This State administered program provides eligible Connecticut residents with low interest loans for residential energy improvements. The majority of marketing for this program is handled by the CT Housing Investment Fund (CHIF) which administers the program. UI will incorporate program information into relevant customer brochures, on the UI web-site, the UI call center, and other appropriate forms of marketing.

#### *SmartLiving™ Catalog*

The *SmartLiving™* catalog, a joint effort with CL&P, is available to all UI residential customers. The catalog is designed to promote energy efficient products and energy education to our residential customer segment. The *Smart Living*  catalog offers customers a variety of energy efficient products at subsidized prices. It features a wide selection of compact fluorescent lights and hard-wired CFL fixtures at discounted prices, accompanied by consumer education. Other products, such as low-cost energy conservation measures that customers can install themselves are also included in the catalog. Domestic hot water and air sealing measures are offered, as well as several environmental and safety products to create a catalog that is valued for its pricing and variety.

The catalog is sent to all UI residential customers twice a year. In addition to the catalog, four different bill inserts will be included in the residential bills that will offer a variety of products for the customer to purchase. The catalog will also be promoted through building inspectors offices and local public libraries. The availability of a catalog will also be included on the UI web site.

**Budget for Residential Opportunities and associated sub-programs: \$2,900,665**  
**Annual Energy Savings: 7,123,681 kWh**

**LOW INCOME OUTREACH**  
**Direct Savings and Educational Program**

*Energy efficiency improvements and education for low income customers.*

<b>CUSTOMER PROFILE</b>	<b>TARGET OPPORTUNITIES</b>	<b>TECHNOLOGIES</b>	<b>SERVICES</b>	<b>BUDGET</b>
<ul style="list-style-type: none"> <li>▪ UI Residential Customers at or below 150% of the federal poverty guidelines</li> <li>▪ Residential customers eligible to receive SAFA</li> <li>▪ Special needs customers:</li>   <li>General electric usage</li>   <li>Domestic hot water</li>   <li>Electric heat</li> </ul>	<ul style="list-style-type: none"> <li>▪ Planned annual energy savings of 3.5 million kWh</li> <li>▪ Low income neighborhoods</li> <li>▪ Low income customers with high energy usage</li> <li>▪ Landlords of rental property to low income tenants</li> <li>▪ SAFA recipients</li> </ul>	<ul style="list-style-type: none"> <li>▪ Blower door testing</li> <li>▪ Shell insulation</li> <li>▪ Setback thermostat</li> <li>▪ Water saving showerhead</li> <li>▪ Faucet aerators</li> <li>▪ Water heater wraps</li> <li>▪ Pipe insulation</li> <li>▪ Compact fluorescent bulbs</li> <li>▪ Hot water heater turndown</li> <li>▪ Refrigerator evaluation</li> <li>▪ Infiltration measures</li> <li>▪ Compact Fluorescent Lighting Fixtures</li> <li>▪ Halogen torchiere replacements</li> </ul>	<ul style="list-style-type: none"> <li>▪ Customer education on energy conservation methods</li> <li>▪ UIHELPS hotline for information regarding utility services, public assistance programs, state agency contacts, community action agencies or other support organizations.</li> </ul>	<ul style="list-style-type: none"> <li>▪ \$1.7 million</li> </ul>

## ***UI Helps***

### ***Energy efficiency improvements and education for low-income customers***

**Objective:** *UI Helps* is designed to produce energy savings for low-income customers through the direct installation of energy conservation measures (“ECMs”) in their homes. The program also provides general education services, which include:

- An explanation of the benefits, and instruction on the proper use and care, of the ECMs installed.
- A review of the customer’s current electric usage and education materials targeted to the customer’s specific energy needs.
- A discussion of the customer’s energy consumption habits and encouragement of an energy efficient lifestyle.

The installation of ECMs and education are fee-free to the customer and the savings benefits are realized immediately.

**Customer Profile:** UI believes expanded outreach efforts are necessary in Year 2000 to ensure all low-income customers are provided with the greatest opportunity to participate in the Company’s Low-Income Program. For this reason, the program targets all residential customers income-eligible to receive assistance through either the Connecticut Energy Assistance Program (“CEAP”) or the State Appropriated Fuel Assistance Program (“SAFA”). All households with income up to 150% of the Federal poverty level are income eligible for CEAP. Households with at least one elderly (60+ years old) or disabled person, and income above 150% but not greater than 200% of the poverty level are income eligible for SAFA. UI believes employing these income criteria will result in greater statewide consistency for eligibility requirements, which may in turn, positively impact program awareness and customer access to program offerings.

**Program Description:** The program provides comprehensive, electric energy efficiency services and some non-electric ECMs. Delivery of customized energy conservation measures is segmented into three basic groups: 1.) Customers with electric heat, 2.) Customers with electric domestic hot water heaters, and 3.) General use electric customers.

1. *High Use Electric Heat Customers:* Services include blower door testing, ceiling, floor and sidewall insulation needs analysis, setback thermostat analysis, refrigerator evaluation, and an inventory of DHW and lighting conservation opportunities. This is followed by the installation of all appropriate measures and customer education.
2. *Domestic Hot Water Customers:* Services include the installation of water saving showerheads, aerators, hot water heater (HWH) wraps, pipe wrap, and compact fluorescent lamps (CFL). HWH temperature turndowns and customer education services are also provided as appropriate. CFL fixture and refrigerator replacement services are provided as warranted.

3. *General Use Customers*: Services include the installation of CFL's and customer education services as appropriate. CFL fixture and refrigerator replacement services are provided as warranted.

**Marketing Strategy:** In order to meet the Company's goal of providing low-income customers with the greatest opportunity for program participation, UI Helps services will be delivered through two marketing channels: 1.) A direct, customer contact and service delivery effort and 2.) A new referral intake process.

*1.) Direct Program Delivery:* The delivery of UI Helps services will be expanded to include both traditional neighborhood canvassing operations by an outside vendor and a customer outreach effort by Community Action Agencies. UI believes this coordinated approach to service delivery will enhance the effectiveness of the program in identifying eligible low-income households and subsequent program participation.

**Neighborhood Canvassing:** UI bids out the program installation and education components of this UI Helps delivery channel to energy service providers. The one-on-one contact promoted via the neighborhood canvassing technique allows the *UI Helps* representative to overcome barriers the customer may have, offer assurance that there will be no fee and point out, on the spot, energy efficiency upgrades that could be done to their residence. The installation contractor also handles special requests and customer referrals from the utility.

UI staff uses customer data files to query for customers who meet the income-eligibility criteria of this program. The installation contractor is responsible for soliciting customer participation in the program. A direct mail postcard is sent to all eligible customers in a neighbor announcing a date range when a field representative will be in their particular neighborhood.

Following the mailing, a *UI Helps* representative canvasses these neighborhoods to solicit participation in the program. To accommodate customers that wish to participate but will not be home during the canvassing hours, the postcard also advises customers to call *UI Helps* directly and an appointment will be made for them at a convenient time.

**Community Action Agency Outreach:** The Community Action Agencies ("CAAs") currently manage energy assistance and weatherization programs for the Connecticut Department of Social Services ("DSS"). They are completing a comprehensive, client tracking data system that they represent will track, from the point of entry, all applicants for CEAP, SAFA and weatherization assistance. As a result, the CAAs believe that they are in an excellent position to expand their outreach capabilities and increase utility program participation levels.

UI is currently holding discussions with representatives of the CAAs aimed at placing the management and responsibility for a portion of the UI Helps program budget and annual goals with the CAAs.

Pending the development of an agreeable management plan by the CAAs, which will include:

- A clear process map and detailed work plan
- Client tracking and follow-up procedures
- ECM verification protocol and customer satisfaction reporting mechanisms
- A menu of electric and non-electric measures and services (with associated unit costs and savings) consistent with those currently provided or planned in UI Helps

The CAAs would:

- Identify eligible households for energy-related services including utility and non-utility assistance programs.
- Assess the level of assistance required by each household and determine the appropriate referral/ counseling services or channels.
- Enroll customers in energy assistance programs, if eligible.
- Make all appropriate referrals and follow-up to ensure that services were received.
- Deliver UI Helps services to eligible energy assistance customers in accordance with the UI Helps program description and the agreed upon management plan.
- Maintain a database that includes customer information such as household eligibility, services requested, service/ program or agency referrals, services provided, achieved energy savings and follow-up information.
- 

In order to ensure an equitable distribution of program funds between the Neighborhood Canvassing and CAA Outreach delivery methods, UI is prepared to commit up to 50% of the planned UI Helps ECM budget to the CAA Outreach effort. Concurrently, UI is willing to give the CAAs the opportunity to meet up to 50% of the program's annual energy savings goal in the year 2000.

Dividing the ECM budget in this manner, rather than the total program budget, is useful in correlating the relative program impacts and cost effectiveness of the two marketing channels. When evaluating overall program performance, all program costs will be considered. If this proves successful, UI is willing to increase CAA Outreach funding and commensurate program energy savings goals in future years.

2.) *Referral Intake:* Thousands of Connecticut households request some type of energy or other special assistance every year. Many of these households may have inquired about or even participated in other assistance programs without ever being informed of or referred to utility programs such as UI Helps. The focus of UI's new referral intake process is to identify these eligible households, provide them with information about UI Helps and refer them for service in the program as appropriate. To accomplish this task, UI will develop a toll free help line that offers customers a centralized source of information regarding utility services, public assistance programs, state agencies, local community action groups or other support organizations.

### **Help Line Referral Source – Pilot Program**

UI will explore the feasibility of funding and supporting (possibly in cooperation with CL&P) an existing help line referral/ counseling service. Through an agreement between UI and the help line provider, the help line's referral/ counseling services would be expanded to include information regarding the Company's programs and increase the provider's role of facilitating customer participation in these programs. Under this pilot program, the help line referral/ counseling service would:

- Identify eligible households for energy-related services including utility and non-utility assistance programs.
- Assess the level of assistance required by each household and determine the appropriate referral/ counseling services or channels.
- Make all appropriate referrals and follow-up to ensure that services were received.
- Maintain a database that includes caller information such as household eligibility, services requested, service/ program or agency referrals, and follow-up information, including customer satisfaction level with services provided.

**Budget:** \$1,665,191  
**Annual Energy Savings:** 4,002,667 kWh

## Benefit / Cost Analysis

Each proposed 2000 UI program and the entire UI plan has undergone analysis to determine that the planned lifetime savings benefits produced are greater than the planned costs needed to capture the savings. See budget spreadsheet page one, UI 2000 C&LM Cost Effectiveness Summary, in the budget chapter of this filing. Two different benefit/cost tests have been performed for all programs: the Utility Test and the Societal Test. The tests are commonly described as follows:

### Utility Test

The utility test accounts for all costs incurred by the Electric Distribution Company to implement the program. The benefits considered include the projected reduction in the cost of electric generation and transmission resulting from the decrease in electric consumption over the life of the efficiency upgrade or investment.

### Societal Test

The Societal Test accounts for all costs incurred by the Electric Distribution Company and participants to implement the program. The benefits include electric generation and transmission savings plus other societal benefits including the following:

- Other fuels
- Environmental
- Economic
- Water

The screening tool used by UI to determine the planned benefit/cost (B/C) ratio for 2000 was recently developed by Optimal Energy, Inc. under the sponsorship of several of the energy collaboratives in Massachusetts and is being used by a number of utilities in that state. Some of the key factors incorporated in the analysis include:

- Program budget and program cost
- Measure life
- Incentives paid to the participants
- KWh savings
- Cost of avoided energy and generating capacity
- Savings resulting from reductions in transmission and distribution losses
- A 25 percent adder to the electric savings is used for environmental and economic benefits, and an additional 50 percent is added as a low-income benefit
- A UI Co. discount rate of 7.55% is used in the Electric System Test
- The T-Bill rate of 5.94% (predicted for quarter 4, 99) is used for the Societal Test

The screening tool has been used on a one-year basis with benefit life projected to a 30 year maximum, depending on the program. Only measures performed in 2000 are included, and no consideration has been made for the following benefits.

- No market transformation predictions are included
- No spillover or post program benefits are included

## Pilot Programs

Pilot activities and programs allow UI to test new program concepts, technologies, and marketing tactics for effectiveness and customer acceptance prior to developing a full scale program offering. For 2000 UI proposes three areas in which pilot activities are appropriate including Load Management, ECMB initiated pilots, and *It Pays to Save* – low income services.

### Load Management

As Connecticut enters electric deregulation, the role and impact of Load Management at the retail level is under going change. Traditionally, electric utility pricing did not require most customers to be concerned with hourly fluctuations in their loads. Restructuring may increase many customers' awareness of the hourly cost of energy, if Electric Suppliers provide pricing motivation for a more interactive management of a facility's energy use. When the hour by hour changes in capacity cost becomes significant, it may be in an Electric Supplier's economic interest to provide pricing signals that optimize their customers' energy usage by lowering demand in peak-periods and shifting loads off-peak when prices are low.

The experiences of the past summer indicate that as the New England ISO power market emerges, the impact of effective customer load curtailment strategies may also intensify. UI believes that the Distribution Company may play a role as facilitator in situations where capacity is constrained. However, the reliability of the bulk power electric system is ISO-NE's responsibility. UI's responsibility includes the development and maintenance of adequate transmission and distribution facilities.

UI has offered successful interruptible Load Management programs in the past. Since generation reliability was the responsibility of the Distribution companies, load management has been exercised whenever electrical demands exceeded generation availability. Large customers participated by shedding load during periods of peak system demand. UI paid customers based on the load they reduced. Now, the Company must move customers away from a regulatory perspective on load management towards a market perspective where customers may bid load reductions in the ISO\_NE market. Economic signals of this type are somewhat speculative at this time. However, the trend across the country is that such economic signals will increase. The price offered for customer actions must at least compensate them for the out-of-pocket costs of the action plus some amount as an adequate incentive for any inconvenience.

A pilot program will be developed for 2000 that builds off of UI's previously successful load management programs and the ISO New England Load Response Program for the Summer of 1999. These initiatives will serve as the model to adapt to the needs of this changing market. The details of pricing structure and other program logistics will be determined as the market conditions evolve. It is UI's intention to limit its long-term role in Load Management and to operate near-term as a process facilitator with customers, ISO, and the retail Electric Suppliers in this emerging market.

The Company proposes to implement pilot load management programs to determine, under actual conditions, what strategies will produce economic and practical resources by customer segment. In the design and implementation of load management pilot programs, the Company desires to

- Build on the Company's experience with load shaping programs (e.g., direct load control, interruptible rates, demand rates, etc.) and successful demand-side management programs; and
- Implement pilots that will test fundamental concepts of programs that would be applicable in a restructured market. That is, programs that would reflect the expected new pricing and program offerings that would be mutually beneficial to the customers and the Company.

UI also plans to investigate opportunities that allow customers to increase their understanding and control of Load Management within their own facilities. Technological advances in metering, telemetry equipment, and software will provide customers with the information necessary to make educated decisions that impact their energy costs and system capacity constraint situations. UI plans to investigate these new technologies and partner with select customers and vendor allies to determine the value of such systems in the deregulated marketplace.

The planned 2000 budget for Load Management pilot programs is \$675,000

#### **ECMB Pilots**

UI believes it is appropriate to set aside funds for pilot programs that the ECMB deems prudent for the Company to investigate in 2000. The Company encourages ECMB representatives of various constituencies to bring new ideas to the table that can then be tested in the market place. This budget will allow the ECMB to further its role in assisting the utilities to carry out new programs and initiatives that help customers better understand and manage their energy costs. At this time no specific activity or target has been identified for these funds. The proposed budget for ECMB Pilots is \$150,000.

#### **It Pays to Save**

A primary barrier to energy efficiency in the low-income market is persistence of savings. It Pays to Save is a pilot program designed to address this issue by encouraging continued use of energy-efficient products and services that are delivered through the Company's UI Helps program. Through this pilot program, UI will incent customers who maintain energy saving practices from month to month after participating in the UI Helps program. This incentive is in the form of a kWh per kWh matched savings. In effect, the customer will receive the value of one free kWh for every kWh saved, including savings that come as a direct result of measures installed via UI Helps. The Company will explore two approaches to delivering the incentive: 1) applying a credit to the customer's UI bill; 2) setting up a unique partnership with area lending institutions in an effort to leverage the customers energy savings. This will be done by incorporating an Individual Development Account.

An educational component for participants will be incorporated to teach energy-efficiency behaviors that will result in reduced energy usage. Periodic newsletters, product catalog and other materials may also become a component to keep customers informed and encouraged and provide a source of low-cost energy saving devices. The proposed budget for It Pays to Save pilot is \$135,000.

## **Research Development and Demonstration**

UI believes that 2000 is a year of transition and learning in the area of Research Development and Demonstration (RD&D). UI fully supports the concepts, objectives, and benefits that can result from successful RD&D initiatives. UI is also concerned that successful RD&D requires a critical mass of funding, dedication, and time to produce measurable results. UI believes that alone it does not possess the adequate size and budget needed for executing successful RD&D activities. Consequently, UI plans to support RD&D activities by aligning itself with other statewide, regional, or national RD&D initiatives that can offer near term benefits for UI customers and the state of Connecticut.

The Electric Power Research Institute (EPRI). EPRI is a large research organization with membership open to all that either generate or distribute electric power. EPRI demonstrates new technologies at member facilities to gain public awareness and acceptance of products prior to commercialization. UI plans to selectively fund specific EPRI energy conservation initiatives (Targets) that will advance leading edge energy conservation technologies for customers. EPRI offers participants opportunities to Co-Fund demonstration projects of new technologies in UI customer's facilities. This approach leverages UI's limited RD&D resources while providing UI customers the opportunity to benefit from exposure to leading edge energy systems.

The Consortium for Energy Efficiency (CEE) is a non-profit, public benefit corporation that uses the power of mass markets to advance super energy-efficient technologies that benefit consumers and the environment. This is done by encouraging utilities and other partners across the country to pool their market influence by voluntarily adopting common programs and efficiency specifications. CEE's national presence has influenced the adoption of energy efficient standards for refrigerators, clothes washers, HVAC equipment, lighting, motors and other appliances. UI will join utilities and other national organizations to support CEE's efforts for continued research and development of efficiency standards for various technologies.

UI will also investigate opportunities to partner with CL&P on RD&D activities that they are planning in 2000. Such activities could likely occur through initiatives endorsed by the Energy Conservation Management Board. As with EPRI activities, a partnership with CL&P would leverage UI budgets and eliminate redundant activities within the state. UI will also look for opportunities to develop partnerships with other organizations.

UI will also look for opportunities to support UI customers who have demonstrated promising new energy efficient technologies, or processes, but need financial support in developing and bringing these products to market. Support for these projects within the service territory benefits customers by reducing energy costs, increases local and states tax revenues, and can provide high tech and high pay manufacturing jobs.

The planned 2000 budget for RD&D is \$260,000.

## Monitoring and Evaluation

UI monitoring and evaluation (M&E) activities will determine whether or not the 2000 programs are producing the results intended. UI will build on its experience of conservation program M&E in the past as well as use of the considerable body of M&E knowledge that has been developed and peer-reviewed by professional evaluators over the last decade. By making use of pertinent findings and conclusions drawn by others and which are transferable, costs can be kept to reasonable levels while still producing credible results.

UI M&E activities will typically be characterized by having many of the following features:

- A computerized tracking system. Examples of events to be tracked range from individual CFL installations to large and complex energy systems.
- A baseline or benchmark assessment of current market conditions for the appropriate energy products and services. Some recent baseline studies done by others can be used by UI. In addition, there are some products and services for which UI will perform separate baseline studies.
- Process evaluations will investigate qualitatively how the market views a given program or sub-program.
- Impact evaluations will be designed to determine the effect the program has had on some variable or set of variables, such as energy consumption or electric demand reduction. These can be simple, single building before and after consumption comparisons, or highly complex multi-customer studies of participants and non-participants employing sophisticated sampling techniques, combined with engineering estimates, on-site visits or surveys. With accepted statistical methods these are used to strengthen the true effects of program offerings.

Each of these has its place and time in the life of a major program or subprogram. UI will strive to select the appropriate area for engaging in studies and analyses to provide the information needed without overspending on studies that seek to determine results that go beyond the required need.

One special M&E situation arises with regard to the NEEP regional market transformation (MT) activities. UI will collect the necessary information, such as units sold in its service area and its individual sub-program costs, in order to be able to calculate the annual cost/benefit values for its part in the regional effort. The determination of how effectively the regional market is being transformed will be done through a series of studies to be commissioned by participating utilities, coordinated through the NEEP organization. The results will be used on a regional basis to determine the overall level of success of the initiatives. Thus, while UI will contribute its small share toward the cost of these efforts, it is the jointly funded evaluations that will determine the degree of success.

Benchmarks for success of UI's more traditional programs will be determined each year in each program and sub-program. Certain benchmarks for success will be identified in the target market description. For example, in the Energy Star Homes sub-program the target market will be all new homes built that year in UI's territory and the UI benchmark for success with the program will be that "x" percent of those new homes will achieve the Energy Star rating with the resulting savings of "y" Mwhrs. The first year M&E activity for this particular sub-program would involve a process evaluation, as described above, between 6 and 12 months after it starts. The first year impact evaluation would be limited to adding up the estimated savings for each home, derived from the HERS rating calculation procedures, producing an aggregation of the savings for all Energy Star Homes for that program year. In the second or third year of the program a more rigorous impact evaluation may be undertaken, in which, either by telephone interview or on-site inspection of a sample of the homes, verification of the as built condition and measure retention would take place.

Industry accepted protocols for the measurement and verification (M&V) of savings resulting from actions taken in a specific building or industrial process will be utilized where applicable. These protocols spell out acceptable approaches to be followed and will form the basis for UI's savings values derived from similar situations found in the UI programs. These protocols give form and consistency to the historically random nature of M&V in the field of performance contracting, guaranteed savings etc. They include the 1997 International Performance Measurement and Verification Protocol (IPMVP), the 1996 Federal Energy Management Program's (FEMP) Measurement Verification Guidelines, and the draft ASHRAE 14-P Measurement of Energy and Demand Savings Guidelines. User groups of these protocols now include in an international setting - government entities, utilities, private companies, and energy service companies. IMVP covers energy and water conservation and is being used with projects involving emission-reduction credits. It offers a series of options, which can be chosen to meet the needs in a given situation. In a very abbreviated form they include:

- Verification via on-site inspections, spot measurements, commissioning etc.
- Savings determined by measurements taken throughout the term of a contract
- Whole-building or facility level review using the utility meter, billing analysis
- Computer simulation of the process, building or building component operation

UI's first year budget for M&E is \$552,420. This will include initial baseline studies and process evaluations. In the second and third years after programs commence more rigorous impact evaluations will be undertaken utilizing the most appropriate methodology for each situation. For those years the M&E budgets will likely rise above the 2000 plan level.

## **C&LM 2000: Distribution Company Incentives**

UI proposes that the Company be allowed to earn up to an 8% (before tax) incentive return for successfully managing its Conservation and Load Management 2000 programs. We propose that the incentive consist of a 1% minimum with an additional 1% adder for each of five (5) major program goals achieved and a 2% adder for cost-efficiency (see details below). Such an incentive return is consistent with past regulatory practice in Connecticut, is authorized and promoted by Section 16a-49 of the CGS and is consistent with expenditures for Conservation and Load Management programs in subsection (d) of Section 33 of PA 98-28.

### **Past Regulatory Practice**

Through 1996, UI, like other regulated gas and electric utilities here in Connecticut, was allowed to earn a maximum 3% bonus rate of return, above and beyond its full allowed rate of return, on unrecovered C&LM program balances. In addition, UI, again like other regulated gas and electric utilities, was allowed to recover the margin attributable to "lost sales" (i.e. the net revenue displaced due to conservation program energy savings) through a Conservation Adjustment Mechanism ("CAM") authorized by the Department pursuant to PA 91-248.

At the peak level in 1996, UI was authorized by the Department's Decision in Docket 96-03-29 to collect CAM revenues amounting to \$15,600,000 over the 1997 program year (6/97-4/98). Of this amount over 54% (\$8,467,000) represented the bonus rate of return and "lost sales" margin. The amount of the bonus rate of return, from 1% to 3%, was determined each year through the achievement of performance goals. UI earned the 3% maximum in each year 1993 through 1996 (e.g. \$2,160,000 in 1996), since UI always met or exceeded C&LM program goals approved by the Department. With the recovery of both a bonus rate of return and "lost sales", UI was fairly incented to carry out approved C&LM programs to the extent feasible within its market opportunities and capabilities.

From 1997 through the current timeframe, UI's priorities and focus shifted to preparation for the restructured electric market. With the approval of the Department, UI has operated under a performance based regulation plan that includes a cap on electric prices and accelerated amortization of costs, such as unrecovered C&LM balances, that would have been stranded by electric industry restructuring. In addition, under the five year plan, all C&LM expenditures were expensed in the program year, and the CAM and its recovery of "lost sales" margin and a bonus rate of return was discontinued. Consequently, UI was able to fully amortize the entire unrecovered C&LM balance from previous program years during the period 1997 through 1999.

However, it is UI's understanding that other regulated electric and gas utilities have continued to recover a bonus rate of return and "lost sales" margin through the 1997 to 1999 time period.

## **Section 16a-49 promotes financial incentives**

Section 16a-49 states in part, “The department shall allow the gas or electric public service company either: ... (2) authorize a return of at least one percentage point but no more than five percentage points on the Company’s prudently incurred conservation and load management expenditures treated as operating costs on programs and measures approved by the department and successfully implemented by the Company. For the purposes of this section ‘conservation and load management expenditures’ shall include all prudent expenditures, approved by the department by gas or electric public service companies designed to conserve energy or manage gas or energy load.”

It is important to note that this statute authorizes a minimum positive incentive return of 1% above the authorized return. UI has adapted the mechanism allowed in the statute to provide a minimum 1% pre-tax return with an additional 7% pre-tax return indexed to program performance. The rationale for a pre-tax level of 8% presumes that the statute maximum of 5% refers to the after-tax return. UI’s proposal of a 1% minimum and 8% maximum pre-tax financial incentive is fair and reasonable within the intent of Section 16a-49.

## **An incentive return is consistent with Section 33 of PA 98-28**

Section 33 of PA 98-28 does not explicitly discuss the matter of incentive returns for the distribution companies implementing the conservation and load management programs authorized by the Act. The opportunity for the distribution companies to earn a just and reasonable level of financial incentive is a legitimate C&LM program expense and is inherent in the expenditures explicitly authorized in subsection (d) of Section 33.

The 3 mills per kWh authorized under PA 98-28 represents essentially new C&LM investment. UI has engaged in good faith discussions with the Energy Conservation Management Board (“ECMB”) authorized by subsection 33(c) of PA 98-28. The ECMB has recognized that UI needed to add personnel and support to meet its obligations to develop and implement the comprehensive plan authorized in subsection 33(d) and the ECMB has urged UI to make appropriate commitments to “ramp up” its C&LM capabilities. Consequently, UI has indeed added personnel and continues to build its capabilities in anticipation of the ECMB and Department’s approval of its comprehensive plan, C&LM 2000. These personnel and support costs are O&M expenses related to C&LM program delivery. Because (as mentioned above) there is no related utility rate base, UI has no means of earning any return on its C&LM program costs, except through an incentive return structured substantially as proposed here.

By way of comparison, if an alternative C&LM delivery agent were authorized to discharge the role of implementing C&LM programs pursuant to subsection 33(d) of PA 98-28, that entity would need to earn at least a similar level of profit within its C&LM program costs in providing such services.

Some ECMB members have expressed the concern that the provision of an incentive return will diminish the funds otherwise available to promote energy conservation. However, a properly constructed incentive will increase the productivity of the Distribution Companies in implementing subsection 33(d) of PA 98-28 and so increase the energy savings accomplished with the funds available. Furthermore, if the DPUC institutes Performance Based Ratemaking (PBR) in future years, UI would consider incorporating the C&LM incentive into a more general source.

**Proposed performance goals**

UI proposes 6 goals or performance targets, one for each major C&LM program and one overall cost-efficiency goal

<b>Program</b>	<b>Target Metric</b>
Energy Blueprint	20,015,994 Annual kWh Savings
Energy Opportunities	15,923,114 Annual kWh Savings
Small Business	6,417,920 Annual kWh Savings
UI Helps	4,002,667 Annual kWh Savings
Residential Opportunities	7,123,681 Annual kWh Savings
Overall C&LM2000 Cost Rate	\$. 314 per Annual kWh saved

UI believes that a minimum of at least 1% is appropriate under Section 16a-49 of the C.G.S. UI proposes 2% be awarded on the basis of the Overall Cost Rate and 1% awarded on the five (5) major program goals.

UI proposes that these program targets be adjusted for any subsequent modifications to the C&LM2000 program as well as prorated to the portion of the program year subsequent to the Department’s approval of C&LM2000. If the Department approves C&LM2000 before January 1, 2000 as filed by UI, the program targets would equal the annual targets.

A monetary incentive for conservation is supported by Section 16a-49 of CGS and consistent with past regulatory practice. Costs that promote program efficiency, including incentive costs, are appropriate program costs under subsection (d) of Section 33 of PA 98-28. These costs will result in improved program efficiency and increased conservation under UI’s proposed incentive structure.

## **C&LM 2000: Accounting Treatment**

UI respectfully submits the following comments regarding its proposed accounting treatment regarding the Conservation and Load Management funds authorized by Public Act No. 98-28

Section 33(a) of the Act states,

On and after January 1, 2000, the Department of Public Utility Control shall assess or cause to be assessed a charge of three mills per kilowatt hour of electricity sold to each end use customer of an electric distribution company to be used to implement the program as provided in this section for conservation and load management programs....

Section 33(b) of the Act states,

The electric distribution company shall establish an Energy Conservation and Load Management Fund which shall be held separate and apart from all other funds or accounts. Receipts from the charge imposed under subsection (a) of this section shall be deposited into the fund. Any balance remaining in the fund at the end of any fiscal year shall be carried forward in the fiscal year next succeeding.

Section 54(c)(1) of the Act states,

Each electric distribution company, as defined in Section 1 of this Act, providing electric transmission services, as defined in Section 16-1, or electric distribution services, as defined in said Section 16-1, shall pay a quarterly tax upon its gross earnings in each calendar quarter at the rate of (A) eight and one-half percent of its gross earnings from providing electric transmission services and electric distribution services allocable to other than residential service and (B) six and eight-tenths percent of such gross earnings from providing electric transmission services or electric distribution services allocable to residential service.

In compliance with the Act, UI proposes to take an amount equal to three mills per kilowatt hour of electricity sold to each end use customer on a monthly basis, less the gross earnings tax, and debit expense and credit a liability account for that amount in order to set up a reserve on the corporate books for the amount of money to be spent on conservation and load management programs. The liability account would be a separate stand-alone account set up specifically to collect monies to be spent on conservation and load management programs and would be easily identifiable on UI's corporate books. Setting up these monies in this matter will meet the criteria set forth in Section 33(b) of the Act by keeping these revenues separate and apart from all other funds or accounts.

Setting these monies up as a liability on the corporate books of UI will also help to match UI's expenses with its revenue. By transferring these revenues to a liability account, the affect on UI's earnings each month would be consistently the three mills per kilowatt-

hour of electricity sold. When UI incurs conservation and load management expenditures, the liability account would be reduced and there would be no affect on UI's earnings for the expenditures. In addition, the monies set up in the reserve would remain there until all monies were spent on conservation and load management programs.

**Docket No. 99-03-35, DPUC Determination of the United Illuminating Company's Standard Offer**

Consistent with the Department's Decision in DPUC Docket No. 99-03-35, DPUC Determination of the United Illuminating Company's Standard Offer, dated October 1, 1999, UI will collect the Gross Earnings Taxes established by Section 54(c)(1) of the Act, through the authorized Distribution Rate.

# Budget

# Appendix

- I. C&LM2000 Energy Conservation Management Board (ECMB) Supporting Resolution**
- II. ECMB Resolution on All Fuels Incentives**
- III. ECMB Resolution on Cost Effectiveness**
- IV. ECMB Resolution on Program Budget Allocation**
- V. ECMB Resolution on Management and Performance Incentives**
- VI. ECMB Resolution on Common Programs Between United Illuminating and CL&P**
- VII. ECMB Resolution on Environmental Issues**
- VIII. ECMB Resolution on Other Issues**
- IX. Program Market Penetration Goals**
- X. Commonality of UI/CL&P Programs**
- XI. Rationale and Budgets for NEEP Participation**
- XII. Energy Opportunities Program Flow Diagram**

## **I. C&LM2000: ECMB Supporting Resolution**

It is the sense of the ECMB that the primary goal of Section 33 of PA 98-28 is to promote efficient use of electricity in Connecticut. Section 33 permits this goal to be achieved through a variety of approaches, including implementing programs to transform markets for energy products and services that conserve energy. The Board agrees that UI's Plan is responsive to the goals of Section 33.

- The Plan provides energy savings opportunities to its diverse customer base through a variety of conservation and load management programs.
- The Plan is comprehensive, employing implementation strategies that promote and facilitate the wise and efficient use of energy.

The ECMB supports UI's response to Section 33 as outlined in the Company's 2000 Conservation and Load Management Plan.

UI faces a significant challenge in ramping up quality program delivery from a \$3 million budget to a \$16 million budget for Y2000. In light of this challenge, UI has agreed to work with the Board to develop, prior to January 1, 2000, a process that will enable the Board to closely monitor program rollout, performance and spending.

The Board looks forward to assisting UI with the refinement of program details and further development of effective implementation strategies.

Furthermore, The Board recommends that the DPUC expedite the Plan approval process so that disbursement of C&LM funds to carry out UI's Plan may commence on January 1, 2000.

## **II. ECMB's Resolution on All Fuels Incentives**

The Board adopted by unanimous vote of the eight members present the following resolution, as modified:

ECMB Resolution Regarding the Role of Non-electric Energy Savings for Programs Funded Pursuant to PA 98-28, Section 33

It is the sense of the ECMB that the primary goal of Section 33 is to promote efficient use of electricity in Connecticut. Section 33 permits this goal to be achieved through a variety of approaches, including implementing programs to transform markets for products and services that conserve electricity and by investing in high efficient electrical equipment at consumer facilities.

In accordance with past practice, Electric distribution companies may implement cost-effective programs that include non-electrical energy savings measures for low-income customers. Electric distribution companies may seek approval for electrical energy efficiency initiatives that provide incentives for non-electrical energy saving measures to other consumer groups. Such incentives should not exceed 10% of the Electric distribution company's annual program budget for energy efficiency. No incentive payments should be paid for fossil fueled cooling or water heating. Electric distribution companies are further encouraged to seek the financial participation of gas companies and oil dealers in jointly implementing programs that improve the efficiency of fossil fuels.

### **III. ECMB's Resolution on Cost-Effectiveness**

During the preparation and review of draft Y2000 plans, the Board resolved that CL&P and UI should apply the electric system, total resource and societal tests to each program proposed for implementation in 2000. The Companies screened their plans under both the electric system test and the societal test. The Board finds that it has been helpful to have programs reviewed under each test. The Board acknowledges that the Commission has utilized an electric system test in the past, and that electric-energy savings and costs are essential criteria of cost-effectiveness analysis. The Board further notes, however, that certain programs, such as low-income and new residential construction (Energy Star), are designed to capture benefits in addition to electric energy savings that are best captured under the societal test. Accordingly, although the Board has deferred to a later date resolving whether a single test should be adopted in Connecticut, the Board recommends that the Commission allow the companies the flexibility of utilizing the societal test where appropriate.

#### **IV. ECMB's Resolution on Program Budget Allocation**

UI has developed this proposed budget allocation with the Board, and the ECMB believes that – from an overall perspective – UI's proposed allocation to specific programs is appropriate. It balances the diverse objectives of the plan, serves the various customer groups, and meets the legislative mandate. The Board is aware that UI may need to vary the actual expenditures within programs during the implementation of programs. For many reasons, such as start-up difficulties or market response, UI may need to reallocate dollars from one program to another to meet its expenditure and energy savings targets. UI will inform Board members in a timely manner of budget adjustments and reallocations during 2000.

## **V. ECMB Resolution on Management and Performance Incentives**

The Board has reached consensus that distribution companies should be allowed to earn a performance incentive for the delivery and administration of quality energy efficiency programs. The Board has discussed the incentives proposed by CL&P and UI and, at this time, has not achieved a consensus on the methodology. The Board urges the DPUC to carefully review the proposals included in the UI and CL&P Y2000 plans for a Y2000 incentive.

The Board expects to review the incentive issue in depth as a priority issue for Y2001. The Board notes that it will seek to examine the issue in a comprehensive manner, including addressing important public policy issues that arise from the concept of incentive payments. For example, as noted in each of the Company's incentive proposals, programs funded pursuant to Section 33 often establish kWh savings goals as a primary performance indicator. However, when distribution company revenues are tied to the amount of kWh sold through the distribution system, utilities also face the incentive to encourage kWh sales. This conflict needs to be examined as part of a comprehensive approach to utility performance incentives.

## **VI. ECMB's Resolution on Common Programs Between UI & CL&P**

The ECMB believes that CL&P and UI should have as many programs in common as possible. For many reasons, such as administrative efficiencies and ease of implementation for trade allies and energy service companies, common statewide programs are the logical choice.

During the planning of the Companies' programs, CL&P and UI have had several meetings to explore common programs. The Companies have agreed to several common programs: SmartLiving catalog; residential new construction (Energy Star Homes); Research, Development and Demonstration; NEEP (Northeast Energy Efficiency Partnerships) - High Efficiency Residential Lighting; Energy Star Appliances; Northeast Premium Efficiency Motors Initiative; Design Lights Consortium; Northeast Regional C&I HVAC Initiative; Northeast O&M Initiative. These programs are further explained in Appendix X of UI's plan. The ECMB supports these common programs, and urges the Department to consider ways to increase the interaction between the two companies, such as adopting common cost recovery, cost effectiveness, filing schedules, etc.

## **VII. ECMB's Resolution on Environmental Issues**

Part of the overall goal of the Companies is to improve public health through their programs, especially by improving air quality. The ECMB fully supports this goal and believes the Companies should promote the environmental benefits of its programs to customers.

One possible topic for Research, Development, and Demonstration programs for 2000 is to study possible approaches for linking the Company's programs to environmental benefits through emission credit exchange mechanisms. Another topic is to explore potential program linkages with the Renewable Energy Investment Fund. The Board fully supports these proposals.

## **VIII. ECMB's Resolution on Other issues**

During the course of its work, the ECMB has adopted resolutions regarding other issues, including cost-effectiveness tests and the "all fuels" issues. These resolutions are as follows:

### ECMB Resolution Regarding the Role of Non-electric Energy Savings for Programs Funded Pursuant to PA 98-28, Section 33

It is the sense of the ECMB that the primary goal of section 33 is to promote efficient use of electricity in Connecticut. Section 33 permits this goal to be achieved through a variety of approaches, including implementing programs to transform markets for products and services that consume electricity and by investing in high efficient electrical equipment at consumer facilities.

In accordance with past practice, electric distribution companies may implement cost-effective programs that include non-electrical energy saving measures for low-income customers. Electric distribution companies may seek approval for electrical energy efficiency initiatives that provide incentives for non-electrical energy saving measures to other consumer groups. Such incentives should not exceed 10% of the electric distribution company's annual program budget for energy efficiency. No customer incentive payments should be paid for fossil fueled cooling or water heating. Electric distribution companies are further encouraged to seek the financial participation of gas companies and oil dealers in jointly implementing programs that improve the efficiency of fossil fuels.

## **IX. Market Penetration Goals**

### **ENERGY BLUEPRINT**

Market	C&I New Construction, Renovation, Equipment Replacement, & Fit out.
Market Size	7,000,000 SF
Target Participating area	4,130,000 SF
Target Penetration	59%

### **ENERGY OPPORTUNITIES**

Market	Retrofit program for C&I Customers > 100 kW
Market Size	2,038 C&I UI Accounts
Target Penetration	9.4%
Target Accounts	192
Communities Served	17

### **SMALL BUSINESS ADVANTAGES**

Market	Retrofit program for Small C&I Customers < 100 kW
Market Size	13,952 Customers
Target Penetration	9..3% Customers Served
Target Number Participants	1,256 Customers Served
Target Penetration	4.6% Installed projects
Customer Installations	642

### **MUNICIPAL**

Market	Retrofit, renovation and new construction projects for
Municipal customers	
Market Size	2,410 Municipal Accounts in 17 Communities
Target Penetration	19%
Target Accounts	458
Communities Served	17

### **PREMIUM MOTORS**

Market	Premium Efficient Motors
Market size	1,807 Units (estimated # of 3 phase qualifying units)
Penetration	5 %
Participating # of motors	90

### **COMFORT ZONE**

Market	Unitary Replacement HVAC Equipment <25 tons
Market Size	5,930 tons
Penetration	20%
Participating # of units	237
Participating tons	1,186

**K-12**

Market	Energy education and retrofit projects for Municipal customers
Market Size	228 public schools
Target Penetration	20%
Target Accounts	46
Communities Served	17

**RESIDENTIAL OPPORTUNITIES**Energy Star Homes

Market	Residential New Construction
Market Size	1,200 projected annual housing starts
Target Penetration	12.0%
Participating # of units	144 Customers

Energy Star Lights

	<b>Retail Point of Purchase</b>	<b>SmartLiving Catalog</b>	<b>Torchiere Replacement</b>
Market Size	276,539 Customers	276,539 Customers	110,61 Torchieres
Projected Penetration	2.8%	1.7%	3.8%
Projected # of units Torchieres	7,743 Sales	4,800 Orders	4,203

Energy Star Appliances

	<b>Refrigerators</b>	<b>Room AC</b>	<b>Clothes Washer</b>	<b>Dish Washer</b>
Appliances in UI area	327,430	244,036	238,380	157,500
Annual Units Purchased	16,372	16,106	16,925	7,875
Target Penetration Rate	33%	25%	5%	25%
Participating # of units	5,403	4,027	846	1,969

**UIHELPS**

Market	Low Income Customers up to 200% of Federal Poverty
Guidelines	
Market Size	58,000
Participants	4859
Target Penetration	8%

## **X. Commonality of UI/CL&P Programs**

United Illuminating and Connecticut Light & Power plan to have nine programs which for all practical purposes will be “identical

The nine programs are:

### **1. SmartLiving Catalog**

This is a catalog mailed to the homes of residential customers to provide education and access to energy efficient and healthy home products. See page 27 of this filing for details.

### **2. Residential New Construction –“Energy Star Homes”**

The two companies have agreed to have a common program for residential new construction. UI and CL&P have agreed to deliver this program jointly. It is likely that both companies will have representatives who work with customers building in their respective service territories. See page 25 of this filing for details.

### **3. Research, Development and Demonstration**

CL&P and UI plan a coordinated effort with the ECMB and an policy and working groups to undertake strategic energy RD&D aimed at sustainable benefits in the state’s energy efficiency, economic health or environmental conditions. The program description for each company can be found in their plans filed on September 14<sup>th</sup> with the ECMB.

### ***Two NEEP Residential Programs***

### **4. High-Efficiency Residential Lighting**

#### **Long Term Goal**

The goal of the Residential Lighting Initiative is to transform the residential lighting market to one where there is sustained availability of and demand for quality, energy-efficient lighting products.

#### **Objectives**

- Increase consumer awareness, acceptance and use of high-efficiency lighting technologies.

- Distinguish quality, energy-efficient lighting products in the marketplace.
- Support the development, introduction, sale and use of high quality, energy-efficient residential lighting products
- Reduce the first-cost purchase price barriers of ENERGY STAR lighting products.
- Facilitate the development, manufacture and adoption of quality, attractive, energy-efficient lighting products that meet the full gamut of residential applications.
- Enable manufacturers to profit from the increased market share of energy-efficient lighting.
- Increase availability of the products in standard market channels.

### **Strategy**

Operate a comprehensive marketing program working with manufacturers and retailers to build consumer awareness of ENERGY STAR lighting technologies and their benefits. Ensure the quality of the ENERGY STAR label for lighting products. Encourage manufacturer introduction of additional quality and attractive fixtures for energy efficient lighting technologies.

### **Key Activities for 1999 and 2000**

The specific tactics and interventions that are currently being employed in the Northeast vary by the state in which they operate and by the segment of the residential lighting market that is being targeted. All are intended to work toward the attainment of the common goal. During the third quarter of 1999, a multiyear Residential Lighting Market Transformation Initiative Plan will be developed.

- Plan and implement a strategic marketing campaign for ENERGY STAR lighting product lines that features attributes that are attractive to consumers such as non-energy benefits; longer life, safety, and other image building messages that favorably portray efficient lighting technologies Improve product availability through expansion of product lines and retail outlets.
- Continue the StarLights and Smart Living catalog offerings to build consumer awareness.
- Consider expansion of the StarLights catalog product line to include other energy-efficient products.
- Extend the catalog offerings into New York and New Jersey.
- Incorporate ENERGY STAR lighting technologies into energy efficient new construction programs and assess consumer and builder response.
- Develop the infrastructure necessary to influence the selection and installation of efficient lighting in remodeling projects.
- Increase manufacturer and retailer marketing of ENERGY STAR products.
- Work with national efforts to encourage manufacturer introduction of products or product features beyond those currently available including use of bulk procurement strategies for new products such as recessed cans and portable fixtures.

- Support national product testing for quality and compliance with ENERGY STAR Specifications.
- Review and revise rebate levels and target audiences for products featured in the regional initiative.

### **Market Indicators**

The priority market indicators to gauge initiative progress in the Year 2000 include:

#### **Compact Fluorescent Lamps**

- Amount of manufacturer and retailer marketing support for ENERGY STAR CFLs.
- The average, unsubsidized retail price on ENERGY STAR CFLs.
- The number of retail entities carrying and promoting ENERGY STAR CFLs (minimum size display area required).

#### **Fixtures**

- The availability of new fixture designs using efficient lighting sources.
- The number of retailers with at least 20 different ENERGY STAR labeled fixtures displayed and/or stocked.  
The number of larger developers, property owners, housing authorities, and near-residential buildings that specify ENERGY STAR fixtures for procurement.

## **5. ENERGY STAR Appliances**

### **Long-term Goal**

The objective of the Residential Appliance Initiative is to permanently change the regional marketplace for high-efficiency appliances so that product sales and consumer preferences are reflected in increased market shares.

### **Objectives**

- Increase consumer awareness of high-efficiency appliances and their benefits.
- Increase the number of product offerings and encourage competition
- Increase retailer promotion of high-efficiency appliances in the Northeast region;
- Increase the number of retailers carrying high-efficiency appliances.
- Reduce incremental prices of high-efficiency equipment to consumers by encouraging competition in the marketplace.

### **Strategy**

Operate a multi-faceted marketing and promotional program that works with manufacturers and retailers to identify and promote ENERGY STAR appliances. Operate a comprehensive consumer marketing campaign to create awareness of the benefits of and demand for ENERGY STAR appliances. Build sufficient regional market share to support upgrading federal appliance standards. Coordinate with

national efforts to encourage manufacturer introduction of new higher efficiency appliances.

### **Market Indicators**

The priority market indicators to gauge initiative progress in the Year 2000 include:

- The percent market share of ENERGY STAR appliances.
- The percentage of customers aware of ENERGY STAR appliances.
- Adoption of federal appliance efficiency standard for clothes washers at the ENERGY STAR level.
- Manufacturer application of the ENERGY STAR label on shipped products.

### **Activities for 1999 and 2000**

- Develop a 3-year Market Transformation Plan in the third quarter of 1999 containing clear cut, market-based goals for each year of operation.
- Use the federal ENERGY STAR Appliance Initiative as the platform for regional activities.
- Develop a comprehensive marketing campaign to create awareness and demand for ENERGY STAR appliances that emphasizes product attributes that are important to consumers.
- Expand manufacturer and retailer support for ENERGY STAR appliances.
- Expand the variety of models available in each product category
- Continue to stimulate consumer demand to increase product competition and reduce the incremental costs of high efficiency appliances.
- Actively support increased federal appliance minimum performance standards.
- Actively support upgrading ENERGY STAR appliance performance specifications.
- Develop strategy for expanding manufacturer participation in the Super Efficient Home Appliance (SEHA) program.
- Participate in the development of an ENERGY STAR specification for water heaters.
- Develop and promote financing options for ENERGY STAR appliances in remodeling and replacement activities.

### **Four NEEP Commercial and Industrial Programs**

#### **6. Northeast Premium Efficiency Motors Initiative**

##### **Initiative Goal**

The primary goal of the Motors Initiative is to change the regional and national marketplace for polyphase electric motors (1 to 200 horsepower) to one where CEE-specification 'qualifying' motors are the products of choice.

## **Objectives**

- Increase customer awareness of, and demand for, CEE-qualifying motors (premium motors).
- Increase availability and sales of 'premium motors' in the region.
- Reduce price difference between 'standard' and premium motors.
- Establish an ongoing mechanism to readily distinguish premium motors in the market place (e.g., ENERGY STAR labeling).
- Influence industry standards to recognize the CEE specification as definition for premium motors.
- Expand focus of the initiative to promote quality and efficiency in motor repair services.

## **Strategy**

Operate a marketing and promotional program that works with vendors to identify and promote premium motors. Work through utility customer representatives to reach motor consumers. Coordinate with national efforts to encourage manufacturers to introduce additional premium motors and define common motor standards.

## **Key Activities for 2000**

- Continue to build customer awareness and demand for qualifying motors through vendor outreach, customer incentives, and direct customer contact.
- Begin promoting the 'motor repair practices' initiative.
- Support adoption of 'ENERGY STAR labeling for qualifying efficient motors.
  
- Work with motor-industry players in effort to develop EPACT enforcement protocol and develop industry standards for energy efficient motors.
- Evaluate and report initiative progress and market impacts.
- Plan for the future, developing mechanisms to maintain market gains from initiative activity.

## **Market Indicators**

- The priority market indicators to gauge initiative progress in the Year 2000 include:
- The percentage of motors sold that meet CEE's efficiency criteria.
- The number of vendors that actively promote qualified motors.
- The number of customers who adopt procurement specifications requiring their company to purchase only CEE qualifying motors.

## **7. Design Lights Consortium**

A regional collaboration seeking to influence naturally occurring lighting events towards quality, comfort and efficiency

## **Mission**

1. Foster the adoption of improved design practices in all parts of the commercial lighting market.
2. Develop, promote, apply and integrate useful tools for those who influence design, specification, selection and installation of lighting systems.
3. Encourage thoughtful design of lighting in a variety of commercial spaces to provide the highest quality from the standpoint of comfort, productivity, aesthetics and energy efficiency.
4. Promote the concept that thoughtful lighting design with lower power density can be superior to traditional lighting practices.
5. Educate owners, developers, electrical contractors, manufacturers, designers and others that influence lighting design, specification, selection and installation practices.
6. Characterize and address the commercial lighting market to support market transformation.

## **Long-Term Goals & Objectives**

- Assess and ultimately transform the market.
- Establish guidelines for quality and efficiency by space type.
- Stimulate market demand for quality and efficiency in light design.
- Foster the capability among product and service providers to deliver quality and efficiency.
- Encourage that demand and supply routinely come together to result in quality and efficient lighting installations.
- Support third party R&D efforts aimed at continuous improvements in lighting.

## **Strategy**

Define quality, energy efficient lighting design. Influence current lighting design practices. Build market awareness of and demand for quality lighting design. Establish strategic regional and national alliances to leverage visibility and resources, and increase market impacts.

## **Key Activities for 2000**

- Facilitate and expand efforts of DLC to recruit additional participants in the Northeast region.
- Establish strategic alliances with other relevant regional and national initiatives to support market transformation.
- Implement a regional marketing plan.
- Coordinate training seminars to distribute Guidelines to target audience.
- Complete a large joint or multiple coordinated (12-14) demonstration projects.

- Assess the applicability of Guidelines to additional market segments and building space types, and develop as appropriate.
- Develop and implement a Measures of Success plan (i.e., evaluation plan).

### **Market Indicators**

The priority market indicators to gauge initiative progress in the Year 2000 include:

- The square footage of target market that is built/remodeled using lighting guidelines.
- The extent to which contractors and other rely on lighting guidelines.
- The extent of customer satisfaction and demonstrated non-energy benefits from the use of the lighting guidelines in pilot projects.

## **8. Northeast Regional C&I HVAC Initiative**

### **Long Term Goal**

The goal of the initiative is to increase energy efficiency by establishing energy efficient packaged HVAC equipment and practices as standard products and services in the Northeast.

### **Objectives**

- Increase availability and sales of high efficiency packaged HVAC equipment and services, to market players in the region.
- Increase consumer and contractor awareness of the energy and comfort benefits of efficient packaged HVAC equipment and services.
- Define and distinguish in the market place, quality energy efficient installation practices for packaged HVAC systems.
- Increase the number of products available to meet the CEE specifications for energy efficient packaged HVAC equipment.
- Reduce the cost difference between standard and high efficiency packaged HVAC equipment and services.
- Influence industry and government codes and standards to define efficiency in HVAC equipment and practices consistent with the initiative specifications.

### **Strategy**

Increase the availability of energy efficient HVAC products and service through marketing and customer rebates. Work with contractors to increase their awareness of options and to promote high-efficiency among consumers. Work with other organizations to promote increased national standards.

### **Key Activities for 2000**

- Continue to build contractor and consumer awareness and market availability of high efficiency HVAC equipment through the 'Cool Choice' program.
- Develop and deliver 'consumer information campaign' to promote customer demand for quality and efficiency in system installations.

- Review and revise initiative equipment qualifications, for increased efficiency and wider range of equipment.
- Evaluate and report progress toward goals and market impacts.
- Identify customers and conduct 'Installation Practices pilot' contractor training program to identify and demonstrate ways to affect installation practices in the field.
- Use results of the Installation Practices pilot to work with business and industry allies to develop and deliver energy efficient HVAC services.
- Work with CEE to define energy efficient installation practices and to establish CEE Tier I specifications as the ASHRAE 90.1r standard.

### **Market Indicators**

- The priority market indicators to gauge initiative progress in the Year 2000 include:
- The percentage of equipment meeting CEE Tier 2 specifications by size and type.
- The inclusion of CEE Tier I equipment in ASHRAE standards.  
The number of chains and large property developers/owners who adopt procurement specifications requiring CEE Tier 2 equipment.

## **9. Resource- Efficient Building Operations and Maintenance Initiative**

### **Long Term Goal**

The long-term goal of NEEP's Resource-Efficient O&M Initiative is to establish resource-efficient building operation and maintenance as the industry standard for commercial and institutional building performance in the Northeast region.

### **Objectives**

- Increase building O&M personnel knowledge and skills to operate and maintain commercial and institutional buildings for comfort, safety and efficiency.
- Build market awareness of the benefits of improved building performance.
- Build market demand for resource-efficient O&M services.
- Distinguish resource-efficient practices, service providers and knowledgeable building operators in the market place.

### **Strategy**

- Establish a self-sustaining building O&M training and certification (T&C) program that is recognized and valued by the commercial and institutional building market as the standard for best practices.
- Establish strategic alliances with commercial and institutional property owners, energy service companies, and related professional and trade organizations in support of the certification program and to assist marketing.
- Undertake a strategic marketing campaign to build market awareness of the value of resource-efficient building practices as wells as demand for the certification program.

- Coordinate regional effort with other related national and regional programs (e.g., ENERGY STAR Buildings).

### **Activities for 1999 and 2000**

- Identify founding sponsors and form an Initiative Sponsors Group.
- Identify and keep informed additional future sponsors (e.g., for year 2000).
- Complete design of T&C program (i.e., purchase existing course or develop an alternative).
- Develop T&C program business plan that defines the services to be provided, how they will be provided, key elements of a marketing plan, the organizational structure for the program, and a financial plan to make the program self-sustaining within 3-years.
- Select contractor and sign contract in 1999 to implement the T&C program beginning in 2000 in at least two states (e.g., Massachusetts, Connecticut).
- Plan and undertake a T&C program marketing campaign.
- Identify and build alliances with commercial and institutional property owners, energy service companies, and related professional and trade organizations.
- Explore linkages with the ENERGY STAR building program.
- Identify opportunities to expand the course to other Northeast states.
- Develop an evaluation plan and provide regional report of the first year program.
- Coordinate initiative with related national and regional efforts.

### **Market Indicators**

The priority market indicators to gauge initiative progress in the Year 2000 include:

- The number of certified building operators.  
The percentage of building owners/operators aware of benefits of improved O&M services.

### ***Similar Programs***

#### **New C/I Construction**

UI and CL&P both have a program aimed at new construction and major renovation. Currently UI has the Energy Blue Print Program and CL&P has a new construction component of its comprehensive C/I program. Both companies allocate a large share of their budget to C/I news construction.

#### **Small business programs**

UI currently has and expects to continue the Small Business Advantage Program. This program targets customers with 100 kW peak demand with cash subsidies for retrofit activities with turnkey operations. It also provides billing through the monthly utility invoice. CL&P has planned similar program for 2000.

### **Hot Shot HPHW**

CL&P installs high efficiency heat pump water heaters for electric water heaters. While UI has no comparable program, they will explore integrating this program in 2001.

### **SmartLiving Technical Center**

CL&P has a hands-on demonstration center for architects, builders, homeowners, trade allies -- to provide technical information, design assistance, and support for energy efficient new construction and renovation. While UI currently has no comparable program, they would like to explore partial funding of the second one to be located in the state in 2000.

Budgets For UI Programs that will be jointly implemented with CLP

Residential Lighting Point of Purchase Program Name	Budget
Residential Lighting Point of Purchase	\$222,913
Smart Living Catalog	\$540,673
Energy Star Homes	\$431,391
Energy Star Appliances	\$864,045
Premium Efficiency Motors	\$ 95,428
Premium Efficiency HVAC	\$281,307
RD&D	\$178,200
Design Lights	\$ 75,000
O&M	\$ 75,000
Total	\$2,763,957

## XI. Rationale and Budgets for NEEP Participation

Working with regional initiatives such as NEEP is a strategy that enhances the Company's ability to serve customers. *These initiatives do not replace UI's involvement with and overall implementation of energy efficiency programs.* UI's approach is to use regional and national initiatives like NEEP as platforms for local program delivery. In this approach UI leverages regional mass marketing initiatives to influence equipment manufacturers. This focus on manufacturers and suppliers is referred to "up-stream marketing." On its own, a utility the size of UI could have little impact on this up-stream market which consists of national manufacturers of appliances, motors or other energy efficient products. Parallel to those efforts, UI Program Administrators work closely with end-use consumers and local distribution channels to market program advantages and encourage program participation. The Company's work with customers is referred to as *downstream marketing*. This combination of activities will produce substantially greater benefits than either element independently.

To provide an explanation of participation cost in NEEP and for details on what NEEP initiatives currently exist, we offer the following.

UI pays fees directly to Northeast Energy Efficiency Partnership (NEEP). Annual membership fees cover some of the operations cost of the NEEP organization. A per-initiative fee covers the cost of the NEEP program managers and facilitators and administrative expenses associated with the individual initiatives.

Annual membership fees		\$5,000
An average per initiative fee	\$3,000 (x) 5 initiatives =	<u>\$18,000</u>
	Total	\$23,000

All other UI expenditures budgeted under the NEEP initiatives are used for marketing, delivery, incentives and other direct program costs. These costs are not paid to NEEP. They are paid to vendors who are chosen by the participating utilities via a collaborative process. UI is able to leverage the funds of the other initiative members (utilities throughout New England) resulting in greater program impact with less per utility cost than what could be accomplished working independently.

UI is currently involved in 5 NEEP initiatives including:

- *Premium Efficiency Motors*
- *Cool Choice*, Premium Efficiency HVAC initiative
- *Tumble Wash*, which is evolving to Energy Star Appliances
- *Design Lights*, Small commercial lighting design
- *Star Lights*, Energy Star residential lighting

For 2000 UI is exploring involvement in a 6<sup>th</sup> NEEP initiative that will promote efficient O&M (Operation and maintenance).