

APPENDIX K

**DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION, *FINAL
DETERMINATION TO APPROVE 2012 CONSERVATION AND LOAD MANAGEMENT
EXPANDED PLAN AND BUDGET***



DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION
Bureau of Energy and Technology Policy

**Final Determination to Approve 2012 Conservation and Load Management Expanded Plan
and Budget**

JULY 19, 2012

DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION
Bureau of Energy and Technology Policy (BETP)

Final Determination to Approve 2012 Conservation and Load Management Expanded Plan and Budget

SUMMARY

Conservation and load management budgets and programs are reviewed and approved pursuant to General Statutes of Connecticut §16-245m, as amended by Section 33 of Public Act 11-80, An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut’s Energy Future. The Department has reviewed the 2012 base C&LM Plan (Base Plan), and issued its Final Determination on the Base Plan on February 17, 2012. In this determination, the Commissioner of the Department of Energy and Environmental Protection (DEEP) approves an expanded budget for the 2012 Conservation and Load Management Plan of \$158.4 million. DEEP approves the programs submitted by the electric distribution companies in consultation with the Energy Efficiency Board subject to the modifications and conditions discussed herein. The expanded budget, together with the base budget approved by DEEP in the Base Plan, will fund the acceleration and expansion of these programs, so as to ultimately put Connecticut on the path to achieving all cost-effective energy efficiency identified in the 2012 Integrated Resources Plan.

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BACKGROUND INFORMATION

Statutory Authority

Electric distribution companies (EDCs) are required under section 16-245m of the Connecticut General Statutes to develop a comprehensive conservation and load management plan (C&LM Plan) to guide the implementation of cost-effective energy conservation programs. An Energy Conservation Management Board was established to advise and assist the EDCs with the development and implementation of comprehensive conservation and load management programs, which were subject to the approval of the former Connecticut Department of Public Utility Control. These programs have been supported by the Energy Conservation and Load Management Fund, which is funded by a \$0.003/kWh charge assessed to all end-use electric customers.

The process for development and approval of C&LM Plans was modified in July 2011 with the enactment of Public Act 11-80, An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut's Energy Future (Act). Pursuant to the Act, the Energy Conservation Management Board—also known as the Energy Efficiency Board (EEB)—continues to advise and assist the EDCs with the development and implementation of C&LM plans. The Act also assigned responsibility to the Department of Energy and Environmental Protection (DEEP or Department) to review the C&LM Plan, including the cost-effectiveness of proposed programs, and to modify or terminate programs that are determined to fail the cost-effectiveness test. The Act further authorized DEEP to approve, modify, or reject the C&LM Plan in an uncontested proceeding.¹ Relatedly, the Act charged DEEP with developing an Integrated Resources Plan (IRP) on a biennial basis, to review the state's energy and capacity resource assessment and to develop a plan for the procurement of energy resources that addresses, among other things, how best to eliminate growth in electric demand, as well as approaches to maximizing the impact of demand-side measures.²

Any disbursements from the Energy Conservation and Load Management Fund by the EDCs to carry out the base budget in the C&LM Plan must be authorized by the Public Utility Regulatory Authority (PURA).³ To the extent that the budget for the C&LM Plan may call for funding energy conservation programs at a level exceeding the amount of funding available in the Energy Conservation and Load Management Fund, any additional collection of funds from ratepayers would also be subject to PURA authorization. In exercising that authority the Act stated that PURA's decisions shall be "guided by" the goals of DEEP, including the IRP approved by DEEP.⁴

¹ See 2012 Supplement to the Connecticut General Statutes, §§16-245m (d)(1) & (d)(3).

² *Id.* §§16a-3a (b) & (d).

³ §16-245m (b).

⁴ §16a-3a (h).

Approval of 2012 Conservation and Load Management Base Budget

On September 30, 2011, the EDCs and local natural gas distribution companies (LDCs) submitted to the Department the 2012 C&LM Plan.⁵ The 2012 C&LM Plan represents the thirteenth plan prepared by the EDCs since passage of Public Act 98-28, An Act Concerning Electric Restructuring, and the seventh plan filed by the natural gas companies since passage of Public Act 05-01, An Act Concerning Energy Independence. The electric portion of the 2012 C&LM Plan was developed in two parts: (1) a Base Plan funded by a budget of \$105.6 million derived from the current \$0.003/kWh assessment and other conservation related funding (e.g. revenue from the sale of renewable energy credits) (Base Budget), and (2) an Expanded Plan supported by an additional \$113.3 million budget to accelerate energy savings and achieve all cost-effective energy efficiency (Expanded Budget). DEEP initiated an uncontested proceeding to review the base and expanded budgets in two phases.⁶

First, in a Determination dated February 17, 2012, the Department approved the 2012 Base Budget of \$105.6 million. The Base Budget would allocate \$84.2 million to conservation programs administered by The Connecticut Light and Power Company (CL&P) and \$21.4 million to The United Illuminating Company (UI). Also in that Determination, the Department concluded that the EDCs should be allowed to maintain 2012 C&LM spending at 2011 levels, or approximately \$124.7 million.⁷ To achieve the 2011 level of spending, in addition to the Base Budget of \$105.6 million, the Department determined that CL&P should be allowed to spend \$14 million in 2011 carryover funds, and that the EDCs should be allowed to spend, in 2012, up to 25% of their projected 2013 revenues from the Energy Conservation and Load Management Fund. In total, the Department approved total 2012 program spending of up to \$145.9 million. As part of its approval of the Base Budget, the Department modified the 2012 C&LM Plan to allocate \$4.6 million to the self-funding of residential loans.

It is important to note that the amounts listed for the 2012 Base Revenues reflect funds recovered through electric rates (i.e., the \$0.003/kWh assessment and other C&LM-related revenues) during the current program calendar year (2012), while carryover and forward spending amounts are derived from funds collected from the \$0.003/kWh assessment outside the current program calendar year. Authorization of expenditures from the Energy Conservation and Load Management Fund for the 2012 C&LM Base Plan is now under consideration at PURA under Docket No. 12-02-01.⁸

⁵ See 2012 C&LM Plan, available at

[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/2fa1f8d01cfc0cc785257981007276d4/\\$FILE/2012%20CLM%20Electric%20and%20Gas%20Plan%20FINAL.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/2fa1f8d01cfc0cc785257981007276d4/$FILE/2012%20CLM%20Electric%20and%20Gas%20Plan%20FINAL.pdf).

⁶ The natural gas portion of the 2012 C&LM Plan was reviewed and approved by PURA in Docket 11-10-03.

⁷ See DEEP Base Plan Determination at 7, available at

[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/2fa1f8d01cfc0cc785257981007276d4/\\$FILE/2012%20CLM%20Electric%20and%20Gas%20Plan%20FINAL.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/2fa1f8d01cfc0cc785257981007276d4/$FILE/2012%20CLM%20Electric%20and%20Gas%20Plan%20FINAL.pdf) and Addendum to DEEP Base

Plan Determination, available at

[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/2b676422fd385d94852579a7005aa31c/\\$FILE/Addendum%20to%20CLM%20Base%20Plan%202-22-12.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/2b676422fd385d94852579a7005aa31c/$FILE/Addendum%20to%20CLM%20Base%20Plan%202-22-12.pdf).

⁸ All documents in Docket No. 12-02-01 can be found on the PURA website at:

[http://www.dpuc.state.ct.us/dockcurr.nsf/\(Web+Main+View/All+Dockets\)?OpenView&StartKey=12-02-01](http://www.dpuc.state.ct.us/dockcurr.nsf/(Web+Main+View/All+Dockets)?OpenView&StartKey=12-02-01).

Summary of the Proposed 2012 C&LM Plan Expanded Budget

The Expanded Budget proposed by the EDCs and submitted by the EEB for the 2012 Plan consists of expenditures for energy efficiency programs above those approved in the 2012 Base Plan. Overall, the Expanded Budget proposed to increase program spending above the Base Plan by \$113.3 million in 2012, with the combined expenditures under the Base and Expanded Budgets totaling \$218.9 million. In submitting the 2012 C&LM Plan, the EEB proposed that \$17 million of the revenues for the Expanded Budget should be collected through the sale of fuel oil, although fuel oil funding is not available at this time. The EEB further proposed that the remaining 85% of the Expanded Budget, or about \$96.3 million, should be recovered through a Conservation Adjustment Mechanism (CAM) or other rate adjustment mechanism on electric bills. The proposed Expanded Plan supports electric savings that are nearly twice those that would be achieved under the 2012 Base Plan.

SIGNIFICANT PUBLIC COMMENTS

The Department conducted one technical meeting on February 10, 2012, and received six written comments on the 2012 C&LM Expanded Budget during an initial public comment period that ended on February 24, 2012. On June 5, 2012, DEEP issued a Proposed Determination to Approve 2012 Conservation and Load Management Plan Expanded Budget. In that Proposed Determination, DEEP summarized and responded to the six comments received during the initial public comment, as well as relevant comments submitted to DEEP in the 2012 IRP. DEEP also invited written comments on the Proposed Determination, during a public comment period beginning on June 5, 2012 and ending on June 21, 2012. All written comments submitted on the 2012 C&LM Expanded Budget, including comments received on the Proposed Determination and a recording of the February 10, 2012 technical meeting are available on the DEEP website.⁹

The Department received nine public comments on the Proposed Determination, representing the views of the following entities: CL&P, UI, Office of Consumer Council (OCC), Northeast Energy Efficiency Partnerships (NEEP), Connecticut Industrial Energy Consumers (CIEC), Connecticut Housing Investment Fund (CHIF), Environment Northeast (ENE), Clean Water Action Connecticut, and The Clover Corporation. This section contains a summary, organized by topic, of major comments on the Proposed Determination and DEEP's responses, and the rationale for changes made to the 2012 Expanded Budget.

A. Multi-Year Plans

All of the commenters on the Proposed Determination indicated support for the move to multi-year planning, as discussed herein. For example, UI supports multi-year programming and recommends a three-year cycle and specific savings goals (e.g., 2%) for the C&LM planning process. CL&P supports multi-year planning to allow the EDCs the opportunity to commit to the

⁹ Written comments are available at [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/\\$EnergyView?OpenForm&Start=1&Count=30&Expand=6.3&Seq=7](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/$EnergyView?OpenForm&Start=1&Count=30&Expand=6.3&Seq=7)
The recording of the technical meeting is available at <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/419208cb6767d97d852579a4004928c8?OpenDocument>.

disbursement of funds in subsequent years, which is consistent with customer demand for multi-year projects. CL&P also believes that long-term planning will establish stable funding and thereby lower costs. CL&P also supports consolidation of the proceedings used to review electric and gas plans, stating that a joint review is appropriate because gas and electric programs are fully integrated. Conducting the reviews of these programs independently is inefficient, costly and administratively burdensome, in CL&P's view, as compared conducting one review of a fully integrated, multi-year C&LM Plan.

Clean Water Action Connecticut supports multi-year plans and budgets, which can provide assurance of "solid funding" going forward. Clean Water Action Connecticut calls for an end to the "boom and bust" funding cycle recently experienced in the state. Multi-year plans, budgets, and funding will provide the vendor community with the confidence necessary to make long term investments in staff and equipment and will also facilitate growth in the contractor base. Absent a solid contractor base, Clean Water Action Connecticut notes, the state cannot meet its aggressive efficiency goals.

NEEP supports a three-year planning cycle which will allow the EDCs to reduce administrative burdens while ensuring program quality and flexibility. NEEP recommends that any multi-year approval strategy should allow program administrators and regulators be allowed to make incremental changes along the way, without triggering a significant, full-blown regulatory review. NEEP believes that such a multi-year structure would streamline the C&LM review process while ensuring ongoing oversight.

The Department supports a three-year planning and budget cycle, as well as streamlining the review process for electric and gas plans. The Department notes that the EDCs have submitted such consolidated electric and gas plans for the past two years. DEEP will work with PURA to identify opportunities to improve the efficiency and effectiveness of the review and approval process for electric and gas C&LM plans on a multi-year basis, consistent with existing statutory authority. Regarding UI's recommendation, DEEP has revised the Proposed Determination to indicate that the EDCs and EEB should, as part of their proposal on multi-year plans, include some "global" targets (e.g., reducing the average use per residential customer, specific peak MW targets or cost to deliver kW or kWh savings). Such targets are discussed in past PURA Decisions.¹⁰

B. Conservation Adjustment Mechanism

UI, CL&P, ENE and NEEP submitted comments on the Proposed Determination expressing support for the use of a CAM to collect the revenues for the Expanded Plan, with a lost sales adjustment for CL&P to fund incremental C&LM program costs under the Expanded Plan, (i.e., costs in excess of the funding provided through the \$0.003/kWh base assessment and the "other" C&LM revenues currently recovered through electric rates).

¹⁰ See, Decision dated May 7, 2009, in Docket No. 08-10-03, DPUC Review of the Connecticut Light and Power Company's and The United Illuminating Company's Conservation and Load Management Plan For The Year 2009, p. 30; and, Decision dated May 27, 2007, in Docket No. 06-10-02, DPUC Review of CL&P and UI Conservation and Load Management Plan For Year 2007 and 2008, p. 31.

UI expressed concern that, in the event PURA cannot implement the CAM mechanism and rate by mid-August 2012, the EDCs should be allowed to spend forward, i.e., use 2013 revenues to support 2012 costs, to allow programs to ramp up while PURA considers the CAM. UI also suggested that the CAM reconciliation become part of the existing semi-annual FMCC/GSC true-up proceeding. DEEP agrees with UI's comments and has revised the Proposed Determination to recommend that if a CAM cannot be implemented on or about August 15, 2012, the EDCs should be allowed to spend forward up to 25% of their respective 2013 C&LM base budgets during 2012 to assure continued operation of the programs. Forward spending could then be reconciled through the CAM.

CL&P commented that the CAM should not be reconciled on a semi-annual basis. Instead, CL&P recommended the use an annual, calendar year, true-up to account for seasonal shifts in C&LM activity and spending and to reduce administrative costs. CL&P also believes it should be allowed to recover lost revenues from the incremental Expanded Plan. In response to CL&P's comment, DEEP notes that although an annual proceeding may provide the benefits cited by CL&P, Conn. Gen. Stat. 16-19b(h) requires PURA to conduct true up proceedings "no less frequently than every six months" for these types of adjustment mechanisms.

ENE's comments endorsed the use of the CAM with a lost revenue adjustment on an interim basis until full decoupling is in place for CL&P. ENE also supported the CAM being set at \$0.00373/kWh. NEEP believes that CL&P's CAM should include a lost sales adjustment until full decoupling is approved.

OCC does not believe the Department should automatically default to electric ratepayers as the sole source of funding to support the Expanded Plan. Instead the Department should explore other funding options, such as the leveraging of private capital or use of the existing fund, to support this effort.

DEEP agrees with the OCC's comment about funding sources. Although direct ratepayer funding is required at this time to support the Expanded Plan, DEEP and the EEB are working with the Connecticut Clean Energy Finance and Investment Administration (CEFIA) to advance programs that will attract and deploy private capital to support energy efficiency. Also, as C&LM programs expand and general awareness increases, it is anticipated that the cost to achieve deeper savings will rely more heavily on direct funding by participants.

In comments submitted on the Proposed Determination, CIEC expressed support for the expansion of energy efficiency programs, but asked the Department to reconsider its recommendation that additional C&LM funds be collected through a single volumetric CAM assessment that is applied equally to all customers.¹¹ Instead of a single volumetric CAM rate CIEC urges the Department to recommend a fixed charge recovery mechanism, or a combination of fixed and volumetric charges for C&I customers to alleviate the excessive burden on this class. If a fixed charge is considered, CIEC suggests a graduated fixed charge of \$0.50 per month for residential customers and \$60 per month imposed on all C&I customers. In the alternative, CIEC requests that the Department re-evaluate the use of a CAM after one year to

¹¹ The use of a sales allocator results in a single, Company-wide CAM rate (i.e., same rate per kWh assessed to all customers) because costs or revenue requirement are divided by sales to produce a retail rate.

assure that larger use commercial and industrial customers are recovering the monies they contribute to the fund. CIEC also commented that a lost sales provision is not a tool to promote conservation but rather a way to assure CL&P with revenue stability. As a result, CIEC opposes the inclusion of a lost sales provision in CL&P's CAM. However, should the Department find that a lost sales provision is appropriate, it should direct PURA to fully evaluate, during CL&P's next full rate case, the effectiveness of this provision to promote conservation and provide direct benefits to customers.

The Department recognizes the concerns expressed by CIEC that a volumetric CAM charge that is based on a sales allocator would result in a greater percentage rate increase for large customers. However, a more modest rate increase for C&I customers would reduce the amount of funds available—and therefore, the number of customers that can be served and the volume of cost-effective savings that can be achieved—through C&I programs. In past budget years, demand for C&I programs has been robust and C&LM budgets for C&I programs have generally been fully expended. DEEP expects that the revenues collected from C&I customers for the Expanded Plan will be fully expended to meet customer demand. Going forward, the Department will evaluate whether the 2012 funds for C&I programs are fully expended, or if not fully expended, could justify a smaller revenue collection than the volumetric CAM approved herein. The Department believes that the volumetric CAM, in conjunction with higher program caps approved herein and full program expenditures for C&I programs is a fair and reasonable approach to collect revenues and provide program services to C&I customers.

Regarding a lost sales provision, the EDCs impute the energy savings provided under the Base Plan in the sales forecast used to establish distribution rates. However, the EDCs did not contemplate the significant additional savings that will occur under the Expanded Plan at the time of their last general rate setting proceeding. Therefore, while UI's decoupling mechanism will accommodate these lost sales, CL&P has no mechanism in place to do so. Therefore, it is reasonable to include a lost sales provision in CL&P's CAM at this time for incremental lost sales associated with the Expanded Plan. Inclusion of a lost sales provision for CL&P to address these incremental savings effectively results in the implementation of a decoupling mechanism for these incremental savings. To avoid the counterproductive results of sales adjustment calculations it is critical that the sales adjustment calculation include an earnings trigger. Revenues should only be increased for lost sales if CL&P is earning below its allowed rate of return. Then the adjustment should only increase revenues sufficient to earn the allowed rate of return. PURA should then fully examine this matter, and decoupling, at the time of CL&P's next general rate case.

C. Self-Funding Residential Loans

UI believes that redirecting dollars from program activity to self-funding will result in a proportional loss of potential savings under the Expanded Plan. UI also notes that while self-funding may be appropriate for certain market niches it should not be used as a broad financing solution as is being considered by the Department. UI believes the Department should focus on attracting third party capital to achieve the desired level of savings envisioned under the Expanded Plan and engage CEFIA in this effort.

CL&P does not believe the Department should use a prescriptive, multi-year funding allocation for residential self-funding. Instead CL&P recommends the Department allocate 10.5% of its overall residential budget in 2013 to self-funding and then review the available balance annually to ensure an adequate loan reserve. The Department would then determine whether additional funding is necessary.

CHIF supports self-funding and encourages the Department to increase the balance of funds currently available under this program. Without an adequate source of low cost capital, CHIF believes that consumers will be unable to finance the measures necessary to provide increased savings under the Expanded Plan. Thus, adequate capital will be necessary to meet the increased demand for financing of energy efficiency projects as a result of the planned comprehensive marketing effort. CHIF also states that self-funding provides the lowest possible cost of capital and allows flexibility in underwriting standards (e.g., use of bill payment history to qualify customer loans) that might not be available if capital is provided from banks or other traditional sources.

Clean Water Action of Connecticut believes that self-funding is not scalable and therefore is not a long-term solution for financing residential projects. Instead, self-funding should be used to build loan volume and customer and contractor awareness for the installation of deeper measures and as a transition to leveraged financing through CEFIA.

The Connecticut Fund for the Environment submitted comments advocating that the amount available for residential self-funding should be increased and that a customer's bill repayment history should be used as secondary underwriting criteria to qualify applicants in the event that they do not meet more stringent FICO and debt-to-income standards.

The current residential financing program administered through CHIF is relatively new, having begun in June 2011. As a result, the general public is not aware of this program. The Department anticipates that there will be an increased demand for residential financing as programs expand generally, contractors promote the program to pursue deeper savings, and, the upcoming marketing effort is launched. Therefore, adequate capital must be available to meet potential residential demand for these loans. The Department finds that it is appropriate to allocate additional funds to this initiative from future annual C&LM budgets and to monitor the program to assure that funding reflects consumer demand.

Therefore, DEEP has modified the Proposed Determination to indicate that beginning in 2013 and annually thereafter in 2014 and 2015, DEEP recommends that CL&P allocate 10.5% of its overall residential budget and that UI allocate 12.5% of its residential budget to this program. The Department will regularly monitor this program and make adjustments as needed. The Department will then determine whether to allocate additional funds to this effort in 2016. If consumer interest in the residential loan program does not meet expectations, these funds can be reallocated to support program activity. Regarding Clean Water Action of Connecticut's comments, this program will provide information such as loan volume, customer and contractor awareness, and, default rates, that can be used to evaluate whether self-funding should continue or whether we should seek to leverage these funds in the future.

Regarding UI's comments, the Department finds that it is appropriate to use self-funding to gain experience within the residential market and reduce the overall cost of financing to ratepayers. To achieve our long term goals (i.e., reduce costs in general and move away from direct ratepayer funded incentives) cost effectively requires consumers to invest in energy efficiency.¹² This in turn requires that consumers have access to low cost financing that is not heavily subsidized. Therefore, the overall cost of financing must be reduced to decrease or eliminate subsidization by other ratepayers. The Department agrees that self-funding has an opportunity cost. However, the Department believes that the cost is much lower than suggested by UI. For instance, current investment alternatives such as stocks and mutual funds are high risk while safer investments provide very low returns. While self-funding may reduce energy savings in the short term, over time financing should increase savings by providing customers the tools necessary to implement deeper savings. This will improve the cost effectiveness of our programs. Should we choose to seek third party capital to leverage these funds in the future, the experienced gained through the self-funding model should allow the EDCs or CHIF to negotiate lower overall costs or more flexible terms. Further, it is important to reiterate that self-funding provides flexibility in determining the underwriting standards allowing the EDCs to offer these loans to consumers that might not otherwise qualify for them.¹³

D. Consultant Costs

UI requested clarification regarding the Department's adjustment for consultant costs, stating that in addition to the costs embedded in the line item "Energy Efficiency Board" there are consultant costs included in other budget items as well. UI would like direction regarding these individual, program specific costs.

Clean Water Action Connecticut commented that expanded spending may not warrant a proportionate ramp up in consultant costs. However, as the programs evolve the Department should consider setting funds aside to engage national experts and coordinate the stakeholder process to ensure that the expanded programs are the best in the nation.

ENE states that the proposed consultant budget is far below the statutory limit on this expense and is not unreasonable given the need for program development that will be necessary in response to expanded spending and the state's ambitious goals. Thus, ENE urges the Department to reconsider its proposed reduction to this expense for 2012.

In response to UI's comments, DEEP has clarified its modification of the consultant budget in the Proposed Determination to indicate that this modification is limited to the consultant costs listed in the "Energy Efficiency Board" line item of the 2012 C&LM Plan. Going forward, however, to facilitate review of consultant costs, DEEP requests that all consultant-related expenses be listed within the "Energy Efficiency Board" line item and not comingled among individual program costs. Further, the DEEP believes that the consultant's

¹² Loan processing and other administrative costs must also be regularly reviewed to lower the overall cost of this program.

¹³ For example, traditional lending institutions are unwilling to allow the use of utility payment history to qualify consumers for these loans, instead requiring minimum FICO scores. CHIF indicated that strict adherence to FICO scores has led to a high rate of decline for these loans.

budget, as modified in this Determination, is adequate to accommodate programmatic changes going forward.

E. Self-Directed C&I programs and C&I Program Caps

In its Comments on the Proposed Determination, CEIC commended the Department's support for exploring the development of a self-directed program. CIEC believes that a self-directed program can more directly utilize the expertise of very large customers and assist them in implementing efficiency projects and comprehensive strategies that are unique to their facilities.

CIEC stated that project incentive caps result in unnecessary project delays. CIEC urged DEEP to direct the EEB to monitor the necessity and the level of the caps annually. C&I customers should have the opportunity to recoup the funds commensurate with the amount contributed into the C&LM fund. CIEC supports the implementation of a self-directed pilot program for 2013. According to CIEC, in the absence of a pilot program, the number of viable large scale C&I programs will decline despite increases to the project cap level.

In its comments, Clean Water Action Connecticut opposes self-directed efficiency programs in which customers can opt out of paying into a public benefits fund by undertaking their own projects. In response to this comment, DEEP clarifies that the approval of any self-directed funding would not revoke, or allow customers to "opt out" of, any part of the C&LM ratepayer charge for C&I customers. Clean Water Action Connecticut further commented that it supports C&I programs that have a transparent approval process and implement a timely process to approve and complete projects. Instead, Clean Water Action Connecticut supports higher per project and per entity caps for C&I customers, including projects for municipal customers.

NEEP also supported ways to make existing C&I programs work more effectively for the largest customers, rather than allowing an opt-out provision. NEEP believes that opt-out programs would require an unwieldy verification process and would present issues of equity, since rate classes would be treated differently. CL&P supports the elimination of project caps, stating that their removal will allow large customers with multiple facilities to fully participate in programs.

In response to these comments, DEEP believes that there is merit to exploring customer-directed program delivery that applies to very large C&I customers who seek to improve their process efficiencies. The Department has modified the Proposed Determination to direct the EDCs and the EEB to consider, for the 2013 C&LM Plan, proposing program enhancements to allow large C&I customers more flexibility to direct C&LM expenditures toward energy investments that would improve process efficiencies.

DEEP also concludes that, at the Expanded Plan funding level, the annual cap should be raised from \$800,000 to \$2 million and the per-metered site cap should be eliminated. An annual cap of \$2 million per Tax I.D. is appropriate, will allow flexibility for larger multi-year projects, and will assure that the greatest number of C&I customers are serviced under the C&LM programs. An annual incentive cap would not impose restrictions for large C&I customers to

receive incentives in future years. The EEB should evaluate the appropriateness of the \$2 million cap after the first year of the Expanded Plan.

F. Self-Funding for C&I Loans

In its comments on the Proposed Determination, UI cautioned that significant use of self-funding for C&LM project financing would result in rate shock for customers. UI expressed its concern that \$5 million in O&M funding redirected to self-funding would result in reduction in O&M program budget to a lower budget than that of the Base Plan. UI stated that the EDCs' primary strategy is to target O&M savings through a variety of programmatic strategies (e.g., retro-commissioning and Business Sustainability), which would deliver deeper savings and reduce the level of incentives. In its comments, CL&P requested additional clarification regarding the amount to be allocated to self-funding C&I projects and rates to be charged to C&I customers. CL&P also suggested that, given two new sources of C&I financing, self-funding is not needed in 2012, but that \$5 million could be tentatively allocated for 2013 for this purpose.

With regard to self-funding for C&I projects, DEEP believes that the additional ratepayer dollars available during the 2012 ramp-up period affords a favorable opportunity to support self-funding of Energy Opportunity (EO) projects, and will direct that allocation of \$5 million from O&M programs or other C&I programs for the creation of a revolving fund to finance EO projects, subject to lending terms consistent with other EO financing vehicles. This flexibility will prevent the transfer of funds from becoming a budget constraint in operating any of the components of the O&M programs.

G. Inclusion of State Contracts in Energy Opportunities Performance Incentive

In its comments on the Proposed Determination, UI expressed concern about DEEP's requirement that state projects be excluded from projects that qualify for the goal that 10% of projects utilize performance contracting or external financing to earn a performance incentive for the EO program. UI noted that state projects were included in the initial development of the performance metric and that the Companies are an integral part of the Lead By Example technical review process and should be compensated for their efforts.

DEEP believes that even though many state projects will be required to utilize performance contracts, the EDCs' efforts are an important component in the implementation of these projects at the outset of the Lead By Example program. The Department will include Lead By Example projects among the eligible projects to qualify for the EO performance incentive for 2012 programs. The Department will reevaluate this issue in 2013.

H. Cost Effectiveness

In its comments on the Proposed Determination, OCC raised several concerns about DEEP's analysis and conclusion that CL&P's Home Energy Solutions (HES) program and the HES Income Eligible program are cost-effective. In the Proposed Determination, DEEP found that "all programs, except CL&P's Home Energy Solutions (HES) program and the HES Income Eligible program are cost effective using the Electric System Test." However, DEEP approved the CL&P HES programs because they are cost-effective under the Total Resource Test. DEEP

also proposed to require additional measures to make the program more cost effective. OCC stated that DEEP erred by not applying its primary measure (the Electric System Test) of cost-effectiveness to all programs, and that it is contrary to law for spending to be increased on a program that is not cost-effective.¹⁴ OCC further stated that programs should be determined to have benefits that exceed costs by a least 1.5:1 before they are determined to be cost effective.

DEEP shares OCC's concern about the cost effectiveness of the CL&P HES programs, but believes that it is appropriate and not contrary to law to approve increased spending on the CL&P HES programs at this time. While DEEP relies on the Electric System Test as the "primary test" to determine program cost effectiveness, no particular cost-effectiveness test is prescribed by law, and the Electric System Test is not the exclusive test of cost-effectiveness. DEEP, and the former DPUC before it, have reviewed the electric C&LM programs under both the Electric System Test and the Total Resource Test (TRT). Applying the TRT to the 2012 C&LM Expanded Plan, CL&P's HES program is cost-effective, with a benefit/cost ratio of 2.4:1. Under the Electric System Test, CL&P's HES program fails by a slim margin, 0.9:1.

In addition, the legislature recently addressed the issue of oil subsidies for the HES program by temporarily lifting a legislative limit of \$500,000 annually, effective until August 2013. DEEP believes that the application of the Total Resource Test—which includes the benefits of oil savings in the calculation of cost-effectiveness—is consistent with the legislature's intent to allow a higher level of cross-subsidization between oil and electric customers. In these circumstances, DEEP does not believe that the cost-effectiveness of the HES program should be evaluated solely based on the Electric System Test, when the legislature has specifically approved more oil subsidization in 2012 and 2013. DEEP has revised the Proposed Determination to clarify this point.

DEEP has reviewed CL&P's HES program extensively and made recommendations to improve its cost effectiveness. CL&P, UI and the EEB will have some time to implement program improvements and work with the legislature to secure oil funding. Oil funding is critical to reaching the legislative goal of weatherizing 80% of Connecticut's homes by 2030 without unduly burdening electric ratepayers. If the spending limitation for oil heated homes resumes in 2013, without oil funding it is likely the volume of electric and gas homes to be served would be insufficient to support the Expanded Budget, and DEEP would have no choice but to reduce the funding for HES.

DEEP believes that OCC's proposal to require that programs have a saving/cost ratio of 1.5 to 1 to be cost effective is not legally mandated and is too restrictive. While many programs have higher benefit/cost ratios 1 to 1 is all that is currently required and DEEP does not believe that it would be appropriate to change it. Concerns about uncertain savings are alleviated by the fact that savings are discounted in the screening analysis. By discounting savings, the analysis already adjusts the savings based on the perceived uncertainty associated with the cost and savings estimates.

¹⁴ OCC pointed out that, as authority for expanding electric ratepayer-funded energy efficiency budgets over the \$0.003/kWh assessment DEEP cites Conn Gen. Stat. §16a-3a, which provides that "resource needs shall first be met through all available energy efficiency and demand resources that are cost-effective, reliable and feasible." Moreover Conn Gen. Stat. §16-245(d)(1) also requires that programs must be screened for cost effectiveness.

FINAL DETERMINATION

I. INTRODUCTION

Electric distribution companies (EDCs) are required under Section 16-245m of the Connecticut General Statutes to develop a comprehensive conservation and load management plan (C&LM Plan) to guide the implementation of cost-effective energy conservation programs. Section 16-245m directs the Energy Efficiency Board (EEB) to advise and assist the EDCs in the development and implementation of the C&LM Plan, and assigns responsibility to the Department of Energy and Environmental Protection (DEEP) to review the C&LM plan, including the cost-effectiveness of proposed programs, and to approve, modify, or reject the C&LM plan in an uncontested proceeding.¹⁵

On September 30, 2011, the Energy Efficiency Board submitted to the Department the 2012 Electric and Natural Gas Conservation and Load Management Plan (2012 C&LM Plan).¹⁶ The electric portion of the 2012 C&LM Plan included a Base Plan funded by a budget of \$105.6 million derived from the current \$0.003/kWh assessment and other conservation-related funding, (e.g. revenue from the sale of renewable energy credits) (Base Budget) and an Expanded Plan supported by an additional \$113.3 million budget to accelerate energy savings and achieve all cost effective energy efficiency (Expanded Budget). DEEP initiated an uncontested proceeding to review the base and expanded budgets in two phases.

First, in a Determination dated February 17, 2012, the Department approved the 2012 C&LM Plan Base Budget of \$105.6 million.¹⁷ As part of that Determination, DEEP concluded that the EDCs should be allowed to maintain 2012 C&LM spending at 2011 levels, or approximately \$124.7 million, by allowing the Connecticut Light and Power Company (CL&P) to spend \$14 million in 2011 carryover funds; by allowing the EDCs to allocate \$4.6 million to the self-funding of residential loans; and, by allowing the EDCs to spend, in 2012, up to 25% of their projected 2013 revenues from the Energy Conservation and Load Management Fund.¹⁸ In total, the Department approved total 2012 spending of up to \$145.9 million, as summarized in Table 1, below.

¹⁵ See 2012 Supplement to the Connecticut General Statutes, §§16-245m (d)(1) & (d)(3).

¹⁶ 2012 C&LM Plan, *available at*

[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/2fa1f8d01cfc0cc785257981007276d4/\\$FILE/2012%20CLM%20Electric%20and%20Gas%20Plan%20FINAL.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/2fa1f8d01cfc0cc785257981007276d4/$FILE/2012%20CLM%20Electric%20and%20Gas%20Plan%20FINAL.pdf).

¹⁷ 2012 Base Revenues reflect funds recovered through electric rates (i.e., the \$0.003/kWh assessment and other C&LM-related revenues) during the current program calendar year, 2012, while carry over and forward spending amounts are derived from funds collected outside the current program calendar year.

¹⁸ See DEEP Base Plan Determination at 7, *available at available at*

[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/2fa1f8d01cfc0cc785257981007276d4/\\$FILE/2012%20CLM%20Electric%20and%20Gas%20Plan%20FINAL.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/2fa1f8d01cfc0cc785257981007276d4/$FILE/2012%20CLM%20Electric%20and%20Gas%20Plan%20FINAL.pdf) and Addendum to DEEP Base Plan Determination, *available at*

[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/2b676422fd385d94852579a7005aa31c/\\$FILE/Addendum%20to%20CLM%20Base%20Plan%202-22-12.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/2b676422fd385d94852579a7005aa31c/$FILE/Addendum%20to%20CLM%20Base%20Plan%202-22-12.pdf).

Table 1

2012 Approved C&LM Spending			
	CL&P	UI	Total
2012 Base Revenues	\$84,191,749	\$21,370,000	\$105,561,749
2011 Carry Over	\$14,000,000	-	\$14,000,000
2013 Forward Spending*	\$21,047,937	\$5,342,500	\$26,390,437
TOTAL	\$119,239,686	\$26,712,500	\$145,952,186
* Estimated as 25% of 2012 Base Revenues In addition to total spending DEEP allocated \$4.6 million to self-funding of residential loans.			

Authorization of expenditures from the Energy Conservation and Load Management Fund to implement the 2012 C&LM Base Plan is currently under consideration at PURA under Docket No. 12-02-01.

The Expanded Budget submitted by the EEB proposes to increase program spending in 2012 by \$113.3 million above the Base Budget to significantly expand the current C&LM program offerings in order to deliver all cost effective energy savings. The Expanded Plan would deliver electric savings that are nearly twice those that would be achieved under the 2012 Base Plan.¹⁹ Table 2 provides a program-by-program comparison of the 2012 Base and Expanded Budgets. As the table shows, the combined expenditures under the Expanded Budget proposed by the EDCs and EEB would total \$218.9 million. The EEB proposed that \$17 million of the additional \$113.3 million in funding be collected through the sale of fuel oil, and that the remaining 85%, or about \$96.3 million, should be recovered through a Conservation Adjustment Mechanism (CAM) or other rate adjustment on electric bills. The Department now, in this determination, reviews, modifies, and approves the 2012 C&LM Plan Expanded Budget, as described below.

¹⁹ See, 2012 C&LM Plan, Table B for CL&P @ pp. 28 and 354 and Table B for UI @ pp. 38 and 366.

Table 2

Comparison - 2012 Base vs. Expanded Budgets			
Energy Efficiency Programs	2012 Base	2012 Expanded	Proposed Increase
RESIDENTIAL			
Residential Retail Products	\$ 6,605,855	\$ 14,405,304	\$ 7,799,449
Appliance Rebate Program	\$ -	\$ 4,000,000	\$ 4,000,000
Total - Consumer Products	\$ 6,605,855	\$ 18,405,304	\$ 11,799,449
Residential New Construction	\$ 1,438,329	\$ 2,015,379	\$ 577,050
Home Energy Solutions (HVAC, Duct Sealing, Lighting)	\$ 14,038,658	\$ 27,269,631	\$ 13,230,973
HES Income Eligible	\$ 11,517,793	\$ 24,077,002	\$ 12,559,209
Subtotal Residential	\$ 33,600,635	\$ 71,767,316	\$ 38,166,681
COMMERCIAL & INDUSTRIAL			
C&I LOST OPPORTUNITY			
Energy Conscious Blueprint	\$ 10,889,221	\$ 12,552,068	\$ 1,662,847
Total - Lost Opportunity	\$ 10,889,221	\$ 12,552,068	\$ 1,662,847
C&I LARGE RETROFIT			
Energy Opportunities	\$ 16,198,999	\$ 44,143,387	\$ 27,944,388
O&M (Services, RetroCx, BSC)	\$ 4,802,298	\$ 13,357,044	\$ 8,554,746
PRIME	\$ 601,141	\$ 938,935	\$ 337,794
Total - C&I Large Retrofit	\$ 21,602,438	\$ 58,439,366	\$ 36,836,928
Small Business	\$ 13,867,636	\$ 42,817,339	\$ 28,949,703
Subtotal C&I	\$ 46,359,295	\$ 113,808,773	\$ 67,449,478
OTHER - EDUCATION *			
SmartLiving Center® - Museum Partnerships	\$ 881,746	\$ 882,096	\$ 350
EE Communities / Behavior Pilot	\$ 1,300,000	\$ 1,800,400	\$ 500,400
K-8 Education	\$ 726,825	\$ 726,825	\$ -
Residential Audits-Non WRAP	\$ -	\$ -	\$ -
Community Based Program (SWCT)	\$ -	\$ -	\$ -
Science Center	\$ 208,000	\$ 208,000	\$ -
Subtotal Education	\$ 3,116,571	\$ 3,617,321	\$ 500,750
OTHER - PROGRAMS/REQUIREMENTS			
Institute for Sustainable Energy (ECSU)	\$ 560,000	\$ 560,000	\$ -
Other Funding Requests	\$ -	\$ -	\$ -
Residential Loan Program (Includes ECLF)	\$ 2,398,709	\$ 2,397,980	\$ (729)
C&I Loan Program	\$ 550,000	\$ 673,000	\$ 123,000
C&LM Loan Defaults	\$ 200,000	\$ 350,000	\$ 150,000
Subtotal Programs/Requirements	\$ 3,708,709	\$ 3,980,980	\$ 272,271
OTHER - LOAD MANAGEMENT			
ISO Load Response Program	\$ 4,876,000	\$ 4,876,000	\$ -
Water Heater Timer Promotion	\$ -	\$ -	\$ -
Demand Reduction	\$ -	\$ -	\$ -
Power Factor	\$ -	\$ -	\$ -
Subtotal Load Management	\$ 4,876,000	\$ 4,876,000	\$ -
OTHER - RENEWABLES & RD&D			
Research, Development & Demonstration	\$ 575,000	\$ 600,900	\$ 25,900
Subtotal Renewables & RD&D	\$ 575,000	\$ 600,900	\$ 25,900
OTHER - ADMINISTRATIVE & PLANNING			
Administration	\$ 1,650,000	\$ 1,949,700	\$ 299,700
Marketing Plan	\$ 250,000	\$ 750,000	\$ 500,000
Planning (UI Planning & Evaluation)	\$ 966,765	\$ 1,096,315	\$ 129,550
Evaluation (UI Evaluation , Outside Services)	\$ 2,580,000	\$ 2,780,400	\$ 200,400
Information Technology	\$ 2,042,500	\$ 2,292,500	\$ 250,000
Energy Efficiency Board	\$ 850,000	\$ 1,000,000	\$ 150,000
Performance Management Fee	\$ 4,986,273	\$ 10,376,011	\$ 5,389,738
Admin/Planning Expenditures	\$ 13,325,538	\$ 20,244,926	\$ 6,919,388
PROGRAM SUBTOTALS			
TOTAL	\$ 105,561,748	\$ 218,896,216	\$ 113,334,468

II. PURPOSE AND NEED

DEEP's approval of increased spending for energy efficiency up to an all cost-effective level is necessary to achieve the goals set forth in Section 1 of Public Act 11-80 for DEEP, as well as the policies identified in the 2012 IRP developed by DEEP to mitigate an increase in electricity rates expected to occur after 2017. Furthermore, the approval of increased spending for energy efficiency is supported by the statutory directive, set forth in Section 16a-3a of the General Statutes of Connecticut, that "resource needs shall first be met through all available energy efficiency and demand resources that are cost-effective, reliable and feasible."²⁰ Moreover, approval of expanded investment in energy efficiency is necessary for compliance with various statutory mandates established by Public Act 11-80, including the requirement in Section 33(d)(1) to weatherize 80% of Connecticut homes by 2030, and the requirement in Section 118(b) to reduce energy use in state-owned or leased buildings by 10% by January 1, 2013 and another 10% by January 1, 2018. Additional conservation will also reduce the need for some distribution and transmission capacity.

A. DEEP Goals and the 2012 Integrated Resources Plan

Public Act 11-80, in creating the new Department of Energy and Environmental Protection, identified four overarching departmental goals for the purposes of energy policy and regulation, one of which is "reducing rates and decreasing costs for Connecticut's ratepayers."²¹ These goals guide DEEP's exercise of its authorities and responsibilities, including the development of the Integrated Resources Plan (IRP). Under Public Act 11-80, DEEP is charged with developing an IRP on a biennial basis, to review the state's energy and capacity resource assessment and to develop a plan for the procurement of energy resources that addresses, among other things, the manner of how best to eliminate growth in electric demand and maximize the impact of demand-side measures.²² DEEP issued the 2012 IRP on June 14, 2012.

The 2012 IRP specifically identified the need to expand energy efficiency programs as part of a broader strategy to mitigate an increase in electricity rates expected to occur after 2017. The 2012 IRP recommends that Connecticut capture all cost-effective efficiency, which is cheaper than supply, as the most beneficial way to meet resource needs in a way that reduces costs for consumers. The 2012 IRP concluded that by increasing the C&LM program budget from \$105 million annually to \$206 million annually, Connecticut can cost-effectively achieve an annual savings of approximately 2.1% of electric consumption, resulting in a 0.4% decline in the annual growth rate for energy consumption.²³ This level of expansion is consistent with the Expanded Budget submitted by the EEB.

²⁰ The DPUC has historically interpreted the statutory "all cost-effective" requirement to allow additional energy efficiency investments only in the circumstance where a capacity or energy need was forecasted—a circumstance that was not identified in any past Integrated Resource Plans. Therefore, the DPUC did not approve any additional investment in energy efficiency under the all cost-effective mandate in Docket Nos. 08-07-01 or 10-02-07. A revisit of Section 16a-3a's mandate may be warranted.

²¹ Section 1 of Public Act 11-80.

²² See §§16a-3a(b) & (d).

²³ This recommendation is supported by analysis in the 2010 Connecticut Electric Residential Commercial and Industrial Energy Efficiency Potential Study commissioned by the Energy Efficiency Board.

Even after paying for all energy efficiency program costs, the 2012 IRP finds that a sustained commitment to funding energy efficiency at this level would save electric ratepayers an estimated \$534 million per year by 2022, as compared to a business-as-usual base case that assumes continuation of the current level of efficiency investment. These expanded savings would arise by lowering peak demand, reducing the consumption of electricity, and by reducing the number of required renewable energy credits. Annual energy savings for 2013 are projected to increase from 224 GWh in the base case modeled in the IRP, to 601 GWh, in the all cost-effective model, an increase of 377 GWh or about 168%. Annual demand savings in 2013 increase from 29 MW in the base case to 125 MW in the all cost-effective model, an increase of 331% for essentially a 100% increase in spending. A dramatic reduction in the unit cost (i.e., cost per kWh and kW) to deliver these savings would be necessary to meet these objectives. The cost per kWh declines from 4.4 cents/kWh in the base case to 2.8 cents/kWh, a reduction of 1.6 cents/kWh or about 36% for incremental savings in the IRP. The cost per kW drops from \$3,414/kW to \$1,115/kW, a reduction of \$2,299/kW or approximately 67%.²⁴

In addition, the 2012 IRP identifies that savings would accrue from reductions in market prices for energy and capacity due to reduced demand that would eliminate the call for the highest cost resources. As such, the approval of the Expanded Budget is consistent with the statutory goals of DEEP to reduce rates and to decrease costs for ratepayers, and is essential to implement the policy identified in the 2012 IRP.

Although there is no imminent need for new generation capacity identified in the 2012 IRP, expanding current conservation efforts will push the need for generation out even further and provide a hedge if reliability is threatened due to unanticipated plant retirements or other unexpected events. The 2012 IRP also identifies positive environmental impacts and economic development potential that should result from expanded conservation. The 2012 IRP estimates that air emissions would decline between 5% and 10% and support an additional 5,500 in-state jobs by 2022.²⁵

B. Lead By Example

Sections 118, 119, 122 and 123 of Public Act 11-80 require DEEP, jointly with the Department of Administrative Services, to implement a plan to reduce energy consumption by 10% at state owned or leased buildings by January 1, 2013, and an additional 10% by January 1, 2018. The plan calls for other initiatives to maximize energy efficiency in state buildings, such as benchmarking, energy audits, technical assistance to state agencies, financing of energy efficiency projects through energy saving performance contracting, and establishing reporting requirements. To effect these changes, the state has issued \$15 million in bonds to provide the long-term financing for energy efficiency projects in state facilities. These bonds will provide approximately 50% of the incentives for state buildings that would otherwise qualify for ratepayer funds under the C&I programs funded through the C&LM Program, enabling ratepayer

²⁴ 2012 IRP pp. 36 and 37; Appendix C, p. C-4.

²⁵ 2012 IRP p. iii; Appendix I, p. I-10.

dollars to be allocated toward other C&I programs thereby reducing the programs' overall unit cost for the C&LM dollars.²⁶

Approval of the Expanded Budget is critical to ensure that the statutory mandate to reduce energy consumption in state buildings is met. Under the Expanded Budget, state buildings will have access to \$2.1 million in C&LM funding through the Small Business Energy Advantage program. This money is projected to deliver 21 GWh of savings to the state, which will contribute significantly to the state's ability to reach the goal of 10% savings by January 1, 2013.

C. Weatherization Goal for Residential Buildings

Section 33(d)(1) of Public Act 11-80 states that C&LM plans developed by the EDCs "shall include steps that would be needed to achieve the goal of weatherization of eighty percent of the state's residential units by 2030." An increase in the number of residential customers served under HES and HES-IE is necessary to increase savings and to meet the weatherization goal. As a result, additional funding, secured through the Expanded Budget is needed to achieve this goal.

III. COST-EFFECTIVENESS DETERMINATION

By law, programs included in the C&LM Plan—including those that would be supported by the Expanded Budget—must be screened through cost-effectiveness testing that compares the value and payback period of program benefits to program costs to ensure that the programs are designed to obtain energy savings and system benefits, including mitigation of federally mandated congestion charges, whose value is greater than the costs of the programs.²⁷ The Department has, in accordance with statutory requirements, screened the programs to be supported by the Expanded Budget, and finds them to be cost-effective for the reasons described below.

The EDCs have submitted detailed programmatic cost and savings information for the Expanded Plan in Table B of the 2012 Electric and Gas Conservation and Load Management Plan. The methodologies used to evaluate the cost effectiveness of the C&LM programs are described in detail in Chapter 6 of the 2012 C&LM Plan. For the 2012 Plan, the EDCs have used benefit-cost screening tools that are consistent with those used in the past. Table B includes a benefit-cost analysis of each program using both the Electric System Test and Total Resource Test (TRT). The Electric System Test evaluates the programs based on the costs to electric ratepayers and the savings to the electric system. The TRT includes the cost to the participant and other non-electric savings. The Electric System Test has been the primary, but not the exclusive test used by the former DPUC to evaluate the cost effectiveness of all electric conservation programs except low income programs. The former DPUC allowed oil subsidies for low income customers and approved low income programs that pass the TRT. The former

²⁶ State projects that qualify under the C&I programs must still meet the cost-effectiveness criteria established in the C&I programs administered by the C&LM funds.

²⁷ Conn. Gen. Stat. §16-245m (d)(1).

DPUC allowed oil subsidies to a limited extent, in the HES program, but still required this program to be cost effective under the Electric System Test.²⁸

The information provided in Table B indicates that overall, the Expanded Plan is cost effective from an electric ratepayer perspective. While DEEP relies on the Electric System Test as the “primary test” to determine program cost effectiveness, the Electric System Test is not the exclusive, or legally-required, test of cost-effectiveness. DEEP has reviewed the electric C&LM programs under both the Electric System Test and the TRT. All of the programs, except CL&P’s Home Energy Solutions (HES) program and the HES Income Eligible (HES-IE) program are cost effective using the Electric System Test. Under the Electric System Test, CL&P’s HES program fails the test by a slim margin, of 0.9:1.²⁹ The HES-IE and HES for CL&P programs are not cost-effective under the Electric System Test because they include incentives for oil savings measures that are paid for by electric ratepayers.

All of the programs, including HES-IE and HES for CL&P, are cost effective using the TRT. The benefits of the oil savings in HES-IE and HES are included in the TRT, with the result that those programs have a positive benefit cost ratio. Applying the TRT to the 2012 C&LM Expanded Plan, CL&P’s HES program has a benefit/cost ratio of 2.4:1. In June 2012, the Connecticut General Assembly addressed the issue of oil subsidies for the HES program by temporarily lifting a legislative limit of \$500,000 annually, effective until August 2013. DEEP believes that the application of the TRT—which includes the benefits of oil savings in the calculation of cost-effectiveness—is consistent with the legislature’s intent to allow a higher level of cross-subsidization between oil and electric customers.

Having reviewed the programmatic cost and savings information DEEP therefore concludes that the Expanded Plan, including HES and HES-IE, is cost-effective. DEEP’s approval of the Expanded Budget is conditioned on the EDCs implementing the additional measures discussed in the Program Review and Modification section, below.

As identified in the 2012 IRP, unit costs for all C&LM programs must decline to ensure that increased savings are achieved while minimizing any rate increases. DEEP is pleased to see that the Expanded Plan includes more financing and performance contracting to lower costs. The cost of financing for C&I customers must be reduced and other cost-cutting measures must be aggressively pursued. As discussed below, the Department has modified the Expanded Plan to increase the amounts available for self-funding of residential loans, and implementation of self-funding for C&I financing, so that ratepayer subsidies can be reduced and unit costs decline. These efforts must be expanded in the years to come to reach the aggressive savings and unit cost goals outlined in the 2012 IRP.

DEEP’s approval of the Expanded Budget for this program for 2012 is conditioned on the EDCs, in coordination with the EEB, implementing additional measures to bring down the overall cost of C&LM programs in the long term. As programs ramp up, the EDCs must provide to DEEP quarterly reporting on customer participation, program activity, and cost-effectiveness.

²⁸ See, Decision dated, March 17, 2010, in Docket No. 09-10-03, DPUC Review of The Connecticut Energy Efficiency Fund’s 2010 Conservation and Load Management Plan for 2010.

²⁹ 2012 C&LM Plan, pp. 352.

The EDCs are in the process of establishing a dashboard for reporting company-wide C&LM program activity and spending. This dashboard will facilitate quarterly reporting. In addition, DEEP will require the EDCs to implement the measures discussed in Section V, below, to improve the effectiveness of the HES programs.

IV. EQUITABLE DISTRIBUTION OF FUNDS

Section 101 of Public Act 11-80 requires DEEP, before approving the C&LM Plan submitted by the EEB, to determine “that an equitable amount of the funds . . . are to be deployed among small and large customers . . . in census tracts in which the median income is not more than sixty per cent of the state median income.”

The C&LM Plan submitted by the EEB includes a Budget and Parity Analysis which shows that program budgets for each customer sector in the Expanded Plan closely match the revenues collected from the respective customer sector.³⁰ DEEP has reviewed this information and is satisfied that the EEB has taken sufficient care to ensure equity between customer classes and has provided a reasonable analysis to demonstrate that equitable distribution of program participation has been achieved.

On July 9, 2012, DEEP issued its first annual report on the Equitable Distribution of Funds, as required under Section 101 of the Act.³¹ The report analyzed the distribution of C&LM program funds across customer sectors. As this report indicated, to comply with Section 101 going forward the EDCs must begin tracking program expenditures by census tract, and must utilize marketing and other measures to boost program participation in distressed communities. The implementation of these measures is especially critical as the programs ramp up.

V. PROGRAM REVIEW AND MODIFICATION

A. Home Energy Solutions

Since 2007, the Home Energy Solutions (HES) program has delivered services to approximately 100,000 Connecticut homes. The Expanded Plan supports a dramatic expansion in the number of homes that can be serviced by the HES program. Under the Base Plan, the EDCs will deliver HES services to approximately 38,000 homes, while under the Expanded Budget the EDCs would increase the number of homes served to a total of 72,000 homes.³² This significant increase in the number of residential customers served under HES and HES-IE is critical to increase savings and to meet the weatherization goals established under Public Act 11-80.

³⁰ See C&LM Plan, pp. 348 & 351.

³¹ Equitable Distribution of Funds report, *available at* <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/4c9614e5098bf4b485257a360068cf54?OpenDocument>

³² The 2012 data reflect the combined goals for UI and CL&P for HES and HES-IE. The figure for the number of homes to be served under the Expanded Budget assumes full funding of the Expanded Plan effective January 1, 2012.

Several key improvements must be made to the HES and HES-IE programs to ensure that the quality and effectiveness of the programs keeps pace with the increased volume of homes serviced.³³ The EEB, in its oversight capacity, must ensure a more gradual ramp up of program activity to allow for the completion of these improvements to assure the program is ready to deliver comprehensive services as cost-effectively as possible. The required improvements are as follows:

1. Weatherization. As discussed above, section 33(d)(1) of Public Act 11-80 established a new requirement that each C&LM Plan must include steps that would be needed to achieve the goal of weatherizing 80% of the state's residential units by 2030. The EEB is promulgating a definition of "weatherization" for the purpose of meeting the goals of Public Act 11-80. This definition is still forthcoming, and therefore it is unclear whether the homes that have been served under HES, or homes that are currently being served, meet this yet-to-be-defined standard. Moving forward rapidly will result in a lost opportunity if customers participate in the HES program but do not make the necessary improvements to qualify as a weatherized home under the forthcoming standard. Therefore, before any funds from the Expanded Budget are expended for HES programs, the EEB must finalize its definition of weatherization to ensure that the HES program is executed so as to maximize achievement of the weatherization goal.
2. Deploy Audit Tool. Customers must be presented with better information as to the benefits and cost of recommended measures. An improved customer experience during the audit is essential, as customer education is the key to securing commitments to the installation of deeper measures that will have significant efficiency benefits. Customers should not be overwhelmed with brochures, rebates, product literature, etc. Instead, customers should be provided a tailored document that provides critical data in a concise, easy to understand format that can act as a roadmap to improved energy efficiency over time. As soon as possible, the EDCs must develop and deploy the tools necessary to deliver clear, customer-specific information about programs, rebates, financing, and other opportunities the customer is eligible for, that will enable the customers to achieve the energy savings identified through the audit.
3. Data Gathering. The HES program provides an invaluable opportunity to gather critical information from customers that can be used for current and future studies of the uptake of efficiency measures (e.g., appliance saturation). This information can also be used to motivate future behavior (e.g., reduced peak energy use) or stimulate energy related investments. Ultimately, this information should be used to better evaluate cost effectiveness and achieve Connecticut's energy goals. Therefore, in developing and deploying the tools referenced above, the EDCs and EEB must develop a protocol for gathering critical information through those tools from HES participants.
4. Uptake for deeper savings among broader customer base. HES vendors and the EDCs have struggled to convince residential customers to invest in additional measures beyond HES Core Services. The EDCs have recently begun working with Gateway Community College

³³ The Department is not suggesting that the EDCs suspend the HES program while these improvements are being addressed.

to develop sales training for HES vendors to improve customer uptake of broader and deeper savings. The EDCs must ensure that HES vendors receive this sales training by 2013.

In addition to these requirements, the EDCs and vendors must conduct a targeted follow-up effort to previous HES participants to encourage deeper savings. The delivery of Core Services represents the most costly component of the HES program. This cost must provide value to all of the ratepayers who support this initiative.

B. Self-Funding Residential Loans

The EDCs conducted a one-year residential Financing Pilot between June 2010 and May 2011. Through that program, the EDCs provided a total loan volume of about \$14 million. The Financing Pilot demonstrated the potential for residential loan volume going forward. Several steps have been taken recently to increase the amount of available capital for the self-funding of residential energy efficiency loans. As shown in Table 3, below, in the approval of the Base Budget, the Department allocated \$12 million for CL&P and \$600,000 for UI to this effort.

Table 3

Balance - Self-Funding Residential Loans		
Item	CL&P	UI
2010 Carry Over	\$6,000,000	-
2011 Carry Over	\$4,000,000	-
2012 Base Plan	\$2,000,000	\$600,000
TOTAL	\$12,000,000	\$600,000

Lowering the cost of providing energy efficiency to residential customers will require a significant increase in the number customers willing to install deeper efficiency measures without requiring rebates or other direct incentives to do so. A comprehensive marketing effort is being planned to stimulate interest in energy efficiency and to drive increased C&LM program participation across Connecticut. DEEP expects that program activity and loan volume will increase as marketing efforts are expanded. Consumers will need access to low-cost capital to finance the measures necessary to provide increased savings. Therefore, adequate capital must be available to support the expected demand for residential financing.

Based on the foregoing, the Department finds that the total self-funding balance of \$12.6 million approved in the Base Budget is inadequate to support the level of residential financing that will be necessary to meet long-term savings goals under the Expanded Plan through the self-funded revolving loan program, and is not proportionally allocated between the EDCs. Therefore, the balance must be increased, by allocating a greater, proportionate share of each EDC’s annual residential C&LM budget to residential self-funding. Historically, revenues, costs, and activities related to C&LM Plans have been divided between CL&P and UI based on the ratio of sales among the two EDCs, according to a ratio of about 80:20. Applying that ratio, under the Expanded Plan, UI’s total share of funding for self-funding of residential loans should be about \$3 million, rather than the current balance of \$600,000 (see Table 3). DEEP has therefore determined to modify the proposed Expanded Budget to allocate \$3 million from

CL&P's 2012 residential Expanded Budget proposal to self-funding of residential loans, and \$1.5 million from UI's 2012 residential Expanded Budget to self-funding of residential loans. The addition of \$4.5 million would increase the available self-funding balance in the overall 2012 C&LM budget to approximately \$17.1 million.

Because it is not possible to accurately predict future loan volume, the EDCs and the EEB should allocate additional funds to this initiative from future annual C&LM budgets and monitor the program to assure that available funding reflects consumer demand.³⁴ Beginning in 2013 and annually thereafter in 2014 and 2015, DEEP recommends that CL&P allocate 10.5% of its overall residential budget and that UI allocate 12.5% of its residential budget to this program.³⁵ The Department will regularly monitor this program and make adjustments as needed. The Department will then determine whether to allocate additional funds to this effort in 2016. If consumer interest in the residential loan program does not meet expectations, the funds allocated to residential financing can be reallocated to support program activity.

DEEP finds that it is appropriate to use self-funding to gain experience within the residential market and reduce the overall cost of financing to ratepayers. To achieve our long term goals cost-effectively (i.e., reduce costs in general³⁶ and move away from direct ratepayer funded incentives) requires consumers to invest in energy efficiency. This in turn requires that consumers have access to low cost financing that is not heavily subsidized. Therefore, the overall cost of financing must be reduced to reduce or eliminate subsidization by other ratepayers. The Department agrees that self-funding has an opportunity cost. However, the Department believes that the cost is much lower than suggested by UI. For instance, current investment alternatives such as stocks and mutual funds are high risk while safer investments provide very low returns. While self-funding may reduce energy savings in the short term, over time financing should increase savings by providing customers the tools necessary to implement deeper savings. This will improve the cost effectiveness of our programs. Should we choose to seek third party capital to leverage these funds in the future, the experience gained through the self-funding model should allow the EDCs or CHIF to negotiate lower overall costs or more flexible terms. Further, it is important to reiterate that self-funding provides flexibility in determining the underwriting standards allowing the EDCs to offer these loans to consumers that might not otherwise qualify for them.³⁷

C. Commercial & Industrial Programs

Several program and funding issues, discussed below, will affect the ability of the programs to increase in scale and comprehensiveness of the C&I programs in the Expanded Plan. In general, DEEP finds that the Expanded Plan will achieve deeper energy savings among a broader range of C&I participants. Programs would be transformed from the installation of

³⁴ The level of funding must be revisited annually as program activity changes and as we gain experience with the residential financing market.

³⁵ The disparate allocation percentages are intended to address the funding imbalance.

³⁶ Loan processing and other administrative costs must also be regularly reviewed to lower the overall cost of this program.

³⁷ For example, traditional lending institutions are unwilling to allow the use of utility payment history to qualify consumers for these loans, instead requiring minimum FICO scores. CHIF indicated that strict adherence to FICO scores has led to a high rate of decline for these loans.

discrete efficiency measures to high performance building and facility upgrades. Programs would also be broadened to reach under-served market segments, particularly small businesses, and to promote and accelerate market transformation. The Expanded Plan proposes increasing the total budget for C&I efficiency programs by 145% (compared to the Base Budget) from \$46.4 million to \$113.8 million. This increase would produce an even greater increase in total energy savings, from 20.9 MW to 54 MW, or 158% (compared to the Base Budget).³⁸ The Expanded Plan would achieve these savings not only through funds recovered from ratepayers, but also through performance contracting, leveraging of private capital, and state bond funding to finance state building projects.

More specifically, the Expanded Plan proposes to significantly increase retrofit efforts for large and small businesses by expanding Energy Opportunities and Small Business Energy Advantage (SBEA) programs. In addition, large increases to the O&M budget would be used to fund the Business and Energy Sustainability Challenge program, which aims to transform business management practices through training efforts on O&M and energy management practices to maximize efficiency. Given limited amounts of new construction in the state, the Energy Conscious Blueprint program would have a comparatively modest budget increase. The particular budget allocations proposed by the EDCs and EEB for these programs are detailed in Table 4, below.

Table 4

C&I Program Budget Increases			
C&I Program	2012 EDC Base Budget	2012 EDC Expanded Budget	Percent Change
Energy Conscious Blueprint	\$10,889,221	\$12,552,068	15.3%
Energy Opportunities	\$16,198,999	\$44,143,387	172.5%
O&M*	\$4,802,298	\$13,357,044	178.1%
PRIME	\$601,141	\$938,935	56.2%
Sm. Bus. Energy Adv.	\$13,867,636	\$42,817,339	208.8%
TOTAL C&I	\$46,359,295	\$113,808,773	145.5%
* O&M Services, RetroCommissioning, Business Sustainability Challenge			
Source of data: 2012 Plan, Tables A1 and B2; pp. 20, 23, 346, and 348.			

In their comments on the Expanded Plan, the EDCs acknowledged they will need additional vendors and infrastructure to fully implement the expanded C&I programs. At the Technical Meeting, the EDCs stated that they are making arrangements in preparation for the program ramp-up. The EDCs indicated that they currently have qualified EO and SBEA vendors on a waiting list. If increased funding receives final approval, the EDCs will hire additional vendors. The SBEA vendors will also be required to install simple gas efficiency improvements such as pipe insulation and low flow faucets. UI indicated that, through the use of American Recovery and Reinvestment Act (ARRA) funds, it has established a partnership with Gateway Community College to develop a training program for certified energy auditors.

³⁸ 2012 C&LM Plan, Tables A1 and B2, pp 20, 23, 346 & 348.

DEEP notes that, with the exception of the Business Sustainability Challenge pilot program, the C&I programs are mature initiatives that have been in operation for over a decade. The ramp-up of these programs therefore will not require a commensurate increase in EDC staff to manage these programs. The EEB should monitor EDC staffing levels to ensure that scale economies are maximized.

To meet the saving targets in the Expanded Plan, the C&I programs will rely on external financing to supplement ratepayer-funded incentives to businesses. This will leverage the C&LM dollars to support more C&I projects and maintain program cost-effectiveness. The C&LM fund already supports financing opportunities for C&I customers through interest rate buy downs. Additional sources of financing include private capital, described below, and state bonding through the Lead by Example program.

The SBEA program provides incentives and interest-free financing for efficiency projects that include gas measures, with no upfront cost to small business customers. The program provides on-bill loan repayment, which appears as a line item on the customer's bill. The EDCs provide the capital to finance the loans, and the C&LM fund pays the EDCs at their respective costs of capital plus some administrative costs.

As a result of a recent competitive bid, Univest and M-Cor will supply private financing for C&I customers. Using these sources of capital, the C&LM fund will provide \$550,000 of program funding to support interest buy downs.

Performance contracting is another source of financing. The performance incentive matrix in the Expanded Plan requires that 10% of projects in the Energy Opportunities (EO) Program incorporate performance contracts or external financing. The Department will include Lead By Example projects among the eligible projects to qualify for the Energy Opportunities performance incentive for 2012 programs. DEEP notes that the 10% requirement is the same as in the Base Plan. Since the EO budget is much larger in the Expanded Plan, the number of performance contracts will rise substantially.

1. Operations and Maintenance Programs

The 2012 Expanded Budget has allocated a major increase for O&M programs (also referred to as the Business and Energy Sustainability program in the Base Plan), which comprises the following components: Retro-commissioning, Business Sustainability Challenge, O&M Services, and Training and Outreach. As shown in Table 4, program expenditures are budgeted to increase from \$4,802,298 in the Base Budget to \$13,357,044 in the Expanded Budget. The O&M program budget increase of 178% is the second highest percentage increase among the C&I programs.

The objective of the O&M programs, especially the Business Sustainability Challenge program, is to educate and train businesses to operate their equipment and manage their businesses in a way that improves energy efficiency. The program also provides businesses with the tools and training to measure their energy use. The focus on operational and cultural changes in businesses presents new challenges in measuring program savings and cost-effectiveness.

Currently, C&I programs that install efficient equipment, such as lighting and HVAC systems, use the “deemed savings” approach to measure energy savings. This approach measures average savings typical for an installed energy efficiency measure that has been developed from generally accepted data sources and applicable to the installed measure.³⁹ Programs that rely on a behavioral approach to savings would be required to measure savings from operational and managerial actions taken.

At the Technical Meeting an EEB consultant indicated that the Business Sustainability Challenge, a component of the O&M programs, is still transitioning out of the pilot phase and is currently undergoing a process evaluation and tracking of energy savings. However, evaluators have not yet measured the energy savings impact of the program. Protocols for measuring behavioral changes by businesses should be developed and adopted by the EEB’s Evaluation Committee during 2012 for implementation in the 2013 C&LM Plan. Given the work needed to develop measurement and verification (M&V) protocols, DEEP believes it is premature to significantly increase funding for O&M program components for which there is no established M&V protocol. DEEP has modified the Expanded Budget to assign \$5 million to self-financing of C&I loans, which funds be allocated from O&M programs and other C&I programs, as discussed below.

2. C&I Self-Funding

Public Act 11-80 authorizes CEFIA to develop a low-cost source of bond funding for the purposes of financing energy efficiency projects. While CEFIA financing options are under development, DEEP is working with the EEB to develop additional sources of external financing to leverage ratepayer dollars from the C&LM fund. In 2012, these financing options will be under development and C&I programs will be ramping up to meet the savings goals of the Expanded Plan. During this interim time period, DEEP directs the EEB and EDCs to utilize self-funding for the EO program, i.e. setting aside a portion of C&LM funds as the source of capital to fund loans for C&I projects. DEEP believes that the additional ratepayer dollars available during the 2012 ramp-up period affords a favorable opportunity to support self-funding, and will direct that allocation of \$5 million from O&M programs and other C&I programs for the creation of a revolving fund to finance C&I projects. The EEB must ensure that C&LM funds used for the purposes of financing C&I projects are subject to lending terms consistent with other financing vehicles for C&I customers, including interest rates, financial qualifications of borrower, and payback lengths.

3. C&I Incentive Caps

In the Addendum to the Base Plan Approval, dated February 22, 2012, DEEP recommended that PURA raise the C&I customer cap from \$750,000 to \$800,000 per federal tax identification number (Tax I.D.) and eliminate the per metered site cap of \$300,000. Similarly, in approving the Expanded Budget, DEEP finds that the annual cap should be raised from \$800,000 to \$2 million, and continue to eliminate a per metered site cap. An annual cap of \$2 million per Tax I.D. is appropriate, will allow flexibility for larger multi-year projects, and

³⁹ Glossary of Terms, Version 2.1, A Project of the Regional Evaluation, Measurement and Verification Forum, July 2011, Prepared by Paul Horowitz PAH Associates, Facilitated by Northeast Energy Efficiency Partnerships.

will assure that the greatest number of C&I customers are serviced under the C&LM programs. Going forward, DEEP recommends an annual incentive cap, which would not impose restrictions for large C&I customers to receive incentives in future years. The EEB should evaluate the appropriateness of the \$2 million cap after the first year of the Expanded Plan.

4. Self-Directed C&I Programs

DEEP believes that there is merit to exploring customer-directed program delivery that applies to very large C&I customers who seek to improve their process efficiencies. Therefore, the EDCs and the EEB should consider, for the 2013 C&LM Plan, proposing program enhancements to allow large C&I customers more flexibility to direct C&LM expenditures toward energy investments that would improve process efficiencies. The proposed program enhancements should be designed to ensure that participants make a commensurate contribution of their own financial resources as a condition of participation in self-directed programs.

D. Consultant Costs and Education Programs

The proposed budget for consultants (line item identified as Energy Efficiency Board) submitted by the EDCs would increase from \$850,000 under the Base Plan to \$1 million under the Expanded Plan. The following table provides historical costs for this line item:

Table 5

Consultant Budget	
Year	Amount
2008	\$ 460,000
2009	\$ 590,000
2010	\$ 610,000
2011	\$ 610,000
2012	\$ 1,000,000
Source of data: 2008-2012 C&LM Plans Table A1	

As the table shows, the proposed budget would nearly double spending on consultants as compared with spending over the last three years. In addition, there are consultant costs embedded in the budget for program evaluation. In 2000, the Energy Efficiency Board relied on a single consultant to guide the development of Connecticut’s C&LM programs. Since that time the number of consultants has increased and their role has expanded to include administrative tasks, such as providing subcommittee reports at monthly Energy Efficiency Board meetings. It is unclear whether this is the best use of these resources. It is not clear that expanding the budgets for existing programs would necessitate a proportionate increase in consultant staffing. Instead, economies of scale should be achieved.

For these reasons, DEEP has modified the Expanded Budget to reduce the allocation for consultant costs to \$610,000 for the Energy Efficiency Board line item for 2012 and reallocate these dollars to educational efforts. Educating consumers about the benefits of energy efficiency will be critical to the success of the Expanded Plan. While program marketing will drive initial participation, absent an increased focus on educating consumers to the benefits of investing in

efficiency it will remain difficult to incent residential and business customers to pursue deeper savings. The Expanded Plan submitted by the EDCs proposed to increase residential and business program spending in excess of 100% (by \$38 million and \$67 million respectively) spending for general education was proposed to increase by only \$500,000, or about 16%. An allocation of consultant funds to educational programs will help to ensure that education programs are able to ramp up in step with the programs they support.

Regarding program evaluation costs embedded in individual programs, DEEP expects that consultant costs should increase by no more than 10% from 2011 levels to achieve economies of scale. The EEB should examine this matter in more detail during 2012. Going forward, to facilitate review of consultant costs, DEEP requests that all consultant-related expenses be listed within the “Energy Efficiency Board” line item and not comingled among individual program costs.

VI. FEASIBILITY OF PROGRAM PERFORMANCE AT EXPANDED LEVELS

As part of its screening of the C&LM programs for cost-effectiveness, the Department has requested information from the EDCs about the feasibility of expanding existing C&LM programs, including maintaining the quality and cost-effectiveness of those programs at expanded levels of activity. Spending at the level proposed in the Expanded Budget would, in most cases, cause program activity to double over a period of several months.

Programs must maintain quality and cost-effectiveness during the ramp up to expanded activity levels. The Department therefore supports a controlled ramp up to all cost-effective spending levels, to ensure that program quality is maintained or improved and that funding results in reasonable rates and bills. This is especially true given that all proceedings on the Expanded Budget may not be completed until well into 2012. Recall that, as noted above, the Expanded Budget submitted by the EEB sought approval of a ramp up to an investment level of \$218.9 million. Of that \$218.9 million, \$17 million is proposed to be derived from oil funding and \$105.6 million would be funded through the Base Plan, leaving an additional \$96.3 million to be collected for the Expanded Budget. This figure assumes a full year of program activity, beginning January 1, 2012. Since all proceedings on the Expanded Budget may not be completed until the second half of 2012, program spending would not be expected to reach the proposed levels in 2012.

On May 25, 2012, DEEP therefore requested from the EDCs supplemental information about the projected levels of spending the EDCs could expect to maintain for 2012 under an Expanded Budget scenario, while maintaining the same or better program quality and effectiveness. This information is provided in Appendix A, and summarized in Table 6. Based on this information, DEEP concludes that the EDCs can ramp up to a total spending level of approximately \$158.4 million in 2012 while maintaining program and vendor quality. At this level, \$34.2 million, rather than \$96.3 million, would be needed to fund program activity under the Expanded Budget for 2012. Funding at this level in 2012 would enable the EDCs to ramp up program activity in a gradual, more controlled way for the remainder of 2012, while positioning the EDCs to deliver conservation programs at the expanded, all cost-effective level in 2013.

DEEP's approval of the 2012 Expanded Budget (Column D in Table 6) reflects the projected amounts the utilities have indicated that they can feasibly spend in the second half of 2012, including a reduction to the Load Management budget identified by UI in its response to DEEP's May 25, 2012 data request. The approved budget amounts in Column D also includes adjustments to program budgets made by DEEP in this determination, as discussed in the previous section. The Energy Efficiency Board line item includes the reduction in consultant costs made by DEEP, and the EE Communities/Behavior Pilot line item includes the corresponding increase to education program funding made by DEEP. DEEP's modifications with respect to self-funding for residential and C&I did not alter the total budget for either program line item.

Table 6

DEEP Approved 2012 Total Budget					
Energy Efficiency Programs	(a) DEEP Approved 2012 Base Budget	(b) EDC Proposed 2012 Expanded Budget	(c) = (a + b) EDC Proposed 2012 Total Budget	(d) DEEP Approved 2012 Expanded Budget	(e) = (a + d) DEEP Approved 2012 Total Budget
RESIDENTIAL					
Residential Retail Products	\$ 6,605,855	\$ 7,799,449	\$ 14,405,304	\$ 4,424,725	\$ 11,030,580
Appliance Rebate Program	\$ -	\$ 4,000,000	\$ 4,000,000	\$ 3,100,000	\$ 3,100,000
Total - Consumer Products	\$ 6,605,855	\$ 11,799,449	\$ 18,405,304	\$ 7,524,725	\$ 14,130,580
Residential New Construction	\$ 1,438,329	\$ 577,050	\$ 2,015,379	\$ 139,000	\$ 1,577,329
Home Energy Solutions (HVAC, Duct Sealing, Lighting)	\$ 14,038,658	\$ 13,230,973	\$ 27,269,631	\$ 5,623,789	\$ 19,662,447
HES Income Eligible	\$ 11,517,793	\$ 12,559,209	\$ 24,077,002	\$ 7,494,300	\$ 19,012,093
Subtotal Residential	\$ 33,600,635	\$ 38,166,681	\$ 71,767,316	\$ 20,781,814	\$ 54,382,449
COMMERCIAL & INDUSTRIAL					
C&I LOST OPPORTUNITY					
Energy Conscious Blueprint	\$ 10,889,221	\$ 1,662,847	\$ 12,552,068	\$ 882,015	\$ 11,771,236
Total - Lost Opportunity	\$ 10,889,221	\$ 1,662,847	\$ 12,552,068	\$ 882,015	\$ 11,771,236
C&I LARGE RETROFIT					
Energy Opportunities	\$ 16,198,999	\$ 27,944,388	\$ 44,143,387	\$ 13,422,436	\$ 29,621,435
O&M (Services, RetroCx, BSC)	\$ 4,802,298	\$ 8,554,746	\$ 13,357,044	\$ 1,686,277	\$ 6,488,575
PRIME	\$ 601,141	\$ 337,794	\$ 938,935	\$ 138,543	\$ 739,684
Total - C&I Large Retrofit	\$ 21,602,438	\$ 36,836,928	\$ 58,439,366	\$ 15,247,256	\$ 36,849,694
Small Business	\$ 13,867,636	\$ 28,949,703	\$ 42,817,339	\$ 9,110,000	\$ 22,977,636
Subtotal C&I	\$ 46,359,295	\$ 67,449,478	\$ 113,808,773	\$ 25,239,271	\$ 71,598,566
OTHER - EDUCATION *					
SmartLiving Center® - Museum Partnerships	\$ 881,746	\$ 350	\$ 882,096	\$ 350	\$ 882,096
EE Communities / Behavior Pilot	\$ 1,300,000	\$ 500,400	\$ 1,800,400	\$ 620,000	\$ 1,920,000
K-8 Education	\$ 726,825	\$ -	\$ 726,825	\$ -	\$ 726,825
Residential Audits-Non WRAP	\$ -	\$ -	\$ -	\$ -	\$ -
Community Based Program (SWCT)	\$ -	\$ -	\$ -	\$ -	\$ -
Science Center	\$ 208,000	\$ -	\$ 208,000	\$ -	\$ 208,000
Subtotal Education	\$ 3,116,571	\$ 500,750	\$ 3,617,321	\$ 380,350	\$ 3,496,921
OTHER - PROGRAMS/REQUIREMENTS					
Institute for Sustainable Energy (ECSU)	\$ 560,000	\$ -	\$ 560,000	\$ -	\$ 560,000
Other Funding Requests	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Loan Program (Includes ECLF)	\$ 2,398,709	\$ (729)	\$ 2,397,980	\$ 3,998,571	\$ 6,397,280
C&I Loan Program	\$ 550,000	\$ 123,000	\$ 673,000	\$ 85,000	\$ 635,000
C&LM Loan Defaults	\$ 200,000	\$ 150,000	\$ 350,000	\$ 25,000	\$ 225,000
Subtotal Programs/Requirements	\$ 3,708,709	\$ 272,271	\$ 3,980,980	\$ 4,108,571	\$ 7,817,280
OTHER - LOAD MANAGEMENT					
ISO Load Response Program	\$ 4,876,000	\$ -	\$ 4,876,000	\$ (1,376,000)	\$ 3,500,000
Water Heater Timer Promotion	\$ -	\$ -	\$ -	\$ -	\$ -
Demand Reduction	\$ -	\$ -	\$ -	\$ -	\$ -
Power Factor	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal Load Management	\$ 4,876,000	\$ -	\$ 4,876,000	\$ (1,376,000)	\$ 3,500,000
OTHER - RENEWABLES & RD&D					
Research, Development & Demonstration	\$ 575,000	\$ (1,175,900)	\$ 600,900	\$ -	\$ 575,000
Subtotal Renewables & RD&D	\$ 575,000	\$ 25,900	\$ 600,900	\$ -	\$ 575,000
OTHER - ADMINISTRATIVE & PLANNING					
Administration	\$ 1,650,000	\$ 299,700	\$ 1,949,700	\$ 250,000	\$ 1,900,000
Marketing Plan	\$ 250,000	\$ 500,000	\$ 750,000	\$ 500,000	\$ 750,000
Planning (UI Planning & Evaluation)	\$ 966,765	\$ 129,550	\$ 1,096,315	\$ 51,190	\$ 1,017,955
Evaluation (UI Evaluation, Outside Services)	\$ 2,580,000	\$ 200,400	\$ 2,780,400	\$ -	\$ 2,580,000
Information Technology	\$ 2,042,500	\$ 250,000	\$ 2,292,500	\$ 50,000	\$ 2,092,500
Energy Efficiency Board	\$ 850,000	\$ 150,000	\$ 1,000,000	\$ (240,000)	\$ 610,000
Performance Management Fee	\$ 4,986,273	\$ 5,389,738	\$ 10,376,011	\$ 2,735,243	\$ 7,721,516
Admin/Planning Expenditures	\$ 13,325,538	\$ 6,919,388	\$ 20,244,926	\$ 3,686,433	\$ 17,011,971
TOTAL	\$ 105,561,748	\$ 113,334,468	\$ 218,896,216	\$ 52,820,439	\$ 158,382,187

VII. REVENUE RECOVERY MECHANISMS FOR THE EXPANDED BUDGET

DEEP considered several funding mechanisms that could be used to recover the revenues necessary to support the Expanded Plan. Because the Expanded Plan calls for funding energy conservation programs at a level exceeding the amount of funding available in the Energy Conservation and Load Management Fund, any additional collection of funds from ratepayers would be subject to authorization by PURA, in accordance with PURA's statutory authorities

and procedures. DEEP provides the following recommendations about the appropriate revenue recovery mechanisms for PURA's consideration in such a proceeding.

DEEP considered three potential funding mechanisms for the Expanded Budget, including a direct increase in the current \$0.003/kWh assessment; an authorization to allow the EDCs to include energy efficiency in their rate base; and the implementation of a Conservation Adjustment Mechanism (CAM). Each of these mechanisms requires funding by electric ratepayers. DEEP concluded that the implementation of a CAM is the best way to fund increased conservation spending. A direct increase to the existing \$0.003/kWh assessment would require legislative action. Given the immediate need to increase revenue to recover the funds necessary for conservation spending, a direct increase through legislative action is not a feasible mechanism for funding the 2012 Expanded Budget, although it may be a desirable mechanism to pursue in future years. Including the cost of energy efficiency in the EDCs' rate base is not desirable, because this option would impose a higher cost on ratepayers. The use of a CAM, on the other hand, would allow for timely collection of funds. It also provides flexibility, by allowing the EDCs to true-up to actual expenditures on a periodic basis, and can address lost distribution revenues. PURA has jurisdiction under Conn. Gen. Stat. §16-19b(c) to implement a CAM to recover the incremental cost⁴⁰ of delivering conservation and load management programs. Connecticut's natural gas distribution companies currently recover their conservation expenditures through a CAM.

A. CAM Level Recommendation

Based on DEEP's analysis of the feasibility of program performance during the ramp up to the all cost-effective level of conservation spending under the Expanded Budget, DEEP recommends that PURA consider implementing a CAM equal to \$0.00373/kWh⁴¹ by mid-August 2012, so as to collect approximately \$34.2 million in 2012.⁴² This amount, together with the anticipated Base Budget revenues of \$105.6 million and the 2011 carryover of \$18.6 million for CL&P, would recover the full \$158.4 million approved by DEEP for expanded C&LM energy efficiency programs.

The precise amount of total CAM revenues collected in 2012 would depend on the timing of PURA's implementation of this cost recovery mechanism. If a CAM is implemented later than mid-August 2012, and the revenues collected are insufficient to fund 2012 C&LM investments, any under recovery should be reconciled in the first CAM reconciliation proceeding. Similarly, any over recovery should be returned to ratepayers or added to the 2013 budget. DEEP recommends that after the CAM is established, PURA should conduct a proceeding every six months or as required by law, to adjust the rate to account for variations in actual program spending and lost revenues, and to lower the rate as alternate sources of funding for energy efficiency programs become available that achieve the all cost-effective level.

⁴⁰ Funds needed to support incremental spending above current base revenue recovery.

⁴¹ The CAM rate is estimated using the EDC's forecasted sales data as submitted in Docket 11-12-01 and a gross receipts tax rate of 1.0749%.

⁴² A CAM set at \$0.00373/kWh would collect approximately \$96 million on an annual basis.

Going forward, a CAM set at \$0.00373/kWh would collect approximately \$96 million on an annual basis, and could allow funding of C&LM programs at \$202 million, which is approximately equivalent to the all cost-effective level identified in the 2012 IRP. The Department notes that this Determination approves an Expanded Budget for 2012 and does not authorize a budget or spending for 2013. The budget for 2013 will be reviewed in the next C&LM proceeding. The Department recognizes that a comparable level of funding will be necessary going forward to sustain the all cost-effective level of savings.

B. Lost Revenue Adjustment

DEEP anticipates that the increase in C&LM spending under the Expanded Plan would significantly reduce CL&P and UI sales, and therefore their distribution revenues. The lost sales associated with the Expanded Plan were not considered in the sales forecast used to set rates at the time of CL&P or UI's last rate case proceeding. Therefore, DEEP provides for PURA's consideration the following recommendations with respect to the inclusion of a lost sales provision as part of the CAM.

First, a lost sales provision should not be included in the CAM for UI, which has full decoupling in place.⁴³ The fundamental purpose of UI's decoupling mechanism is to provide full recovery of allowed distribution revenues due to fluctuations in sales. Because UI's decoupling mechanism captures all changes in sales, its CAM should not include a lost sales provision. Instead, UI's CAM should only address fluctuations in C&LM spending.

Full decoupling has not been implemented for CL&P.⁴⁴ As a result CL&P does not have a mechanism in place to recover the distribution revenues that would be lost through the incremental savings under the Expanded Plan. Therefore, DEEP recommends that a sales adjustment calculation be included within CL&P's CAM for lost sales associated with the Expanded Budget. To avoid the counterproductive results of sales adjustment calculations it is critical that the sales adjustment calculation include an earnings trigger.⁴⁵ Revenues should only be increased for lost sales if CL&P is earning below its allowed rate of return. Then the adjustment should only increase revenues sufficient to earn the allowed rate of return.

DEEP believes that full decoupling is superior to embedding a sales adjustment clause within the CAM. Accordingly, DEEP recommends that PURA revisit decoupling in the next rate case for CL&P. Any conservation sales adjustment mechanism established for C&LP should be eliminated if full decoupling were approved for CL&P.⁴⁶

⁴³ DPUC Decision dated June 3, 2009, in Docket No. 08-07-04, Application of The United Illuminating Company To Increase Its Rates and Charges, pp. 116-131; and UI's decoupling mechanism continues to operate on a pilot basis. See, Decision dated August 1, 2011, in Docket No. 08-07-04RE03, Application of The United Illuminating Company to Increase Its Rates and Charges – Review of 2010-2011 Decoupling Mechanism and Pilot, p. 5.

⁴⁴ DPUC Decision dated June 30, 2010, in Docket No. 09-12-05, Application Of The Connecticut Light and Power Company To Amend Its Rate Schedules, pp. 165-174.

⁴⁵ See, DPUC Decision dated January 18, 2006, in Docket No. 05-09-09, DPUC Investigation Into Decoupling Energy Distribution Company Earnings From Sales.

⁴⁶ See, DPUC Decision dated January 18, 2006, in Docket No. 05-09-09, DPUC Investigation Into Decoupling Energy Distribution Company Earnings From Sales.

The former DPUC found that the C&LM sales adjustment mechanism was administratively burdensome; encouraged the EDCs to overestimate savings; and incentivized the EDCs to promote sales through their respective conservation programs because it allowed EDCs to keep increased revenues associated with higher sales, and to claim lost revenues due to their participation in conservation programs.⁴⁷ Therefore, the former DPUC replaced this mechanism with a performance incentive payment and recommended including earnings trigger in future sales adjustment mechanisms, noting that the previous sales adjustment mechanism did not consider CL&P or UI's allowed rate of return or then-current earnings.⁴⁸

VIII. FURTHER PROCEEDINGS

A. Evaluation Roadmap

In its Final Determination of the 2012 Conservation and Load Management Plan dated February 17, 2012, DEEP indicated that it had recommended changes to the Energy Efficiency Board's 2012 Program Evaluation Plan that was submitted as part of the 2012 C&LM Plan, filed on October 1, 2011. These recommended changes, summarized in DEEP's February 17, 2012 Final Approval, are to conform to the requirements of Public Act 11-80 to ensure that program evaluations are independent, cost-effective, comprehensive, timely, and that evaluation results are accurately taken into account in program development and implementation. On March 16, 2012, the Energy Efficiency Board submitted to DEEP its revised changes as the EEB Program Evaluation and Market Assessment Roadmap (Energy Efficiency Board Evaluation Roadmap). DEEP reviewed the Energy Efficiency Board Evaluation Roadmap, and has made additional modifications to the Roadmap to ensure the independence of evaluation results and to clarify specific provisions.⁴⁹

B. Compliance Reporting

DEEP directs the EDCs to provide quarterly reporting on energy and demand savings, program cost delivery, and loan volume and activity, as well as the implementation of the additional measures related to the HES program, discussed above. The EDCs are in the process of establishing a dashboard for reporting C&LM program activity and spending. To facilitate this quarterly reporting the dashboard should include the information being required herein.

C. Development of 2013 Conservation and Load Management Plan

As discussed herein, the EDCs project significant increases in energy and demand savings and a concomitant reduction in the cost per kWh to deliver these savings. To achieve these goals will require that consumers are willing to invest in energy efficiency; market transformation is accelerating; education is inducing behavioral change; and codes and standards

⁴⁷ This occurred, for example, through the promotion of efficient air conditioning and heat pumps, which resulted in the increased sales of electric end use devices to consumers who otherwise did not own such devices.

⁴⁸ See, Decoupling Decision at 17-20.

⁴⁹ The revised EEB Program and Market Assessment Roadmap, approved by DEEP, are posted on the EEB website, <http://www.ctenergyinfo.com/2012%20EEB%20Program%20Evaluation%20Roadmap%20revised%203-16-12%20final.pdf>.

are impacting markets. Success in achieving these milestones requires the support from the vendor community.

In the C&LM Plan for 2013, the EDCs should provide detailed information about how they have met the participation and savings goals established in the 2012 C&LM Plan, while maintaining program quality and customer satisfaction. This information will inform DEEP's decision to approve, modify, or reject the 2013 C&LM Plan, particularly with respect to any requested increase above the level of spending approved in the 2012 C&LM Plan. In addition, the EDCs and EEB should address the following issues and report their recommendations in the 2013 C&LM Plan:

- **Self-Directed Energy Efficiency Pilot.** Self-directed energy efficiency programs allow large commercial and industrial customers to self-direct all or a portion of their charges paid into the C&LM fund toward customized efficiency investments. The EDCs and EEB should review existing programs and propose potential enhancements that could utilize self-directed funding to leverage large customers' energy investments in projects to make process efficiency improvements.
- **C&I Incentive Caps.** The EEB should evaluate the appropriateness of the \$2 million C&I incentive cap after the first year of the Expanded Plan.
- **Non-Distribution Alternatives.** Targeted C&LM activity may provide the opportunity to defer or avoid distribution related costs, providing non distribution alternatives to the EDCs. DEEP is unaware of any past programs that may have addressed this issue. In the 2013 C&LM Plan, the EDCs should identify any distribution projects that can be avoided or deferred by implementation of particular conservation programs, and the costs and savings associated with those programs.
- **Long Term Goals.** The projected energy and capacity savings identified through the IRP must be achieved to protect ratepayer interests. Therefore, EDC incentives must develop long-term energy and demand targets for the 2013 C&LM Plan to meet the goals for 2022 that are established in the 2012 IRP.

D. Multi-Year Planning

Since 2000, the EDCs have submitted annual C&LM Plans on or about October 1st of each year. Going forward, DEEP believes that it will be beneficial to transition to a multi-year schedule for development and approval of C&LM plans, at such time when program ramp up has concluded successfully and program spending stabilizes at an all-cost effective level. Multi-year planning can provide greater clarity to program participants and allow for long-term planning, therefore improving the overall quality and effectiveness of conservation programs. Moreover, DEEP expects that periodic CAM adjustment proceedings will allow for regular opportunities to review program spending and performance in the interim periods between the approval of new, multi-year plans. DEEP therefore directs the EEB and EDCs to develop a proposal for development, approval, monitoring, and modification of CL&M programs on a multi-year basis, including the consolidation of proceedings for gas and electric plans. In developing this

proposal, the EEB and EDCs should include provision for long-term, global goals, such as reducing the average per residential customer, specific peak MW targets, complying with the statutory weatherization goal, or cost to deliver kW or kWh savings.

IX. SUMMARY OF DETERMINATION

The Department, in this determination, reviews, modifies, and approves the 2012 C&LM Expanded Plan and Budget, including the cost-effectiveness of the programs that would be funded by the Expanded Budget. As described above, DEEP has determined that approval of increased funding for energy efficiency up to a total spending level of \$158.4 million in 2012 is necessary to implement the policies identified in the 2012 IRP to mitigate an increase in electricity rates expected to occur after 2017, as well as to comply with several statutory mandates, including Section 16a-3a of the General Statutes of Connecticut, and the various requirements enacted in Public Act 11-80.

Having reviewed the programmatic cost and savings information provided by the EDCs, DEEP concludes that, overall, the Expanded Plan is cost-effective. This determination is consistent with decisions of the former DPUC, which has allowed oil subsidies for low income customers and approved low income programs that pass the Total Resource Test. As programs ramp up, the EDCs will be required to provide quarterly reporting on customer participation, program activity and cost-effectiveness. Further, DEEP has conditioned its approval of the Expanded Budget on the EDCs' implementation of additional measures, which will improve the cost-effectiveness of the HES programs, and has directed the EDCs to submit quarterly compliance reports to the DEEP, to demonstrate progress in achieving the strategies discussed in this determination for improving the cost-effectiveness of the programs. DEEP is also satisfied that the Expanded Plan adequately ensures equity between customer classes and that the EEB has provided a reasonable analysis to demonstrate that equitable distribution of program participation has been achieved.

As identified in the 2012 IRP, the unit cost to deliver efficiency must decline to assure that increased savings are achieved while minimizing rate increases. The Expanded Plan includes more financing and performance contracting to lower costs. The cost of financing for C&I customers must be reduced and other cost-cutting measures aggressively pursued. For these reasons, the Department modified the Expanded Budget pursuant to its authority under Section 16-245m(d)(1), by increasing the amounts allocated to self-funding of residential loans; implementing self-funding for C&I financing; and reducing allowed consultant costs and allocating those funds to the education budget, which must be increased to support the expansion of efficiency programs. The modifications discussed herein are intended to reduce unit costs and ratepayer subsidies. These efforts must be expanded in the years to come to reach the aggressive savings and unit cost goals outlined in the 2012 IRP. Accordingly, in this determination, DEEP directs the EDCs and EEB to evaluate the opportunity to expand these efforts in the 2013 CL&M Plan. DEEP also directs the EEB and EDCs to develop a proposal for development, approval, monitoring, and modification of CL&M programs on a multi-year basis, including the consolidation of proceedings for gas and electric plans.

DEEP requested additional information from the EDCs to evaluate the feasibility of expanding existing C&LM programs, including maintaining the quality and cost-effectiveness of those programs at expanded levels of activity. Based on this information, DEEP concludes that the EDCs can ramp up to a total spending level of \$158.4 million in 2012 while maintaining program and vendor quality. At this level, \$34.2 million, rather than the proposed \$96.3 million, would be needed to fund program activity under the Expanded Budget for 2012. DEEP makes no recommendation regarding recovery of the \$17 million for oil funding as proposed in the Expanded Plan. To recover the funding for expanded efficiency, DEEP recommends that a CAM be implemented by PURA. If the CAM is implemented by mid-August 2012 or later, DEEP recommends that PURA set the rate at \$0.00373/kWh to recover the \$34.2 million in incremental revenues necessary to support the total 2012 approved budget of \$158.4 million.

Funding at this level in 2012 would enable the EDCs to ramp up program activity in a gradual, more controlled way for the remainder of 2012, while positioning the EDCs to deliver conservation programs at the expanded, all cost-effective level in 2013, furthering the state's long-term commitment to pursue all cost-effective energy efficiency savings, consistent with the 2012 Integrated Resources Plan and statutory mandates. In approving this expanded level of funding, the Department is careful to note that it does not intend for ratepayer funding to be the exclusive source of support for expanded efficiency in the long term. The Department is working with the Energy Efficiency Board and the Connecticut Clean Energy Finance and Investment Authority to maximize opportunities to attract and deploy private capital to support energy efficiency investments so that ratepayer funding can be decreased in the next three to five years. The use of a CAM mechanism to collect funds for the C&LM Expanded Plan can provide the flexibility to decrease the level of ratepayer funding for expanded energy efficiency programs as more efficiency savings are achieved through private investment.

In consideration of the foregoing, the Department of Energy and Environmental Protection approves the 2012 Conservation and Load Management Expanded Plan and Budget with the modifications discussed herein.

Dated: July 19, 2012

A handwritten signature in black ink, appearing to read "Daniel C. Esty". The signature is written in a cursive, flowing style.

Daniel C. Esty,
Commissioner

APPENDIX A							
2012 Feasible Spending - CL&P and UI Responses to DEEP's May 25, 2012 Data Request.							
CL&P/UI C&LM BUDGET	2012 CL&P Proposed Base Budget	2012 CL&P Change to Base Budget	2012 CL&P Revised Budget	2012 UI Proposed Base Budget	2012 UI Change to Base Budget	2012 UI Revised Base Budget	2012 CL&P/UI Expanded Budget Total
RESIDENTIAL							
Residential Retail Products	\$ 4,850,000	\$ 3,580,000	\$ 8,430,000	\$ 1,755,855	\$ 844,725	\$ 2,600,580	\$ 11,030,580
Appliance Rebate Program	\$ -	\$ 3,100,000	\$ 3,100,000			\$ -	\$ 3,100,000
Total - Consumer Products	\$ 4,850,000	\$ 6,680,000	\$ 11,530,000	\$ 1,755,855	\$ 844,725	\$ 2,600,580	\$ 14,130,580
Residential New Construction	\$ 1,261,000	\$ 139,000	\$ 1,400,000	\$ 177,329	\$ -	\$ 177,329	\$ 1,577,329
Home Energy Solutions (HVAC, Duct Sealing, Lighting)	\$ 11,757,000	\$ 3,546,000	\$ 15,303,000	\$ 2,281,658	\$ 2,077,789	\$ 4,359,447	\$ 19,662,447
HES Income Eligible	\$ 9,399,700	\$ 5,244,300	\$ 14,644,000	\$ 2,118,093	\$ 2,250,000	\$ 4,368,093	\$ 19,012,093
Subtotal Residential	\$ 27,267,700	\$ 15,609,300	\$ 42,877,000	\$ 6,332,935	\$ 5,172,514	\$ 11,505,449	\$ 54,382,449
COMMERCIAL & INDUSTRIAL							
C&I LOST OPPORTUNITY							
Energy Conscious Blueprint	\$ 8,503,000	\$ -	\$ 8,503,000	\$ 2,386,221	\$ 882,015	\$ 3,268,236	\$ 11,771,236
Total - Lost Opportunity	\$ 8,503,000	\$ -	\$ 8,503,000	\$ 2,386,221	\$ 882,015	\$ 3,268,236	\$ 11,771,236
C&I LARGE RETROFIT							
Energy Opportunities	\$ 13,241,680	\$ 10,154,320	\$ 23,396,000	\$ 2,957,319	\$ 3,268,116	\$ 6,225,435	\$ 29,621,435
O&M (Services, RetroCx, BSC)	\$ 4,171,000	\$ 829,000	\$ 5,000,000	\$ 631,298	\$ 857,277	\$ 1,488,575	\$ 6,488,575
PRIME	\$ 485,000	\$ 15,000	\$ 500,000	\$ 116,141	\$ 123,543	\$ 239,684	\$ 739,684
Total - C&I Large Retrofit	\$ 17,897,680	\$ 10,998,320	\$ 28,896,000	\$ 3,704,758	\$ 4,248,936	\$ 7,953,694	\$ 36,849,694
Small Business	\$ 11,640,000	\$ 8,360,000	\$ 20,000,000	\$ 2,227,636	\$ 750,000	\$ 2,977,636	\$ 22,977,636
Subtotal C&I	\$ 38,040,680	\$ 19,358,320	\$ 57,399,000	\$ 8,318,615	\$ 5,880,951	\$ 14,199,566	\$ 71,598,566
OTHER - EDUCATION *							
SmartLiving Center® - Museum Partnerships	\$ 400,000	\$ 350	\$ 400,350	\$ 481,746	\$ -	\$ 481,746	\$ 882,096
EE Communities / Behavior Pilot	\$ 1,000,000	\$ 380,000	\$ 1,380,000	\$ 300,000	\$ -	\$ 300,000	\$ 1,680,000
K-8 Education	\$ 325,000	\$ -	\$ 325,000	\$ 401,825		\$ 401,825	\$ 726,825
Science Center	\$ 166,000	\$ -	\$ 166,000	\$ 42,000		\$ 42,000	\$ 208,000
Subtotal Education	\$ 1,891,000	\$ 380,350	\$ 2,271,350	\$ 1,225,571		\$ 1,225,571	\$ 3,496,921
OTHER - PROGRAMS/REQUIREMENTS							
Institute for Sustainable Energy (ECSU)	\$ 448,000	\$ -	\$ 448,000	\$ 112,000		\$ 112,000	\$ 560,000
Residential Loan Program (Includes ECLF)	\$ 2,051,429	\$ 3,998,571	\$ 6,050,000	\$ 347,280	\$ -	\$ 347,280	\$ 6,397,280
C&I Loan Program	\$ 500,000	\$ -	\$ 500,000	\$ 50,000	\$ 85,000	\$ 135,000	\$ 635,000
C&LM Loan Defaults	\$ 150,000	\$ 25,000	\$ 175,000	\$ 50,000		\$ 50,000	\$ 225,000
Subtotal Programs/Requirements	\$ 3,149,429	\$ 4,023,571	\$ 7,173,000	\$ 559,280	\$ 85,000	\$ 644,280	\$ 7,817,280
OTHER - LOAD MANAGEMENT							
ISO Load Response Program	\$ 3,500,000	\$ -	\$ 3,500,000	\$ 1,376,000	\$ (1,376,000)	\$ -	\$ 3,500,000
Subtotal Load Management	\$ 3,500,000	\$ -	\$ 3,500,000	\$ 1,376,000	\$ (1,376,000)	\$ -	\$ 3,500,000
OTHER - RENEWABLES & RD&D							
Research, Development & Demonstration	\$ 350,000	\$ -	\$ 350,000	\$ 225,000		\$ 225,000	\$ 575,000
Subtotal Renewables & RD&D	\$ 350,000	\$ -	\$ 350,000	\$ 225,000		\$ 225,000	\$ 575,000
OTHER - ADMINISTRATIVE & PLANNING							
Administration	\$ 900,000	\$ 250,000	\$ 1,150,000	\$ 750,000	\$ -	\$ 750,000	\$ 1,900,000
Marketing Plan	\$ 200,000	\$ 300,000	\$ 500,000	\$ 50,000	\$ 200,000	\$ 250,000	\$ 750,000
Planning (UI Planning & Evaluation)	\$ 650,000	\$ 50,000	\$ 700,000	\$ 316,765	\$ 1,190	\$ 317,955	\$ 1,017,955
Evaluation (UI Evaluation, Outside Services)	\$ 2,010,000	\$ -	\$ 2,010,000	\$ 570,000		\$ 570,000	\$ 2,580,000
Information Technology	\$ 1,700,000	\$ 50,000	\$ 1,750,000	\$ 342,500	\$ -	\$ 342,500	\$ 2,092,500
Energy Efficiency Board	\$ 550,000	\$ 50,000	\$ 600,000	\$ 300,000	\$ 50,000	\$ 350,000	\$ 950,000
Performance Management Fee	\$ 3,982,940	\$ 2,237,060	\$ 6,220,000	\$ 1,003,333	\$ 498,183	\$ 1,501,516	\$ 7,721,516
Admin/Planning Expenditures	\$ 9,992,940	\$ 2,937,060	\$ 12,930,000	\$ 3,332,598	\$ 749,373	\$ 4,081,971	\$ 17,011,971
PROGRAM SUBTOTALS							
Residential	\$ 31,056,929	\$ 20,152,151	\$ 51,209,080	\$ 7,781,037	\$ 5,332,514	\$ 13,113,551	\$ 64,322,631
C&I	\$ 42,543,880	\$ 19,519,390	\$ 62,063,270	\$ 9,969,364	\$ 4,629,951	\$ 14,599,315	\$ 76,662,585
Other*	\$ 10,590,940	\$ 2,637,060	\$ 13,228,000	\$ 3,619,598	\$ 549,373	\$ 4,168,971	\$ 17,396,971
TOTAL	\$ 84,191,749	\$ 42,308,601	\$ 126,500,350	\$ 21,369,999	\$ 10,511,838	\$ 31,881,837	\$ 158,382,187

APPENDIX L

**PUBLIC UTILITY REGULATORY AUTHORITY, *2012 ANNUAL REPORT TO THE
GENERAL ASSEMBLY ON ELECTRIC DISTRIBUTION COMPANY SYSTEM
RELIABILITY***



STATE OF CONNECTICUT

**AUTHORITY OF ENERGY AND ENVIRONMENTAL PROTECTION
PUBLIC UTILITIES REGULATORY AUTHORITY
TEN FRANKLIN SQUARE
NEW BRITAIN, CT 06051**

**DOCKET NO. 12-04-10 PURA 2012 ANNUAL REPORT TO THE GENERAL
ASSEMBLY ON ELECTRIC DISTRIBUTION COMPANY
SYSTEM RELIABILITY**

May 30, 2012

By the following Directors:

John W. Betkoski, III
Arthur H. House

DECISION

DECISION

I. INTRODUCTION

A. SUMMARY

General Statutes of Connecticut §16-245y(a) requires each electric distribution company to report reliability data to the Public Utilities Regulatory Authority for the prior 12 months in terms of System Average Interruption Duration Index and System Average Interruption Frequency Index by October 1 of each year. The Public Utilities Regulatory Authority is then required to report the data for each electric and electric distribution company and for the State as a whole to the joint standing committee of the General Assembly having cognizance of matters relating to energy, by the following January 1. This report covers calendar year 2011.

B. CONDUCT OF THE PROCEEDING

By letter dated March 30, 2012, The United Illuminating Company (UI) provided its annual reliability data to the Public Utilities Regulatory Authority (Authority). By letter dated March 30, 2012, The Connecticut Light and Power Company (CL&P) provided its annual reliability data.

No hearing is required on this matter, and none was held. The data provided by UI and CL&P were not contested.

C. PARTICIPANTS

The Authority recognized the following as participants in this proceeding: The Connecticut Light and Power Company, P. O. Box 270, Hartford, CT 06141-0270; The United Illuminating Company, P. O. Box 1564, New Haven, CT 06506-0901; and the Office of Consumer Counsel, Ten Franklin Square, New Britain, CT 06051.

II. AUTHORITY ANALYSIS

A. IMPLEMENTATION OF CONN. GEN. STAT. §16-245Y(A)

The General Statutes of Connecticut (Conn. Gen. Stat.) §16-245y(a) requires the Authority to submit reliability data, in terms of the System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI), to the Legislature by January 1 of each year. SAIDI is defined as the sum of customer interruptions in the preceding 12-month period, in minutes, divided by the average number of customers served during that period. Conn. Gen. Stat. §16-245y(a). SAIFI is defined as the total number of customers interrupted in the prior 12-month period divided by the average number of customers served during this period. *Id.* SAIDI can be viewed as the average outage duration experienced by all customers on an electric distribution company's system, and SAIFI can be viewed as the average outage frequency on an electric distribution company's system. Lower SAIDI and SAIFI numbers reflect better reliability performance in terms of outage duration and frequency.

Both SAIDI and SAIFI are required by statute to exclude outages attributable to major storms, scheduled outages, and outages caused by customer equipment, each as determined by the Authority. Conn. Gen. Stat. §16-245y(a)(1).

Conn. Gen. Stat. §16-245y(a) requires the electric distribution companies to report reliability statistics to the Authority by October 1 each year. The Authority currently receives the Transmission and Distribution Reliability Performance Reports (TDRP Reports) on or about March 31 of each year. The TDRP Reports contain comprehensive data regarding outages and reliability from each utility for the prior calendar year. These reports provide valuable information regarding the factors that affect reliability and the effectiveness of reliability initiatives by the electric distribution companies.

In this report, the Authority exceeds the requirements of Conn. Gen. Stat. §16-245y(a) by including data for both SAIDI and SAIFI with and without major storms plus information on the causes of outages. This will provide the Legislature with insight into the circumstances that affect the reliability data the Authority reports to the Legislature.

Conn. Gen. Stat. §16-245y(a)(1) requires the Authority to exclude major storms from the SAIDI and SAIFI data. Traditionally, the Authority has emphasized reliability data excluding major storms, since major storms have a large effect on reliability data and can cause large year-to-year variations. Further, the electric distribution companies have limited influence over the reliability of the system under major storm conditions. Some factors under the control of the electric distribution companies can certainly improve performance of the distribution system under major storm conditions; however, the impact of major storms on overhead distribution system reliability data are significant regardless of the design or operation of that system.

For the purpose of determining reliability trends of the distribution system, the Authority believes it is correct to exclude major storms from the reliability data. However, the Authority also examines reliability data including major storms, since this data reflects the ultimate reliability seen by consumers. Also, since reliability of the system under major storm conditions is not entirely out of the control of the electric distribution companies, it is proper to consider major storm conditions when considering the adequacy of the overall design, operation, and maintenance of the distribution system. Therefore, the Authority includes SAIDI and SAIFI data both with and without major storms in its annual report to the Legislature, even though the statutes only consider data excluding major storms.

The Authority defines “major storm” based on the following statistical criterion: whenever the number of trouble locations (that result in outages) exceeds the 98.5 percentile of the trouble location frequency over the preceding four years, a major storm will be declared and all interruptions during the major storm period, or that began in that period, are excluded from the non-storm SAIDI and SAIFI calculations. Therefore, the definition is not based on meteorological criteria, but solely on the impact a weather event has on the distribution system. It should be noted that this does not eliminate the effects of weather on a distribution company’s reliability data; rather, it just excludes the

most significant storms. The data is still affected to a high degree by annual variations in weather, particularly the severity of winter weather.

The Authority further notes that weather is not the only factor to be considered when examining reliability data. Singular events, such as a large transmission disturbance, can have a significant effect on the reliability statistics. The Authority considers the effects of such events when determining whether changes in the reliability statistics truly reflect a change in reliability, and whether such a change is reasonably within the control of a distribution company.

Traditionally, the Authority has used a four-year average of reliability data excluding major storms to determine reliability trends. The Authority has used this measure after considering two competing concerns. First, annual variations in weather, such as frequent minor storms that are not classified as major storms, can significantly affect reliability data. Second, to capture recent changes in reliability data or trends in reliability, the time period should not be too long. The Authority believes a four-year period is a reasonable compromise of these two concerns. The Authority includes data for the four years ending in 1998, so that current reliability may be compared to reliability statistics that were current when Public Act 98-28, An Act Concerning Electric Industry Restructuring (the Act), was passed into law.

B. DESCRIPTION OF THE UTILITIES

CL&P covers 87% of the geographic area of Connecticut and serves approximately 1.2 million customers. CL&P TDRP Report for 2011, p. 2. CL&P's service territory includes urban, suburban, and rural areas, as well as an extensive amount of wooded and hilly terrain. *Id.* The rural area and high density of trees in much of CL&P's territory can have a significant effect on CL&P's distribution system, both in terms of the design of many of the circuits and the performance of the circuits that traverse such areas.

UI covers 7% of the geographic area of Connecticut and serves approximately 320,000 customers. UI's service territory includes predominantly urban and suburban areas, with one small rural area in Easton. UI TDRP Report for 2011, p. 4.

The remaining 6% of the territory of Connecticut is served by municipal utilities, which are not required to report SAIDI and SAIFI data to the Authority.

C. RELIABILITY STATISTICS

1. The Connecticut Light and Power Company

Reliability statistics for CL&P as of year-end 2011 are as follows.

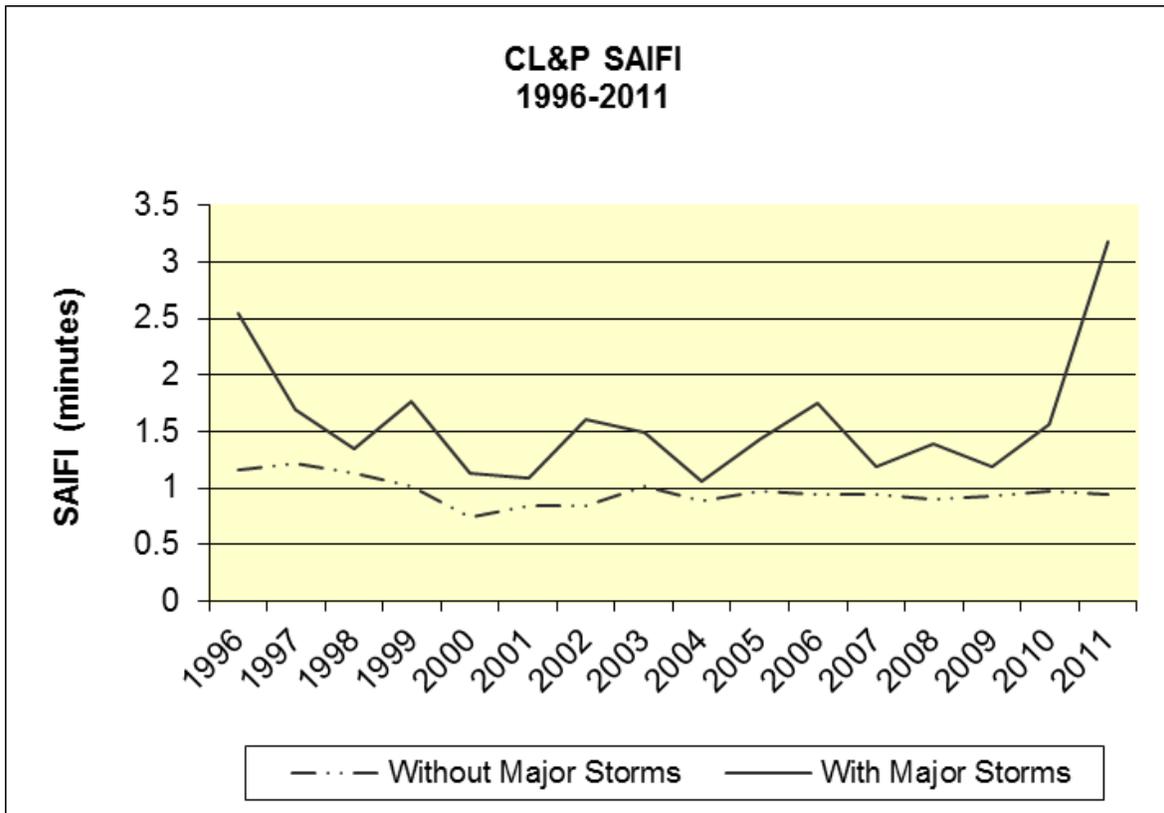
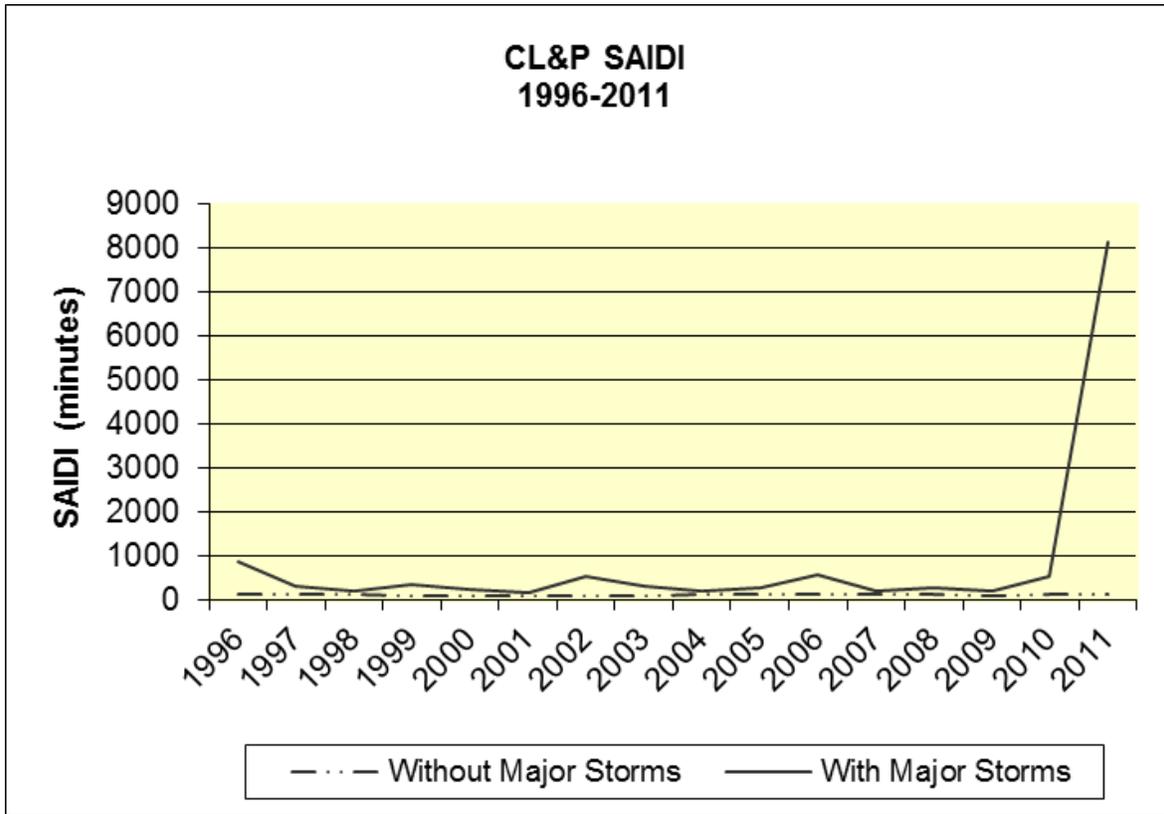
CL&P Reliability Data¹

	<u>Without Major Storms</u>		<u>With Major Storms</u>	
	<u>SAIDI</u>	<u>SAIFI</u>	<u>SAIDI</u>	<u>SAIFI</u>
1996	130	1.16	893	2.54
1997	116	1.22	320	1.69
1998	129	1.14	205	1.35
1999	107	1.02	352	1.77
2000	81	0.75	240	1.14
2001	102	0.84	171	1.09
2002	114	0.85	548	1.61
2003	107	1.02	328	1.49
2004	140	0.89	191	1.06
2005	127	0.97	280	1.44
2006	129	0.95	566	1.75
2007	119	0.95	220	1.19
2008	116	0.90	275	1.39
2009	107	0.83	200	1.12
2010	125	0.98	558	1.56
2011	133	0.94	8279	3.15
1995-1998 Average ²	132	1.22	484	1.96

CL&P TDRP Report for 2011, p. 4; Decision dated December 1, 1999, in Docket No. 99-06-12, DPUC 1999 Annual Report to the General Assembly on Electric Distribution Company Reliability, p. 4. The SAIDI and SAIFI indices are shown graphically below.

¹ Data excluding major storms also excludes customer caused outages and scheduled outages, as required by Conn. Gen. Stat. §16-245y.

² As stated previously, the Authority includes the four-year average ending 1998 in conjunction with Conn. Gen. Stat. §16-244i.



The Authority notes the extremely poor reliability performance in 2011, which is attributable to the occurrence of Tropical Storm Irene in late August of 2011 and a "Nor'Easter" that produced heavy wet snow in late October of 2011. The Authority is investigating the effects of these storms on the electric, gas, telecommunications and water infrastructure of the State in Docket No. 11-09-09, PURA Investigation of Public Service Companies' Response to 2011 Storms.

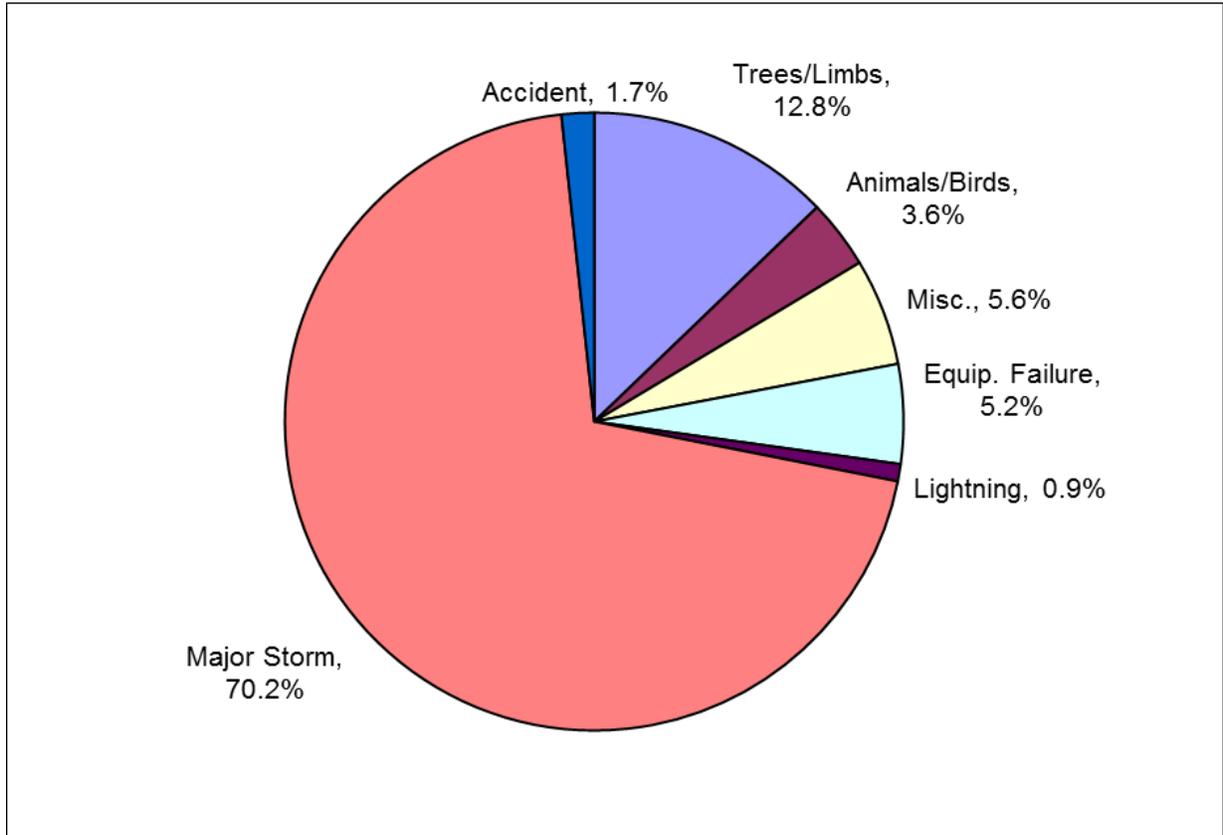
The following storms in CL&P's service territory in 2011 met the Authority's major storm definition criterion:

- On February 19, 2011, high winds resulted in a total of 122,466 customer-hours interrupted;
- On June 9, 2011, thunderstorms resulted in a total of 2,623,866 customer-hours interrupted;
- On August 27-September 6, 2011, Tropical Storm Irene resulted in a total of 57,604,440 customer-hours interrupted;
- On October 29-November 8, 2011, a Nor'easter resulted in a total of 107,050,251 customer-hours interrupted;
- On December 8, 2011, heavy rain and high winds resulted in a total of 190,677 customer-hours interrupted.

CL&P TDRP Report for 2011, Appendix 7.

The following chart provides data on the causes of outages in CL&P's service territory in 2011.³ CL&P TDRP Report for 2011, p. 6.

2011 CL&P Outage Causes



³ See Appendix A for information on the causes of outages.

2. The United Illuminating Company

Reliability statistics for The United Illuminating Company as of year-end 2011 are as follows.

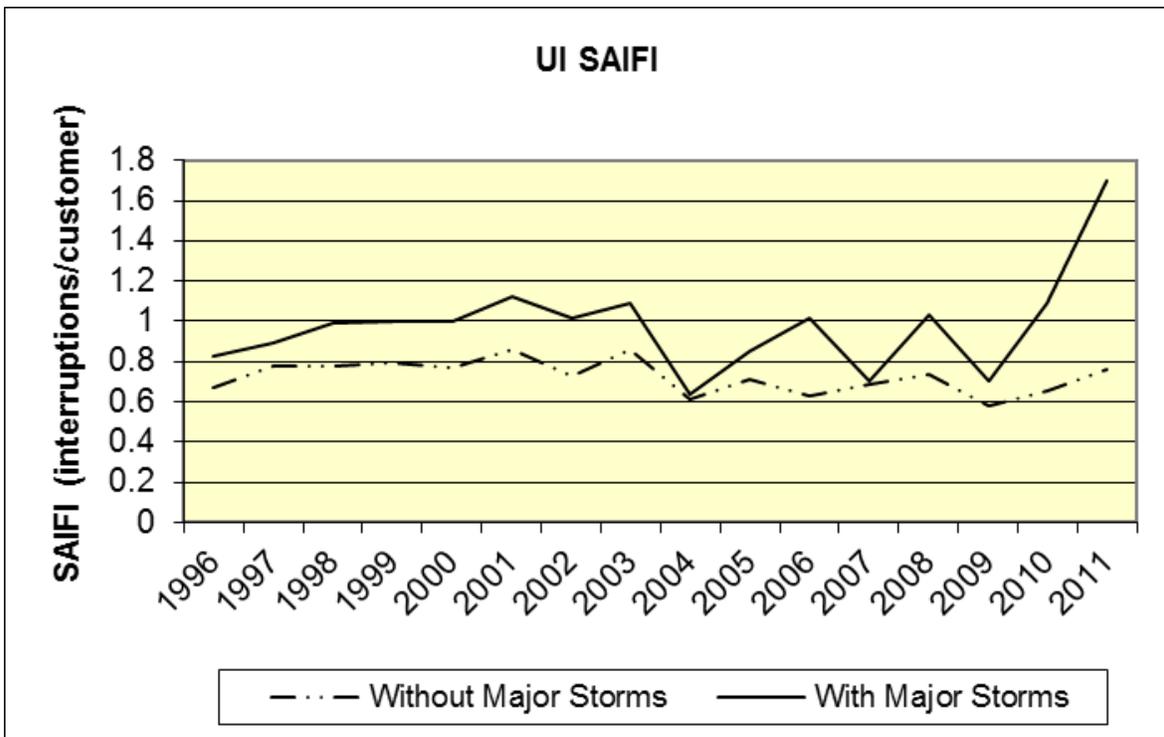
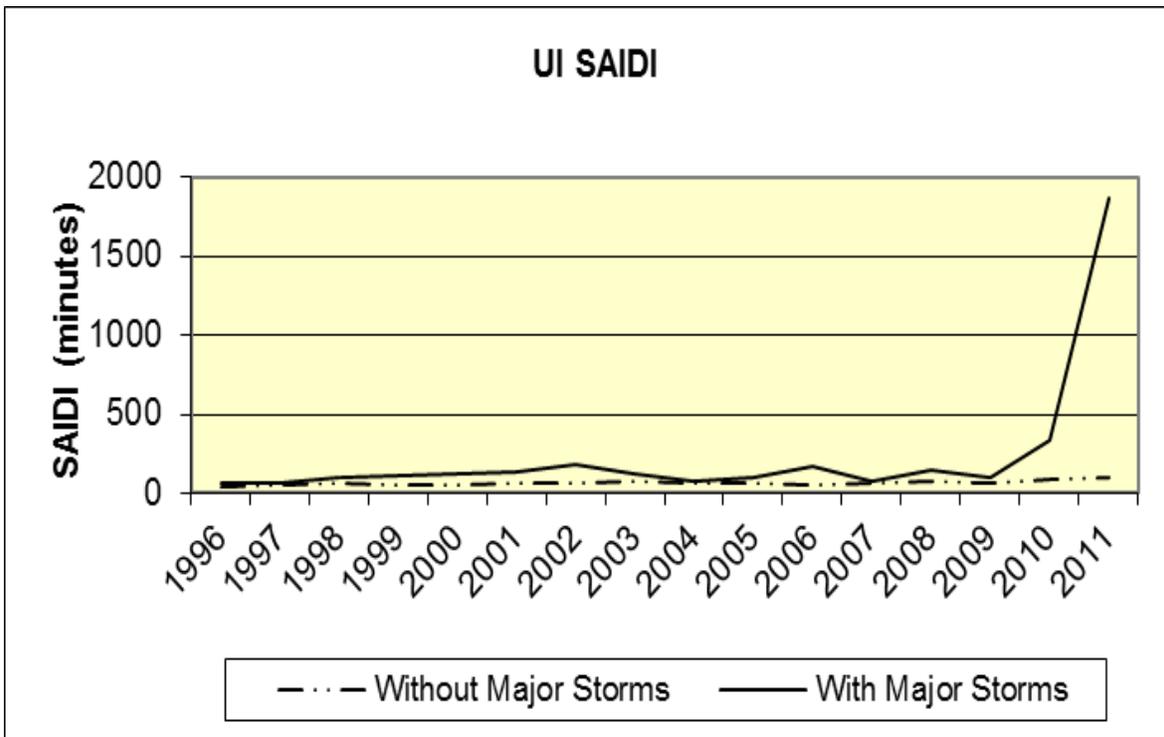
UI Reliability Data⁴

	<u>Without Major Storms</u>		<u>With Major Storms</u>	
	<u>SAIDI</u>	<u>SAIFI</u>	<u>SAIDI</u>	<u>SAIFI</u>
1996	46	0.67	64	0.83
1997	48	0.78	60	0.89
1998	61	0.78	97	0.99
1999	58	0.79	106	1.00
2000	57	0.77	122	1.00
2001	63	0.86	140	1.12
2002	70	0.73	182	1.02
2003	79	0.86	122	1.09
2004	62	0.61	72	0.64
2005	66	0.71	96	0.85
2006	54	0.63	173	1.02
2007	69	0.69	74	0.70
2008	73	0.74	143	1.03
2009	68	0.58	94	0.70
2010	85	0.65	338	1.09
2011	101	0.76	1871	1.70
1995-1998 Average ⁵	52	0.77	71	0.90

UI TDRP Report for 2011, pp. 9 and 10; Decision dated December 1, 1999, in Docket No. 99-06-12, DPUC 1999 Annual Report to the General Assembly on Electric Distribution Company Reliability, p. 7. The SAIDI and SAIFI indices are shown graphically below.

⁴ Data excluding major storms also excludes customer caused outages and scheduled outages, as required by Conn. Gen. Stats. §16-245y.

⁵ As stated previously, the Authority includes the four-year average ending 1998 in conjunction with Conn. Gen. Stat. §16-244i.



The Authority notes the extremely poor reliability performance in 2011, which is attributable to the occurrence of Tropical Storm Irene in late August of 2011 and a “Nor’Easter” that produced heavy wet snow in late October of 2011. The Authority is investigating the effects of these storms on the electric, gas, telecommunications and water infrastructure of the State in Docket No. 11-09-09.

The following major storms in UI's service territory in 2011 met the Authority's major storm definition criterion:

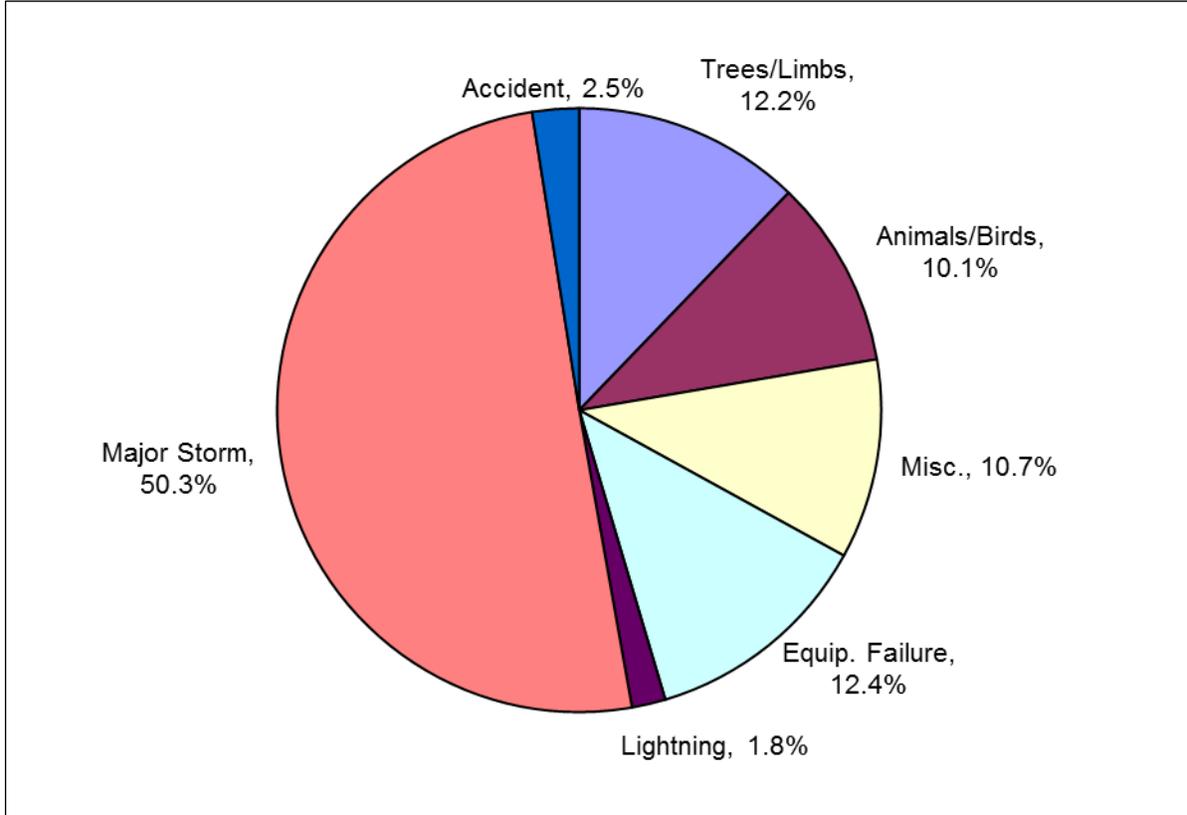
- On January 18, 2011, a heavy snow and ice event resulted in a total of 19,798 meter hours interrupted;
- On February 2, 2011, a freezing rain event resulted in a total of 18,177 meter hours interrupted;
- On June 9, 2011, a lightning storm resulted in a total of 109,292 meter hours interrupted;
- On July 22, 2011, excessive heat resulted in a total of 7,136 meter hours interrupted;
- On August 1, 2011, a lightning storm resulted in a total of 24,550 meter hours interrupted;
- On August 29-September 2, 2011, a Tropical Storm Irene resulted in a total of 8,579,929 meter hours interrupted;
- On October 29-October 31, 2011, a Nor'easter resulted in a total of 693,723 meter hours interrupted.

UI TDRP Report for 2011, Appendix 7.

The following chart provides data on the causes of outages in UI's service territory in 2011.⁶ UI TDRP Report for 2011, p. 11.

⁶ See Appendix A for information on the causes of outages.

2011 UI Outage Causes



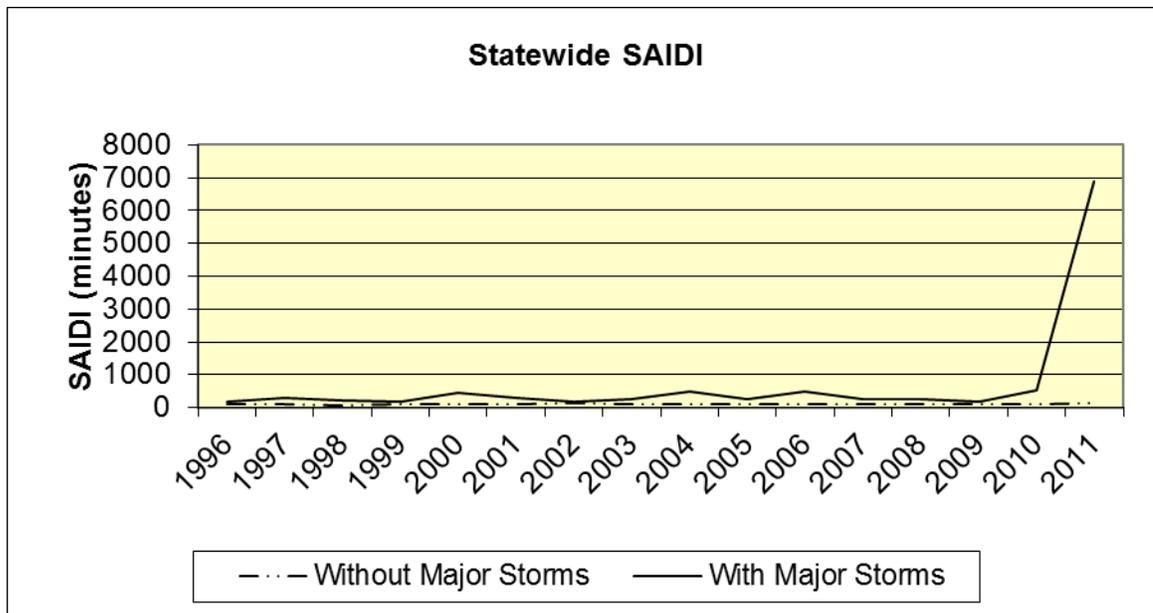
3. State-wide Reliability Indices

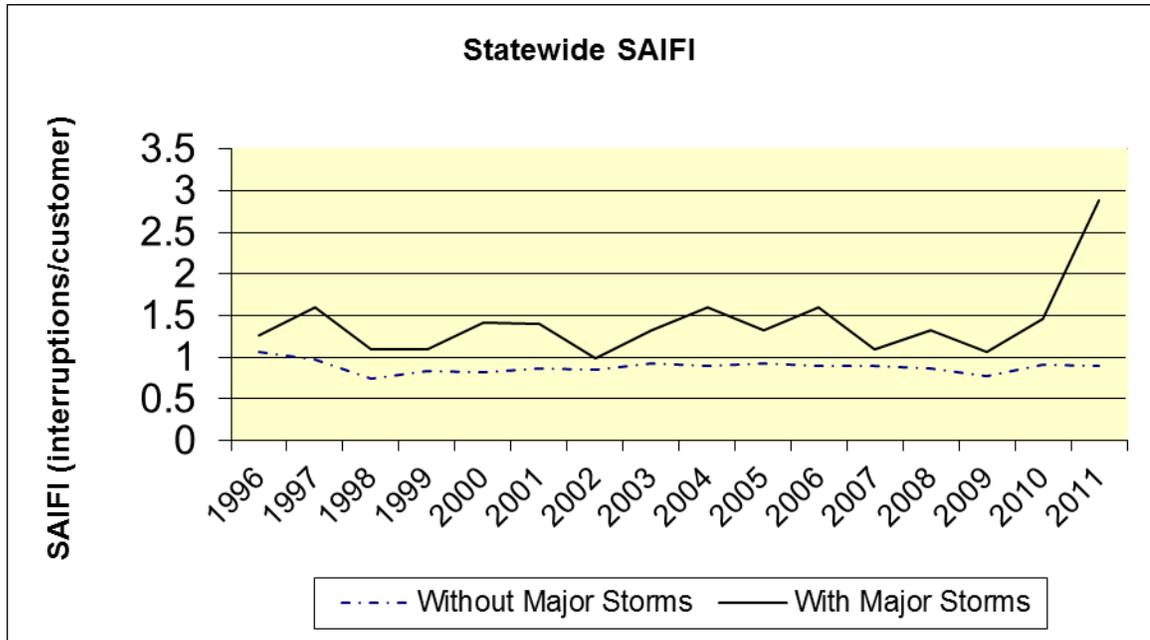
Conn. Gen. Stat. §16-245y(a) requires the Authority to include state-wide SAIDI and SAIFI data in its report to the Legislature, excluding outage statistics attributable to major storms, customer caused outages and scheduled outages. The following chart shows state-wide SAIDI and SAIFI data that combines data from UI and CL&P, using a weighted average by customer count and the SAIDI and SAIFI data provided by each electric distribution company.

State-wide Reliability Indices

	<u>Without Major Storms</u>		<u>With Major Storms</u>	
	<u>SAIDI</u>	<u>SAIFI</u>	<u>SAIDI</u>	<u>SAIFI</u>
1998	114	1.06	181	1.27
1999	96	0.97	298	1.60
2000	76	0.75	214	1.10
2001	94	0.84	164	1.10
2002	101	0.82	438	1.42
2003	101	0.87	282	1.40
2004	125	0.85	168	0.99
2005	115	0.92	243	1.32
2006	114	0.89	487	1.60
2007	109	0.90	191	1.09
2008	107	0.87	249	1.32
2009	99	0.78	179	1.07
2010	117	0.91	514	1.46
2011	127	0.90	6891	2.88
1995-1998 Average	116	1.13	401	1.75

The data exclude the approximately 6% of the State that falls within the service territories of the municipal utilities. The SAIDI and SAIFI indices are shown graphically below.





III. CONCLUSION

The Authority concludes its report on Electric Distribution Company reliability for calendar year 2011.

Appendix A

Explanations of Outage Cause Categories

Power Supply-	Outages caused by the operation of the electric transmission and distribution system in conjunction with other electric distribution companies, such as Independent System Operator-imposed load shedding or loss of a transmission line owned by another electric distribution company.
Scheduled-	Outages caused by intentionally de-energizing facilities serving customers for the purpose of apparatus change-out, conversion, maintenance, relocation/extension, permanent repair, or customer request.
Major Storm-	Outages associated with weather events that meet the Authority-approved major storm criterion.
Customer Caused-	Any interruption caused by customer-owned equipment failure or customer operation.
Animal/Bird Contact-	Any interruption caused by animals or birds contacting energized facilities.
Lightning-	Any interruption caused by lightning affecting energized facilities.
Accident-	Any interruption caused by an employee error, or by a vehicle or foreign object contacting a structure, guy, or enclosure.
Equipment Failure-	Any interruption caused by the failure of a component of the electric distribution company's transmission or distribution system.
Tree/Limb Contact-	Any interruption caused by vegetation contacting energized facilities, other than those felled by customers or employees.
Miscellaneous/ Unknown -	Any interruption caused by an electrical overload, an interruption for which the cause is indeterminate, or miscellaneous causes not included in other categories.

The Authority is an affirmative action/equal opportunity employer and service provider. In conformance with the Americans with Disabilities Act (ADA), the Authority makes every effort to provide equally effective services for persons with disabilities. Individuals with disabilities who need this information in an alternative format to allow them to benefit and/or participate in the agency's programs and services, should call 860-424-3035 or e-mail the ADA Coordinator, at DEP.aaoffice@ct.gov. Persons who are hearing impaired should call the State of Connecticut relay number 711. Requests for accommodations must be made at least two weeks prior to the meeting date (Emphasis added).

**DOCKET NO. 12-04-10 PURA 2012 ANNUAL REPORT TO THE GENERAL
ASSEMBLY ON ELECTRIC DISTRIBUTION COMPANY
SYSTEM RELIABILITY**

This Decision is adopted by the following Directors:

John W. Betkoski, III

Arthur H. House

CERTIFICATE OF SERVICE

The foregoing is a true and correct copy of the Decision issued by the Public Utilities Regulatory Authority, State of Connecticut, and was forwarded by Certified Mail to all parties of record in this proceeding on the date indicated.



May 30, 2012

Kimberley J. Santopietro
Authority of Energy and Environmental Protection
Executive Secretary
Public Utilities Regulatory Authority

Date

APPENDIX M

**DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION AND
DEPARTMENT OF ADMINISTRATIVE SERVICES, *LEAD BY EXAMPLE*
*LEGISLATIVE REPORT JULY 2012***



ENERGY EFFICIENCY IN STATE AND MUNICIPAL BUILDINGS

LEGISLATIVE REPORT

July 2, 2012



SUBMITTED BY:

**CONNECTICUT DEPARTMENT OF ENERGY &
ENVIRONMENTAL PROTECTION
AND
CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES**

EXECUTIVE SUMMARY

Connecticut's "Lead by Example" State and Municipal Building Energy Efficiency Program

Connecticut's "Lead by Example" program will help Connecticut reduce energy use in state facilities by 10% by January 1, 2013 and provide support for municipalities to achieve energy reductions in their buildings. The scale of this endeavor is significant. State building energy use was roughly 4.1 trillion British Thermal Units (BTUs) in FY 2011. "Lead by Example" has made progress towards the goals set forward in Public Act 11-80, but there is still a great deal of work to do.

The "Lead by Example" program is supported by a strong partnership that includes the Department of Administrative Services, Department of Energy and Environmental Protection, Department of Construction Services, Office of Policy and Management, Board of Regents, Office of the Treasurer, Attorney General's Office, and the program administrators of the CT Energy Efficiency Fund, with no expenses for outside consultants. During its first nine months, "Lead by Example" has implemented three major initiatives: Bond funding, performance contracting, and improved building operations.

INCREASING ENERGY EFFICIENCY WITH BOND FUNDING

\$15 million of bonded funds for energy efficiency upgrades in state buildings was made available in September of 2011. Of the \$15 million, \$8,302,237 has been committed to 37 different projects across the state, with an average payback of 5.45 years (all numbers current as of June 29, 2012). An estimated 75% of these projects, plus some additional projects funded by the program in the coming months, will be complete by January 2013. These projects will achieve energy reductions that are the annual equivalent of:

- ❖ 358,700 fewer gallons of gasoline used
- ❖ 1,460 homes in CT taken off of the electricity grid
- ❖ 3,530,900 fewer pounds of coal used
- ❖ 322,900 fewer gallons of home heating oil used

ENERGY SAVINGS PERFORMANCE CONTRACTING

Energy Savings Performance Contracting is the use of guaranteed savings from the maintenance and operations budget (utilities) as capital to make needed upgrades and modernizations to building environmental systems, financed over a specified period of time¹. The "Lead by Example" program has developed a standardized Energy Savings Performance Contracting (ESPC) process that can reduce energy use in state and municipal facilities by 25% or more. This program enables state agencies and municipalities to implement multi-million dollar retrofit projects that are paid through future energy savings and can be structured to require no upfront capital investment. The program will repurpose wasted utility dollars to upgrade facilities with highly efficient energy systems, stabilize energy costs, create jobs, and stimulate Connecticut's economy. The standardized ESPC program provides the following key elements to allow state agencies and municipalities to implement successful projects:

- ❖ ESPC contract documents that have been pre-approved by the Attorney General's Office and other key agencies
- ❖ A pre-qualified list of energy services providers
- ❖ A Program Manager to provide oversight, support, and assistance
- ❖ A pool of vendors that will provide technical support on a project by project basis

BUILDING OPERATIONAL IMPROVEMENTS

The "Lead by Example" Program has contracted to provide energy monitoring services for approximately 100 state buildings. These energy monitoring services include real-time data on energy use, a web-based dashboard to manage a portfolio of buildings, and expert technical analysis to identify operational inefficiencies. Identification of operational inefficiencies will help state facilities save energy in the near term. State agencies will have the capability to benchmark and compare facilities, which will enable large, multi-site facilities to quickly identify buildings that are underperforming when compared to their peers or historical baselines

CONNECTICUT LEAD BY EXAMPLE
LEGISLATIVE REPORT
JULY 2, 2012

Connecticut's "Lead by Example" program will reduce energy use in state agencies and municipal government buildings and operation

The Department of Energy and Environmental Protection (DEEP) and the Department of Administrative Services (DAS) have developed a "Lead by Example" program to maximize energy efficiency in state and local government buildings. The goal of this program is to assist Connecticut in its quest to become the most energy efficient state in the nation. "Lead by Example" initiatives will help state agencies reduce energy use in state buildings 10% by 2013 and an additional 10% by 2018, in accordance with the targets established in Section 118 of Public Act No. 11-80, "An Act Concerning the Establishment of The Department of Energy and Environmental Protection and Planning for Connecticut's Energy Future." The "Lead by Example" program is also intended to satisfy the requirements of Section 123 of the Public Act.

The following "Lead by Example" initiatives are reducing energy use in state and municipal buildings:

- 1.) "Lead by Example" Bond Funding
- 2.) Standardized Energy-Savings Performance Contracting Process
- 3.) Building Operational Improvements Through Energy Monitoring

In addition, the "Lead by Example" program has created a consistent framework for benchmarking energy use and tracking savings.

The "Lead by Example" program addresses all aspects of efficiency in state buildings, and provides assistance to municipalities seeking to reduce their energy use. Bond funding and energy monitoring allow the state to quickly address the obvious targets for efficiency upgrades. Energy savings performance contracting gives state agencies and municipalities a tool to dramatically reduce energy use through major upgrades to a building's mechanical systems, windows, insulation, etc. Energy monitoring and benchmarking identify targets for efficiency upgrades that may not be immediately apparent.

This report provides a summary of "Lead by Example" progress, in fulfillment of the requirements of Public Act 11-80, Section 118:

Public Act No. 11-80	
Lead by Example Energy Reduction Plan and Requirements	
❖	Reduce energy consumption by 10% by January 1, 2013 and an additional 10% by 2018
❖	Assess current energy consumption of all fuels used in state owned buildings
❖	Identify the top one hundred energy consuming buildings
❖	Establish targets for conducting energy audits in state buildings
❖	Determine which energy efficiency measures are most cost effective in state buildings
❖	Establish programs that utilize performance contracting, bonding, or other means

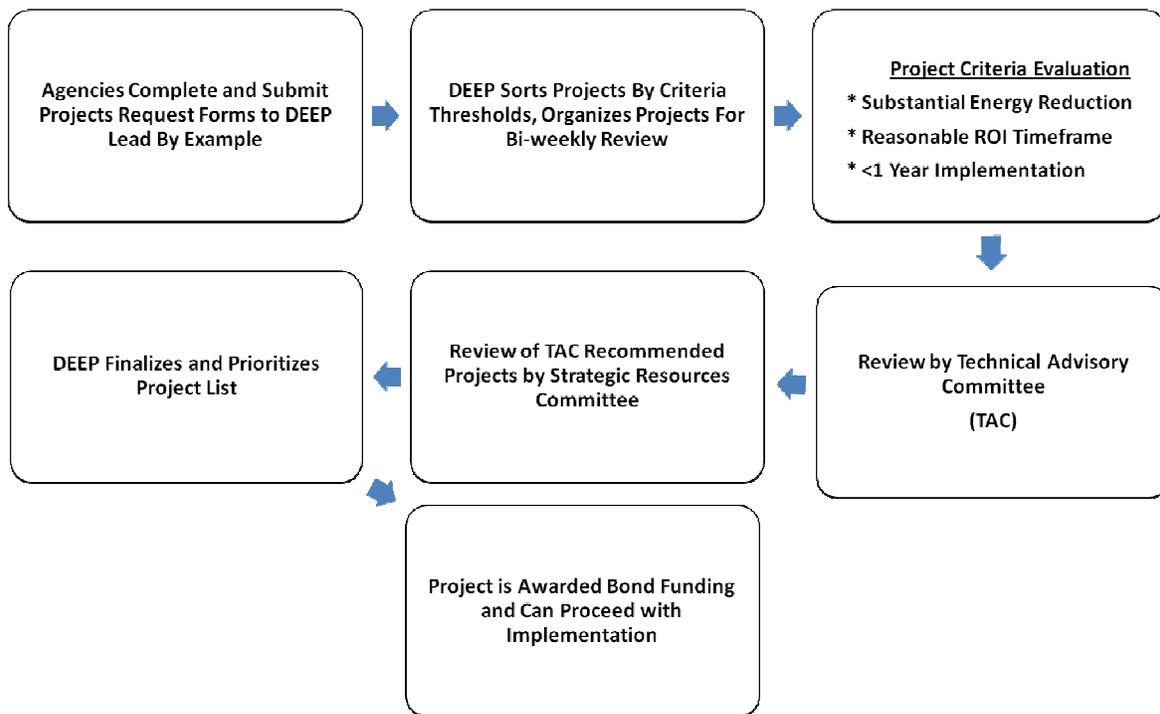
SECTION I

INCREASING ENERGY EFFICIENCY WITH BOND FUNDING

Overview

In September 2011, the Bond Commission authorized \$15 million in bond funds to increase energy efficiency in state buildings. DEEP and DAS formed the “Lead by Example” program to manage these bond funds and other funds for state and municipal energy efficiency upgrades. “Lead by Example” created a project application and review process (see diagram below). Projects selected for funding must result in significant energy reductions, have a reasonable payback, and be able to be implemented quickly. Projects are reviewed by the Technical Advisory Committee (TAC), comprised of energy experts and engineers from the Department of Construction Services (DCS), Department of Administrative Services (DAS), Higher Education, Connecticut Energy Efficiency Fund (CEEF), and “Lead by Example” program administrators within the Department of Energy and Environmental Protection (DEEP) and the Clean Energy Finance and Investment Authority (CEFIA). After TAC approval, the proposed project moves on for approval by the Strategic Resources Committee (SRC), which looks at the project through a state budgetary lens. Since September 2011, the TAC and SRC have reviewed project requests every two weeks to approve the most promising and impactful projects.

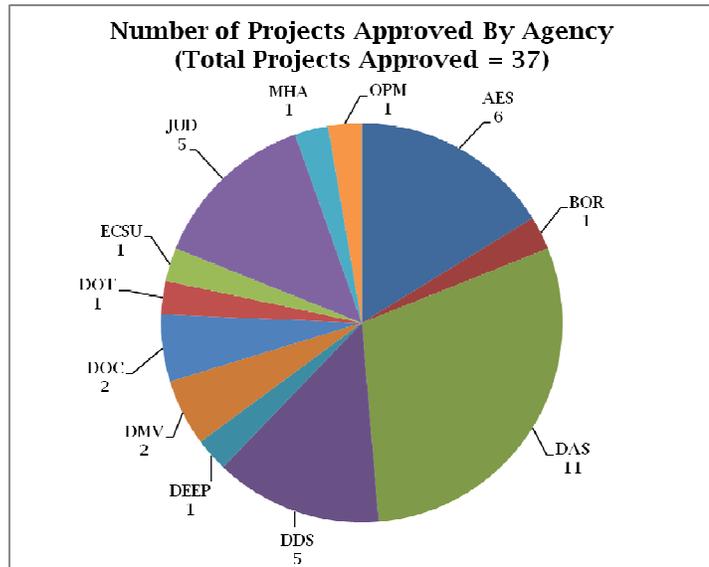
Flow of the Bond Funds Process



Results: Part I

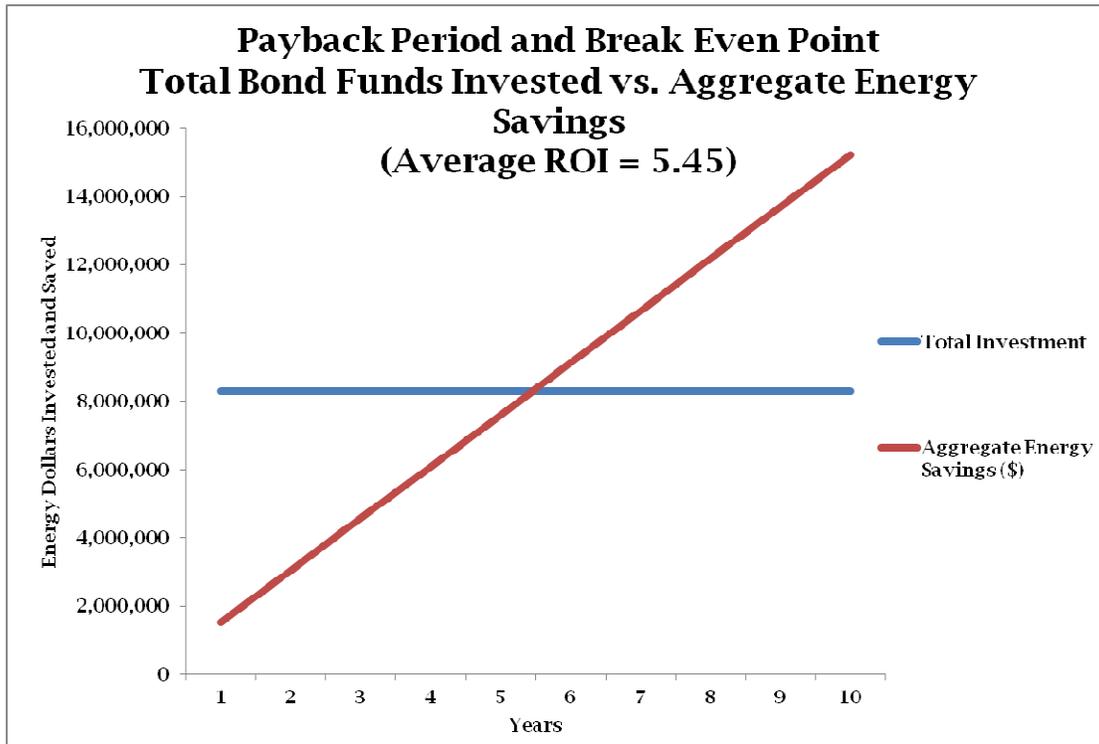
As of June 29, 2012, 37 projects have been approved for a total commitment of \$8.302 million with an average payback of 5.45 years. “Lead by Example” estimates that bond-funded projects will save agencies approximately 45 billion BTUs, an amount which will measurably reduce the state’s overall energy consumption, and will save approximately \$1.523m/year.

Reducing the state’s energy consumption by 45 billion BTUs is the annual equivalent of:¹



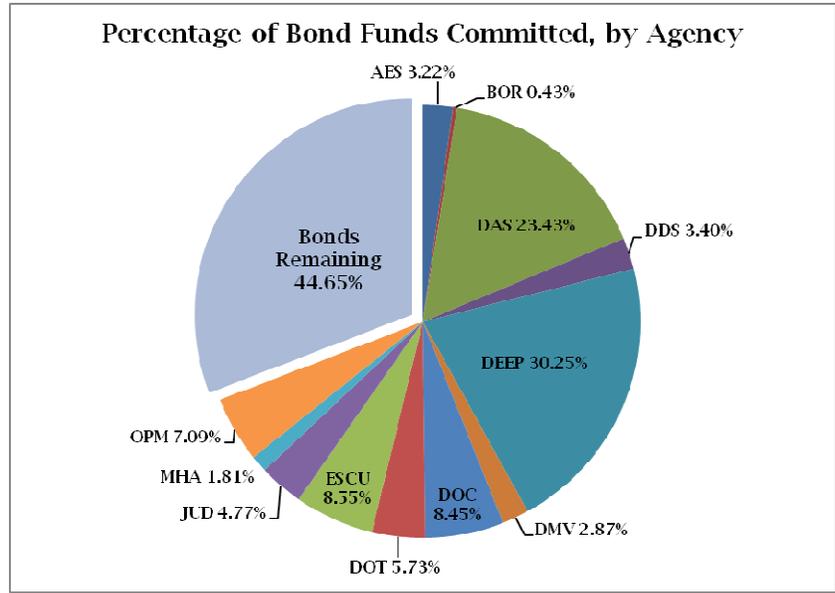
- ❖ 358,700 fewer gallons of gasoline used
- ❖ 1,460 homes in CT taken off of the electricity grid.
- ❖ 3,530,900 pounds of coal used
- ❖ 322,900 fewer gallons of home heating oil used

The bond funds used to pay for these energy efficiency retrofits and upgrades are a prudent investment for the state. The projects are projected to collectively pay for themselves in 5.45 years (see below).



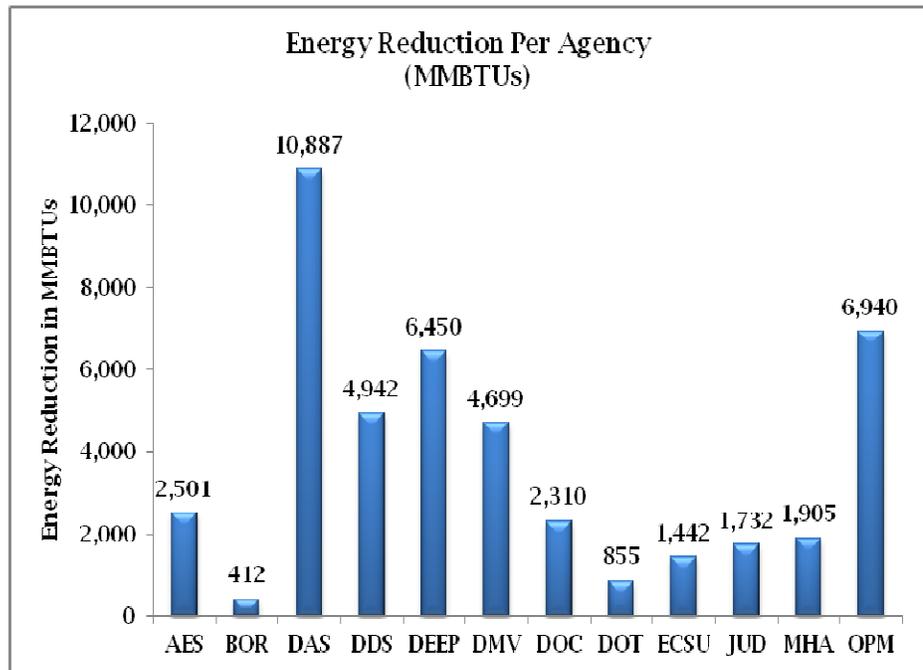
¹ Conversions factors can be found in Appendix, Table III.

Although a majority of the \$15 million in bond funds has been allocated, agencies still have a chance to request funding for additional energy efficiency upgrades. Approximately 45% (or \$6.7 million of the authorized \$15 million) is still available for allocation and requests are still being accepted until all bond funds are fully committed. A sample project request form has been provided in the Appendix, Table II, which serves as an overview of selected details and information that are required to request bond funding.

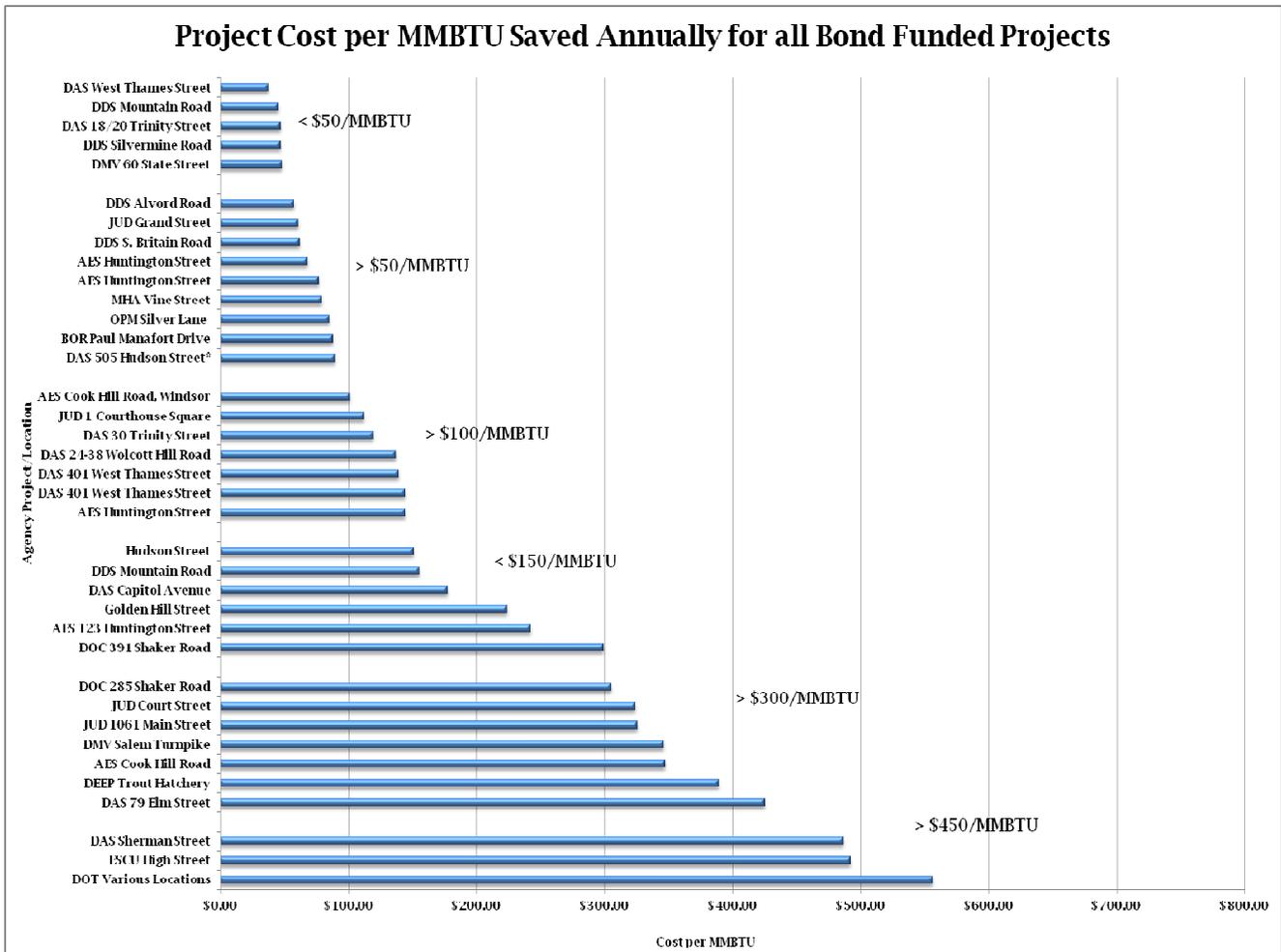


Results: Part II

The “Lead by Example” program has demonstrated a commitment to not only “light” efficiency (harvesting easy savings such as lighting-only projects), but also “deeper” projects. These broad scope, comprehensive efficiency projects sometimes cost more per MMBTU saved, but yield higher total energy savings. This “deep” efficiency strategy will yield benefits in the long term, and will serve the taxpayers of Connecticut well for years to come.



The bar chart below demonstrates the program’s commitment to “deeper” efficiency. The projects at the bottom of the chart (>\$300 per MMBTU saved annually) include far-reaching and comprehensive efficiency measures, which will increase the long-term impact of the program.



SECTION II

STANDARDIZED ENERGY SAVINGS PERFORMANCE CONTRACTING

Overview

Energy Savings Performance Contracting is the use of guaranteed savings from the maintenance and operations budget (utilities) as capital to make needed upgrades and modernizations to building environmental systems, financed over a specified period of timeⁱⁱ. The “Lead by Example” program has developed a standardized Energy Savings Performance Contracting Process (the Process) that has the potential to reduce energy use in state and municipal facilities by 25% or more. The Process will repurpose wasted dollars spent on utility bills and upgrade facilities with highly efficient energy systems, stabilize energy costs, create

jobs, and stimulate investment in Connecticut's economy. The Process enables state agencies and municipalities to implement multi-million dollar energy retrofit projects that are paid for by future energy savings and can be structured to require no upfront capital costs. The Process will be formally launched in July 2012.

Energy Reduction Potential and Benefits

The National Association of Energy Service Companies estimates that current state facility energy expenditures in Connecticut are approximately \$200 million. Municipal energy expenditures in the state are greater than \$200 million. Through the Process, state and municipal governments can achieve up to 25% in energy reductions, which translates to roughly \$120 million in total savings. Performance contracting drives economic growth because it allows agencies and municipalities to focus on energy efficiency in the long-term and tap into the private capital markets, creating partnerships between state agencies or municipalities and private companies. This can reduce state agencies' and municipalities' reliance on state aid and financing for energy efficiency projects.

The following types of state and local government facilities can benefit significantly from performance contracting:

- ❖ Higher Education
- ❖ Primary and Secondary Schools
- ❖ Waste Water Treatment Facilities
- ❖ Campuses and Dormitories
- ❖ Correctional Facilities
- ❖ Health Care Facilities
- ❖ Office Buildings

Results

Since October 2011, "Lead by Example" has worked in close partnership with the following key state agencies to develop the standardized Process:

- ❖ The Department of Energy and Environmental Protection
- ❖ The Department of Administrative Services
- ❖ The Department of Construction Services
- ❖ The Office of Policy and Management
- ❖ The Office of the Attorney General
- ❖ The Office of the Treasurer

The resulting Process is streamlined, repeatable, and transparent. The standards and requirements set forth in this Process will mitigate risk for state agencies and municipalities and cultivate successful projects with guaranteed energy and cost savings. A thorough vetting of the program by these agencies not only provides confidence for user agencies and municipalities, but also creates a level playing field for energy service companies as well.

The framework created by the Process addresses areas that are critical to the execution of an efficient, effective, and successful performance contracting experience:

1. A standardized set of contractual documents that have been pre-approved by agencies with jurisdiction over energy, procurement, legal, and fiscal decisions.
2. Financing templates in the form of tax-exempt municipal leases and loans as guidance for municipalities in third party financing agreements.
3. Allotment of bond funding for initial state agency projects.

4. A Program Manager who will provide program management, outreach, and technical and analytical support to state agencies and municipalities.
5. Additional third-party technical support for individual projects during key stages of project development.

SECTION III

BUILDING OPERATIONAL IMPROVEMENTS THROUGH ENERGY MONITORING

Overview

The “Lead by Example” program has contracted for the installation of energy monitoring software on approximately 100 state buildings. The contractor will also provide expert technical analysis of energy use patterns in these buildings, which will allow energy managers to target and address inefficiencies in state facilities. This contract is paired with an existing demand response program for state agencies, which was established to voluntarily shed electric load during times of peak energy demand in exchange for quarterly payments.

Energy Reduction Potential and Benefits

Sophisticated Energy Monitoring Systems

This “Lead by Example” initiative will install energy monitoring systems at approximately 100 of the highest energy consuming state-owned buildings. This system will provide value to the state in four ways:

- 1.) Single Metering System: Sub-meters will be installed, where necessary, to isolate individual building energy use
- 2.) Real-Time Data: A web-based dashboard offers a clear view of real-time energy use across a portfolio of buildings
- 3.) Benchmark and Compare Facilities: This tool will enable large, multi-site facilities to quickly identify buildings that are underperforming when compared to their peers or historical baselines
- 4.) Technical Analysis: This will include system tools, energy analysis, and energy efficiency solutions. The solutions provide facilities managers with specific, concrete actions to reduce energy consumption at low or no cost

Energy Efficient Monitoring System	
Benefits	
❖	Reduce Energy Usage
❖	Mitigate Peak Demand Charges
❖	Address Utility Bill Overcharges
❖	Enhance Measuring and Verification Efforts
❖	Optimize Energy Efficiency Investments

Results

“Lead by Example” has conducted outreach to state agencies, including all sites currently enrolled in demand response. “Lead by Example” and the contractor are working with these agencies to identify specific buildings that are good candidates for the energy monitoring system. “Lead by Example” expects to have at least 80 buildings participating in energy monitoring system by January 1, 2013. The new monitoring systems will highlight, for example,

if lights are left on overnight, if building temperatures are too high or low, or if HVAC units are kept running over the weekend in unoccupied facilities. The technical analysts will help interpret energy use trends and recommend improvements to building operations and energy management that will reduce energy use and minimize operating costs for the state.

COMPLEMENTARY MEASURES

PORTFOLIO MANAGER: ENERGY BENCHMARKING AND MEASUREMENT

Overview

In order to track energy reductions statewide, “Lead by Example” has established master accounts for the State of Connecticut in the U.S. Environmental Protection Agency’s Portfolio Manager online tool, and has made participation in this master account a requirement for all buildings receiving “Lead by Example” funding. Portfolio Manager is an online energy management tool that allows agencies and municipalities to track and assess energy consumption across their entire agency’s or municipality’s portfolio of buildings. It can also help identify investment priorities, find under-performing buildings, and verify efficiency improvements. State agencies and municipalities are required to share their data with the appropriate Connecticut master account as a condition of receiving “Lead by Example” funds. In addition to sharing building accounts with the state master account, state agencies and municipalities participating in the “Lead by Example” program must update their portfolio manager account with monthly energy usage data. This monthly update will enable “Lead by Example” to generate aggregate energy reports on energy use and reduction.

Energy Reduction Potential and Benefits

State of Connecticut master accounts in Portfolio Manager have been set up for the following categories of government buildings:

- ❖ K-12 schools
- ❖ Other (non-school) local government buildings
- ❖ Board of Regents Higher Education Institutions
- ❖ University of Connecticut Facilities
- ❖ Other State Agencies (non-higher education)

In partnership with the US Environmental Protection Agency, “Lead by Example” has established a pilot program with Connecticut Light & Power and United Illuminating to institute the electronic transfer of electric energy usage information to Portfolio Manager. This program will allow for more efficient tracking of energy usage and eliminate the paperwork burden of having to manually input the tracked information into Portfolio Manager.

NEXT STEPS

- ❖ “Lead by Example’s” performance contracting program will be rolled out to state agencies and municipalities in July of 2012
- ❖ The program will integrate into the state’s “Energize Connecticut” marketing campaign
- ❖ “Lead by Example” will work with the Clean Energy Finance and Investment Authority (CEFIA) to develop longer-term financing options for performance contracting
- ❖ The program will evaluate its progress against Public Act 11-80’s 10% energy reduction requirement in state buildings on January 1, 2013, as well as against other goals
- ❖ “Lead by Example” will institute a real-time data collection program in partnership with the utilities for state agencies and municipalities

Appendix

Table I

Lead by Example Bond Fund Projects

ID Number	Agency	Building Address	Project Name	Project Cost	Projected Annual Energy Cost Savings	ROI
19	AES	123 Huntington Street, New Haven, CT	Windows	\$63,550.00	\$31,921.00	1.99
20	AES	123 Huntington Street, New Haven, CT	Windows	\$36,881.00	\$5,475.00	6.74
21	AES	123 Huntington Street, New Haven, CT	Dual Fuel Burners	\$46,900.00	\$18,968.00	3.42
22	AES	153 Cook Hill Road, Windsor, CT	Windows	\$20,300.00	\$4,999.00	4.06
24	AES	153 Cook Hill Road, Windsor, CT	Lighting & Occupancy sensors	\$16,012.34	\$3,806.00	2.99
25	AES	123 Huntington Street, New Haven, CT	Windows	\$83,863.00	\$23,988.00	3.50
103	BOR	55 Paul Manafort Drive, New Britain CT	Charter Oak Occupancy Sensor Installation and HVAC Upgrades	\$36,000.00	\$21,137.00	1.70
26	DAS	24-38 Wolcott Hill Road, Wethersfield, CT	EMS, RA Conversion, Central Plant Fixture Replace	\$915,453.00	\$152,988.00	5.63
27	DAS	110 Sherman Street, Hartford, CT	Digital Electronic Control System	\$308,522.00	\$18,039.16	13.86
28	DAS	505 Hudson Street, Hartford	Lighting Upgrade - Upper & Lower Garage	\$19,246.76	\$5,400.78	6.21
30	DAS	18/20 Trinity Street, Hartford, CT	Replace VFDs and Pumps - Tie into BMS	\$16,243.00	\$28,000.00	1.56
31	DAS	30 Trinity Street, Hartford, CT	VFD Installation and Tie into BMS	\$24,468.00	\$13,800.00	1.82
38	DAS	505 Hudson Street, Hartford CT	High Efficiency Gas Fired Boilers	\$124,080.00	\$11,279.00	10.28
43	DAS	79 Elm Street, Hartford, CT	VAVs/FTUs/VFDs	\$349,750.00	\$131,000.00	2.45
77	DAS	401 West Thames Street, Norwich, CT	Uncas Domestic Hot Water Boiler	\$12,850.00	\$2,645.17	4.86
79	DAS	401 West Thames Street, Norwich, CT	Uncas Control Valves	\$18,480.00	\$6,701.49	3.08
80	DAS	401 West Thames Street, Norwich, CT	Uncas TVCCA Windows	\$98,736.00	\$9,854.61	10.02
85	DAS	165 Capitol Avenue, Hartford, CT	SOB - Occupancy Sensors, Basement, Ground, First	\$57,427.46	\$14,241.34	3.43
32	DDS	67-87 Mountain Rd Newington CT	Installation of EMS	\$73,169.00	\$24,796.00	3.21

33	DDS	146 Silvermine Road Norwalk, CT	Installation of EMS	\$79,104.00	\$49,227.00	1.75
39	DDS	195 Alvord Road, Torrington, CT	Installation of EMS	\$60,765.00	\$20,214.06	3.34
50	DDS	1 1450 S Britain Rd Southbury CT	Lighting at Power House	\$14,278.00	\$8,707.00	1.64
111	DDS	71 Mountain Road, Newington, CT	Interior and Exterior Lighting Retrofit	\$55,305.00	\$18,033.00	3.07
104	DEEP	141 Trout Hatchery Road, Central Village, (Plainfield) CT	Energy Conservation Improvements	\$2,511,259.00	\$288,669.61	8.70
91	DMV	173 Salem Turnpike, Norwich, CT	Lighting upgrade	\$16,500.00	\$2,517.00	6.56
108	DMV	60 State Street, Wethersfield, CT	Revised Wethersfield- Lighting 5/24/12	\$221,708.00	\$40,344.00	5.50
37	DOC	285 Shaker Road, Enfield, CT	Robinson HVAC Rooftop Replacement	\$551,000.00	\$79,397.00	6.94
42	DOC	391 Shaker Road, Enfield	HVAC Rooftop Unit Replacement	\$150,690.00	\$22,137.00	6.81
94	DOT	Various Locations	Energy Efficiency Improvement at DOT Commuter Parking	\$475,668.00	\$32,172.00	14.79
1	ECSU	High Street, Willimantic, CT	Allerton Building Automation System	\$709,818.00	\$76,065.66	9.33
81	JUD	1 Courthouse Square, Norwich, CT	LED Lighting Retrofit	\$15,599.50	\$6,933.79	2.25
96	JUD	1 Court Street, Middletown, CT	Middletown Courthouse Garage Lighting Retrofit	\$55,631.00	\$8,550.00	6.51
105	JUD	172 Golden Hill Street, Bridgeport, CT	Lighting Retrofit	\$135,000.00	\$86,988.00	1.55
106	JUD	400 Grand Street, Waterbury, CT	Waterbury Courthouse Garage Lighting Retrofit	\$17,500.00	\$14,406.00	1.21
109	JUD	1061 Main Street, Bridgeport, CT	Fairfield JD Lighting Retrofit	\$172,000.00	\$26,343.00	6.53
87	MHA	500 Vine Street, Hartford, CT	Hot Water DDC Controls	\$150,000.00	\$45,286.00	3.31
44	OPM	615 Silver Lane East Hartford, CT	Aggregated Efficiency Measures Project	\$588,500.00	\$168,010.00	3.50
*** Summary Figures for all Projects***				Total Cost	Annual Projected Savings	Average ROI
Totals				\$8,302,257	\$1,523,040	5.45

Table II

Sample Project Request Form



* Required Fields - Please note that applications will not be processed unless all required information is provided.

Agency and Building Information:

Name of State Agency: QIP Building Name: _____ Elm Street _____ Check here to verify that the building is owned by the State of Connecticut:

Building Address: _____ 78 Elm Street _____

Year Built: 1962 Year Reconstructed: _____ Type of Building: Office Net Sq. Footage: 69000.00

Agency Contact Name (Last, First): John Smith Title: Deputy Comm. Phone: 860-555-5555 Email: john.smith@ct.gov

Electric Utility Billing Account Number: 5252221000

Project Information:

1. What is the stage of project development? (Check all that apply) Place your course over the red triangle to see an overview of information a project would have in each stage. We anticipate funding projects in all stages. For projects in earlier stages, please describe the types of energy savings you anticipate in question #2 and complete the other questions to the best of your ability. We realize that early stage projects will not have budget, equipment specs, and detailed projected savings.

(Please indicate when this stage will be completed to the right)

Conceptual Design, to be completed by (date) _____

Study, to be completed by (date) 1/1/2012

Physical Design, to be completed by (date) 5/1/2012

Bidding, to be completed by (date) 5/1/2012

Construction, anticipated start (date) 7/1/2012

2. Is this a stand alone project or part of a bigger project with other funding? If part of a larger project please elaborate. _____

2a. Project Name: Elm Street Building Lighting and Occupancy Sensors

2b. Provide a concise description of the project, highlighting the energy savings opportunities for all levels. What equipment or energy system is this project replacing? (Note: Data on energy savings to be provided in the final section of this form; use this space to describe the savings opportunities briefly in narrative form.)

This project would provide energy efficient lighting upgrades and occupancy sensors, which would be installed in all offices. Currently there are 150 fixtures that are 200w fluorescent bulbs and the remainder have 45 fixtures that are 80w T12 fluorescent bulbs, they will be replaced with energy star certified lighting fixtures that will dramatically reduce electrical usage and costs. DEEP will also install occupancy sensors on the remaining un-sensored floors of the building which are the basement, ground and first to reduce energy usage in unoccupied rooms.

3. Does the project address use of green equipment or a more comprehensive system? _____

4. Does the project address use of green equipment or a more comprehensive system? _____

5. Budget Detail: (Please do not include Connecticut Energy Efficiency Fund related to this project cost)

Order or other category if they apply, can offer the above info to be specific to your project or not	Cost (\$)	Estimate/Quote
Design/Engineering		
Equipment	515,800.00	estimate
Installation	1,200,000.00	estimate
Construction		
Staff Training		
Disposal fees, related	57,000	estimate

6a. Will this project reduce peak electricity demand? _____

6b. If so what is current peak demand and projected peak demand after implementation?

Current Demand: 145

Projected Demand: 112

7. Does your agency have the staff to implement the project? no

10a. Has the building been benchmarked using EPA's Portfolio Manager? no

10b. If so what is the current benchmarking score and how do you anticipate this changing as a result of the project? _____

11. What other sources of funding does your agency use to implement energy upgrades? (No other sources of funding are available)

Energy Saving Detail: All fields in this section must be filled in. For energy types that are not part of the proposed project, please put in a zero. You may not leave any of these fields blank.

12.* Total Projected Installed Costs for Project (\$)	272000.00	19.* Projected Annual Electricity Use (kWh)	110000
13.* Current Annual Electricity Use (kWh)	150000	20.* Projected Annual Electricity Cost (\$)	22876.00
14.* Current Annual Electricity Cost (\$)	27345.00	21.* Projected Annual Fuel Oil Use (Gallons)	0
15.* Current Annual Fuel Oil Use (Gallons)	0	22.* Projected Annual Fuel Oil Cost (\$)	0.00
16.* Current Annual Fuel Oil Cost (\$)	0.00	23.* Projected Annual Natural Gas Use (Therms)	36000
17.* Current Annual Natural Gas Use (Therms)	35000	24.* Projected Annual Natural Gas Cost (\$)	27270.00
18.* Current Annual Natural Gas Cost (\$)	31815.00	25.* Projected Savings from Reduced Maintenance after implementation. (\$)	30014.00
		26.* Total Costs Funding to Completion (Months)	0.00

Table III

Conversion Factors

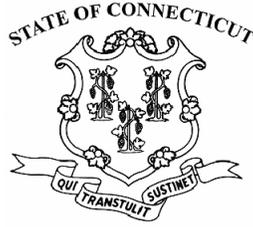
Energy Type	BTU's per Energy Type Original Unit	Original Unit
Motor Gasoline	125,000.00	Gallons
Residential Oil	149,690.00	Gallons
Anthracite Coal	12,700.00	Pounds
Electricity	3,412.34	KWh
Natural Gas	1,031.00	Cubic Foot
Fuel Oil	138,874.36	Gallons

ⁱ Federal Department of Energy

ⁱⁱ Federal Department of Energy

APPENDIX N

**PUBLIC ACT NO. 12-148, *AN ACT ENHANCING EMERGENCY PREPAREDNESS AND
RESPONSE***



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Public Act No. 12-148

AN ACT ENHANCING EMERGENCY PREPAREDNESS AND RESPONSE.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. Subsection (b) of section 28-5 of the 2012 supplement to the general statutes is repealed and the following is substituted in lieu thereof (*Effective July 1, 2012*):

(b) The commissioner shall direct the preparation of a comprehensive plan and program for the civil preparedness of the state and integrate and coordinate that plan and program to the fullest extent possible with the civil preparedness plans of the federal government and of other states. When the plan and program has been prepared, the commissioner shall present it to the Governor for his or her approval. When the Governor approves the plan, all government agencies, state or local, [and] all civil preparedness forces in the state and all public service companies, as defined in section 16-1, shall carry out the duties and functions assigned by the plan and program as approved. The plan and program may, from time to time, be amended or modified in like manner. The commissioner shall coordinate the civil preparedness activities of the towns and cities of the state to the end that they shall be fully integrated with the state civil preparedness plan and program.

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Sec. 2. Subsection (e) of section 28-5 of the 2012 supplement to the general statutes is repealed and the following is substituted in lieu thereof (*Effective July 1, 2012*):

(e) The commissioner shall utilize the personnel, services, equipment, supplies and facilities of existing departments, offices and agencies of the state to the maximum extent possible. The head of each such department, office or agency, in cooperation with and under the direction of the commissioner, shall be responsible for the planning and programming of such activities in the civil preparedness programs as will involve the utilization of the facilities of his or her department, office, institution or agency and shall implement and carry out such activities whenever necessary for the welfare and safety of the state, including participation in planning, training and exercises, as directed by the commissioner.

Sec. 3. (NEW) (*Effective from passage*) (a) As used in this section, "utility" means any electric distribution company or gas company, as those terms are defined in section 16-1 of the general statutes, and "emergency" has the same meaning as provided in section 16-32e of the general statutes, as amended by this act.

(b) The Public Utilities Regulatory Authority shall initiate a docket to establish industry specific standards for acceptable performance by each utility in an emergency to protect public health and safety, to ensure the reliability of such utility's services to prevent and minimize the number of service outages or disruptions and to reduce the duration of such outages and disruptions, to facilitate restoration of such services after such outages or disruptions, and to identify the most cost-effective level of tree trimming and system hardening, including undergrounding, necessary to achieve the maximum reliability of the system and to minimize service outages. On or before November 1, 2012, the authority shall submit a report identifying the standards established by the authority pursuant to such docket and

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any recommendations concerning legislative changes necessary to implement such standards to the joint standing committee of the General Assembly having cognizance of matters relating to energy in accordance with the provisions of section 11-4a of the general statutes. The authority shall allow, in a future rate proceeding, each utility to recover the reasonable costs incurred by such utility to maintain or improve the resiliency of such utility's infrastructure necessary to meet the standards established pursuant to this section pursuant to a plan first approved by the authority.

(c) The authority shall, in the docket initiated pursuant to subsection (b) of this section, review:

(1) Each such utility's current practices concerning service restoration after an emergency. Such review shall include, but not be limited to, an analysis of each such utility's (A) estimates concerning potential damage and service outages prior to any emergency, (B) damage and service outage assessments after any emergency, (C) restoration management after any emergency, including access to alternate restoration resources via regional and reciprocal aid contracts, (D) planning for at-risk and vulnerable customers, (E) policies concerning communication with state and local officials and customers, including individual customer restoration estimates and the timeliness and usefulness of such estimates, and (F) need for mutual assistance during any emergency;

(2) The adequacy of each such utility's infrastructure, facilities and equipment, which shall include, but not be limited to, an analysis of (A) whether such utility is following standard industry practice concerning operation and maintenance of such infrastructure, facilities and equipment, and (B) whether such utility had access to adequate replacement equipment for such infrastructure, facilities and equipment during the course of such emergency;

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(3) Coordination efforts between each electric distribution company and any telecommunications company, community antenna television company, holder of a certificate of cable franchise authority or certified competitive video service provider, as those terms are defined in section 16-1 of the general statutes, including coordinated planning before any emergency;

(4) Tree trimming policies of each electric distribution company and shall determine (A) the amount spent by each electric distribution company for tree trimming in each year since such company's most recent rate case, (B) each such company's system average interruption duration index, as described in section 16-245y of the general statutes, caused by falling trees and limbs, (C) the impact of expanding the area adjacent to distribution lines for tree trimming, including an analysis of the benefits and the costs of such expansion to ratepayers and the likelihood that such expansion would decrease damage to infrastructure, facilities and equipment used to distribute electricity and decrease service outage frequency or duration, (D) the percentage of service outages during Tropical Storm Irene and the October, 2011 snowstorm caused by trees and limbs outside the current trim area based on an analysis of the quantity and effectiveness of prior tree trimming, and (E) the standards appropriate for road-side tree care in the state, vegetation management practices in utility rights-of-way, right tree-right place standards, and any other tree maintenance standard recommended by the State Vegetation Management Task Force established by the Department of Energy and Environmental Protection; and

(5) Any other policy, practice or information that the authority determines is relevant to a review of each such utility's ability to ensure the reliability of such utility's services in an emergency and to prevent, minimize and restore any long-term service outages or disruptions caused by such emergency.

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(d) The authority shall, in the docket initiated pursuant to subsection (b) of this section, establish standards for acceptable performance in an emergency in which more than ten per cent of any utility's customers are without service for more than forty-eight consecutive hours. The standards established by the authority shall include, but not be limited to, provisions for:

(1) Minimum staffing and equipment levels for each utility, based on the number of customers served by such utility and the nature of the infrastructure deployed to serve such utility's customers, in such emergency;

(2) Targets for recovery and restoration of service in emergencies for service outages affecting more than ten per cent, thirty per cent, fifty per cent and seventy per cent of such utility's customers;

(3) A communication plan between each utility and its customers, including, but not limited to, communication during other than normal business hours;

(4) Safety standards for employees of each utility, mutual aid crews and private contractors;

(5) Filing mutual aid agreements by utilities and assessing each utility's ability to rely on mutual storm restoration assistance from other utilities in the region;

(6) Communication and coordination protocols defining interactions between each utility and the appropriate state, municipal or emergency operations center official concerning emergency preparation, road clearing and the establishment of restoration priorities;

(7) Tree trimming, cutting and removal by each electric company and electric distribution company to reduce service outages caused by

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trees and limbs;

(8) Communication and coordination, in consultation with the Department of Emergency Services and Public Protection, between each utility and the public including, but not limited to, standards concerning the use of any emergency notification system to notify the public of service restoration estimates and any dangerous conditions;

(9) Timely notification by each utility to any relevant state or municipal agency or official including, but not limited to, any public safety agency or official, of any emergency and standards for coordination and communication between such utility and such agency or official;

(10) Communication and coordination between any appropriate electric distribution, gas, telephone or telecommunications company or voice over Internet protocol service provider, as defined in section 28-30b of the general statutes; and

(11) The operation of the call center of each utility.

(e) The authority shall establish as it deems fit any other standards for acceptable performance by any utility to ensure the reliability of such utility's services in any emergency, to prevent and minimize any service outages or disruptions lasting more than forty-eight consecutive hours and affecting more than ten per cent of any utility's customers and to facilitate restoration of such services after such outages or disruptions.

(f) Any mutual aid agreement filed with the authority pursuant to this section shall not be considered a public record or file subject to disclosure under the Freedom of Information Act, as defined in section 1-200 of the general statutes.

(g) The authority may initiate any additional docket to establish

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standards for acceptable performance by each utility in an emergency, in accordance with this section, upon determination by the authority that the changed circumstances of any utility necessitates such docket.

(h) Not later than April 15, 2013, and annually thereafter, each utility shall provide an emergency response report to the Public Utilities Regulatory Authority. Such report shall include information and analysis concerning such utility's ability during the preceding year to meet the emergency preparedness and response standards established by the authority pursuant to this section. In addition to the annual report required in this subsection, the authority may require any utility to submit a supplemental emergency response report after any storm, emergency or event causing significant service outages.

Sec. 4. (NEW) (*Effective from passage*) The Public Utilities Regulatory Authority shall review the performance of each electric distribution company and gas company, as those terms are defined in section 16-1 of the general statutes, after any emergency, as defined in section 16-32e of the general statutes, as amended by this act, (1) in which more than ten per cent of any such company's customers were without service for more than forty-eight consecutive hours, or (2) at the authority's discretion. The authority, upon a finding that any such company failed to comply with any standard of acceptable performance in emergency preparation or restoration of service in an emergency, adopted pursuant to section 3 of this act, or with any order of the authority, shall make orders, after a hearing that is conducted as a contested case in accordance with chapter 54 of the general statutes, to enforce such standards or orders and may levy civil penalties against such company, pursuant to section 16-41 of the general statutes, not to exceed a total of two and one-half per cent of such electric distribution or gas company's annual distribution revenue, for noncompliance in any such emergency. In determining the amount of any penalty, the authority shall consider whether such company

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received approval and reasonable funding allowances, as determined by the authority, from the authority to meet infrastructure resiliency efforts to improve such company's performance. Any such penalty shall be assessed in the form of a credit to ratepayers of such electric distribution or gas company. Any such penalty shall not be included as an operating expense of such company for purposes of ratemaking.

Sec. 5. (NEW) (*Effective from passage*) (a) The Public Utilities Regulatory Authority shall initiate a docket to establish standards for restoration of intrastate telecommunications service, as defined in section 16-247a of the general statutes, by any telephone company, certified telecommunications provider, certified competitive video service provider, community antenna television company, holder of a certificate of cable franchise authority or holder of a certificate of video franchise authority, as those terms are defined in section 16-1 of the general statutes, after any emergency, as defined in section 16-32e of the general statutes, as amended by this act. The standards established by the authority shall be limited to any portion of an emergency in which (1) the intrastate telecommunications service outage affects more than ten per cent of any such company's, provider's or holder's access lines, (2) such outage lasts more than forty-eight consecutive hours, and (3) such outage was not caused by the equipment, negligence or wilful act of the subscriber of such service or any other third party.

(b) In establishing such emergency restoration standards, the authority shall consider:

(1) The severity, extent and duration of the emergency;

(2) Communication and coordination by each such company, provider or holder with the state, municipalities and any relevant electric distribution company;

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(3) The operations of any call center operated by each such company, provider or holder during an emergency;

(4) Requirements concerning the assignment of a representative of each such company, provider or holder to staff the emergency operations center of any relevant electric distribution company during an emergency;

(5) Service restoration;

(6) The safety of the subscribers of any such company, provider or holder; and

(7) That restoration of such intrastate telecommunications service cannot be completed until after commercial power is restored.

(c) If the authority determines that any such company, provider or holder has failed to comply with the standards established pursuant to subsection (b) of this section, the authority may submit a report, in accordance with section 11-4a of the general statutes, to the joint standing committee of the General Assembly having cognizance of matters relating to energy, recommending legislation establishing penalties for future noncompliance with such standards. Any penalty for noncompliance with the standards established pursuant to this section shall be limited to any penalty established pursuant to this section.

(d) Each telephone company and certified telecommunications provider, shall, to the extent permitted under federal law, provide a bill credit to any subscriber of such company or provider for any service outage of intrastate telecommunications service, in an emergency, provided (1) such service outage lasts for more than twenty-four consecutive hours, (2) the subscriber notifies such company or provider of such service outage not later than thirty days after the end of any such emergency, (3) such service outage was not

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caused by the equipment, negligence or wilful act of the subscriber or any other third party, (4) such service outage affects more than ten per cent of any such company's or provider's access lines, and (5) such service outage was not caused by the failure of commercial power used to provide such intrastate telecommunications service. The amount of any such credit shall equal the proportionate share of such service not received during the billing period during which such outage occurred. The provisions of this subsection shall not apply to any certified competitive video service provider, community antenna television company, holder of a certificate of cable franchise authority or holder of a certificate of video franchise authority that already provides credits pursuant to section 16-331l or 16-331w of the general statutes.

Sec. 6. Section 16-32e of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(a) As used in this section, "emergency" means any (1) hurricane, tornado, storm, flood, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, drought or fire explosion, or (2) attack or series of attacks by an enemy of the United States causing, or which may cause, substantial damage or injury to civilian property or persons in the United States in any manner by sabotage or by the use of bombs, shellfire or atomic, radiological, chemical, bacteriological or biological means or other weapons or processes.

(b) Not later than [June 1, 1996] July 1, 2012, and every [five] two years thereafter, each public service company, as defined in section 16-1, each telecommunications company, as defined in [said] section 16-1, that installs, maintains, operates or controls poles, wires, conduits or other fixtures under or over any public highway for the provision of telecommunications service authorized by section 16-247c, each voice over Internet protocol service provider, as defined in section 28-30b,

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and each municipal utility furnishing electric, gas or water service shall file with the Public Utilities Regulatory Authority, the Department of Emergency Services and Public Protection and each municipality located within the service area of the public service company, telecommunications company, voice over Internet protocol service provider or municipal utility an updated plan for restoring service which is interrupted as a result of an emergency, except no such plan shall be required of a public service company or municipal utility that submits a water supply plan pursuant to section 25-32d. Plans filed by public service companies and municipal utilities furnishing water shall be prepared in accordance with the memorandum of understanding entered into pursuant to section 4-67e. Each such plan for restoring service which is interrupted as a result of an emergency shall include measures for (1) communication and coordination with state officials, municipalities and other public service companies and telecommunications companies during a major disaster, as defined in section 28-1, or an emergency; and (2) participation in training exercises as directed by the Commissioner of Emergency Services and Public Protection. Each such plan shall include such company's, provider's or municipal utility's response for service outages affecting more than ten per cent, thirty per cent, fifty per cent and seventy per cent of such company's, provider's or municipal utility's customers. On or before September 1, 2012, and biannually thereafter, the authority shall submit a report, in accordance with section 11-4a, to the joint standing committee of the General Assembly having cognizance of matters relating to public utilities summarizing such plans. Not later than September 15, [1996] 2012, and every [five] two years thereafter, the Public Utilities Regulatory Authority may conduct public hearings on such plans and, in consultation with the Department of Emergency Services and Public Protection, the Department of Public Health and the joint standing committee of the General Assembly having cognizance of matters relating to public utilities, revise such plans to the extent necessary to

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provide properly for the public convenience, necessity and welfare. If the Public Utilities Regulatory Authority revises the emergency plan of a public service company, telecommunications company, voice over Internet protocol service provider or municipal utility, such company, provider or municipal utility shall file a copy of the revised plan with each municipality located within the service area of the company, provider or municipal utility. Any information provided in any such plan shall be considered confidential, not subject to disclosure under the Freedom of Information Act, as defined in section 1-200, and any such information shall not be transmitted to any person except as needed to comply with this section.

(c) At the discretion of the Commissioner of Emergency Services and Public Protection or after an emergency or major disaster is declared in the state by the Governor under the laws of this state or by the President of the United States under federal law, each telephone company, certified telecommunications provider, holder of a certificate of video franchise authority or holder of a certificate of cable franchise authority, as those terms are defined in section 16-1, with more than twenty-five thousand subscribers, shall provide a representative to staff the emergency operations center of an affected electric distribution company, as defined in section 16-1, as needed to ensure communication and coordination during emergency response and restoration efforts.

Sec. 7. (NEW) (*Effective from passage*) (a) As used in this section:



(1) "Municipality" has the same meaning as provided in section 7-233b of the general statutes;

(2) "Critical facility" means any hospital, police station, fire station, water treatment plant, sewage treatment plant, public shelter or correctional facility, any commercial area of a municipality, a municipal center, as identified by the chief elected official of any

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municipality, or any other facility or area identified by the Department of Energy and Environmental Protection as critical;

(3) "Distributed energy generation" means the generation of electricity from a unit with a rating of not more than sixty-five megawatts on the premises of a retail end user within the transmission and distribution system;

(4) "Electric distribution company" and "participating municipal electric utility" have the same meanings as provided in section 16-1 of the general statutes; and

(5) "Microgrid" means a group of interconnected loads and distributed energy resources within clearly defined electrical boundaries that acts as a single controllable entity with respect to the grid and that connects and disconnects from such grid to enable it to operate in both grid-connected or island mode.

(b) The Department of Energy and Environmental Protection shall establish a microgrid grant and loan pilot program to support local distributed energy generation for critical facilities. The department shall develop and issue a request for proposals from municipalities, electric distribution companies, participating municipal electric utilities, energy improvement districts and private entities seeking to develop microgrid distributed energy generation, or to repurpose existing distributed energy generation for use with microgrids, to support critical facilities. Any entity eligible to submit a proposal pursuant to this section may collaborate with any other such entity in submitting such proposal.

(c) The department shall award grants or loans under the microgrid grant and loan pilot program to any number of recipients, provided the total amount of grants and loans awarded under the program shall not exceed fifteen million dollars. To the extent possible, the amount of

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loans and grants awarded under the program shall be evenly distributed between small, medium and large municipalities. Such grants and loans shall only be used to provide assistance to recipients for the cost of design, engineering services and interconnection infrastructure for any such microgrid. The department may establish any financing mechanism to provide or leverage additional funding to support the development of distributed energy generation and microgrids that is not limited to the cost of interconnection infrastructure.

(d) Not later than January first, annually, for a period of five years after receiving a grant or loan under the microgrid grant and loan pilot program, the recipient of such grant or loan shall submit a report to the Public Utilities Regulatory Authority, the Office of Consumer Counsel and the Department of Energy and Environmental Protection and, in accordance with section 11-4a of the general statutes, to the joint standing committees of the General Assembly having cognizance of matters relating to appropriations and energy. Such report shall include information concerning the status of such recipient's microgrid project.

(e) On or before January 1, 2013, the department shall file a report, in accordance with the provisions of section 11-4a of the general statutes, with the joint standing committee of the General Assembly having cognizance of matters relating to energy, identifying other funding sources necessary to expand the microgrid grant and loan pilot program established pursuant to this section and any legislative changes necessary to access such funding.

(f) The Department of Energy and Environmental Protection, in consultation with the Connecticut Academy of Science and Engineering, shall study the methods of providing reliable electric services to critical facilities, taking into consideration the location of such critical facilities. Such study shall evaluate the costs and benefits

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of such methods, including, but not limited to, the use of microgrids, undergrounding and portable turbine generation, and shall make recommendations identifying the most cost-effective and reliable of such methods. Not later than January 1, 2013, the department shall submit the findings of such study, in accordance with section 11-4a of the general statutes, to the joint standing committee of the General Assembly having cognizance of matters relating to energy and technology.

Sec. 8. (NEW) (*Effective from passage*) (a) On or before October 1, 2012, and annually thereafter, each provider of mobile radio service, as defined in 47 CFR 20.3, shall submit a report to the Connecticut Siting Council and the Department of Emergency Services and Public Protection concerning each such provider's ability to provide backup power during an electric service outage for any telecommunications tower or antenna owned, leased or operated by such provider and each such provider's plans concerning such backup power. Any information provided in the report submitted pursuant to this section shall be considered confidential, not subject to disclosure under the Freedom of Information Act, as defined in section 1-200 of the general statutes, and such information shall not be transmitted to any person except as needed to comply with this section.

(b) As the reliability of such mobile radio service is considered to be in the public interest and necessary for public health and safety, after such initial report is submitted, the Connecticut Siting Council, in consultation and in coordination with the Department of Energy and Environmental Protection, the Department of Emergency Services and Public Protection and the Public Utilities Regulatory Authority, shall study the feasibility of requiring backup power for telecommunications towers and antennas.

(c) Such study shall consider (1) the federal, state and local jurisdictional issues of such backup power requirements, including,

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but not limited to, siting issues, (2) similar laws or initiatives in other states, (3) the technical and legal feasibility of such backup power requirements, (4) the environmental issues concerning such backup power, and (5) any other issue concerning backup power that the authority deems relevant to such study.

(d) On or before January 1, 2013, the authority shall submit a report of its findings and recommendations and a proposed plan for deploying backup power, if such backup power is determined to be feasible, in accordance with the provisions of section 11-4a of the general statutes, to the joint standing committees of the General Assembly having cognizance of matters relating to energy, public safety and planning and development.

Sec. 9. Subsection (a) of section 16-2a of the 2012 supplement to the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(a) There shall be an independent Office of Consumer Counsel, within the Department of Energy and Environmental Protection, for administrative purposes only, to act as the advocate for consumer interests in all matters which may affect Connecticut consumers with respect to public service companies, electric suppliers and certified telecommunications providers, including, but not limited to, rates and related issues, ratepayer-funded programs and matters concerning the reliability, maintenance, operations, infrastructure and quality of service of such companies, suppliers and providers. The Office of Consumer Counsel is authorized to appear in and participate in any regulatory or judicial proceedings, federal or state, in which such interests of Connecticut consumers may be involved, or in which matters affecting utility services rendered or to be rendered in this state may be involved. The Office of Consumer Counsel shall be a party to each contested case before the Public Utilities Regulatory Authority and shall participate in such proceedings to the extent it

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deems necessary. Said Office of Consumer Counsel may appeal from a decision, order or authorization in any such state regulatory proceeding notwithstanding its failure to appear or participate in said proceeding.

Sec. 10. (NEW) (*Effective from passage*) The Department of Transportation and any municipality shall notify the Public Utilities Regulatory Authority of any pending project involving the construction, alteration, reconstruction, improvement, relocation, widening or changing of the grade of a section of any state highway or any other public highway, that is greater than five miles long or located in a commercial area. The authority, upon determination that such project may provide an opportunity for any public service company, as defined in section 16-1 of the general statutes, to install, replace, upgrade or bury any water, sewer or gas line, electric wire or cable or fiber optics, shall notify such company of such project.

Sec. 11. (NEW) (*Effective from passage*) On or before January 1, 2013, the Department of Energy and Environmental Protection, in coordination and consultation with each public service company, as defined in section 16-1 of the general statutes, the Department of Transportation, the Department of Emergency Services and Public Protection and an association of municipalities, shall develop procedures to expedite the process of road-clearing for public safety personnel after an emergency, as defined in section 16-32e of the general statutes, as amended by this act.

Sec. 12. Section 22a-6k of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(a) The Commissioner of Energy and Environmental Protection may issue an emergency authorization for any activity regulated by the commissioner under section 22a-32, subsection (h) of section 22a-39, 22a-54, 22a-66, 22a-174, 22a-208a, 22a-342, 22a-368, 22a-403, 22a-430,

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22a-449 or 22a-454 provided he finds that (1) such authorization is necessary to prevent, abate or mitigate an imminent threat to human health or the environment; and (2) such authorization is not inconsistent with the federal Water Pollution Control Act, the federal Rivers and Harbors Act, the federal Clean Air Act or the federal Resource Conservation and Recovery Act. Such emergency authorization shall be limited by any conditions the commissioner deems necessary to adequately protect human health and the environment. Summary suspension of an emergency authorization may be ordered in accordance with subsection (c) of section 4-182. The commissioner may assess a fee for an emergency authorization issued pursuant to this subsection. Such fee shall be of an amount equal to the equivalent existing permit fee for the activity authorized. The commissioner may reduce or waive the fee required pursuant to this subsection if good cause is shown. The fee required pursuant to this subsection shall be paid no later than ten days after the issuance of the emergency authorization.

(b) The commissioner may issue a temporary authorization for any activity for which the commissioner has authority to issue a general permit under section 22a-45a, 22a-174, 22a-208a, 22a-349a, 22a-361, 22a-378a, 22a-411, 22a-430b or 22a-454 provided the commissioner finds that (1) such activity will not continue for more than [thirty] ninety days, whether consecutive or not; (2) such activity does not pose a significant threat to human health or the environment; (3) such authorization is necessary to protect human health or the environment or is otherwise necessary to protect the public interest; and (4) such authorization is not inconsistent with the federal Water Pollution Control Act, the federal Rivers and Harbors Act, the federal Clean Air Act or the federal Resource Conservation and Recovery Act. No temporary authorization shall be renewed [more than once, and no such authorization shall be] or issued for an activity which has been authorized by a temporary authorization during the previous twelve

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calendar months. Any person seeking a temporary authorization shall submit to the commissioner sufficient information to allow the commissioner to make the determination set forth herein. A temporary authorization shall be limited by any conditions the commissioner deems necessary to adequately protect human health and the environment. Summary suspension of a temporary authorization may be ordered in accordance with subsection (c) of section 4-182. The commissioner may assess a fee for a temporary authorization issued pursuant to this subsection. Such fee shall be of an amount equal to the equivalent existing permit fee for the activity authorized. The commissioner may reduce the fee required pursuant to this subsection if good cause is shown. The fee required pursuant to this subsection shall be paid before the issuance of the temporary authorization. The commissioner may, if good cause is shown, allow late payment of the fee required by this subsection provided such fee shall be paid no later than ten days after the issuance of the temporary authorization.

Sec. 13. (*Effective from passage*) (a) The Public Utilities Regulatory Authority shall initiate a docket to study the feasibility of establishing a program administered by the authority to reimburse any residential customer of an electric distribution company, as defined in section 16-1 of the general statutes, for spoilage loss of food items or refrigerated medications caused by a lack of refrigeration during any electric service outage lasting longer than forty-eight hours, and the necessary mechanisms to administer such program. Such docket shall include, but not be limited to, a study of the establishment of any such program in which (1) the reimbursement, for each such service outage, shall not exceed one hundred fifty dollars for any such spoilage loss of food items and two hundred dollars for any such spoilage loss of refrigerated medications for any customer, (2) such customer shall file an application for reimbursement with such company not later than thirty days after electric service is restored, and (3) such customer shall submit with such application an itemized list of any spoiled food items

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or refrigerated medications and proof of such spoilage loss.

(b) On or before February 1, 2013, the authority shall submit a report, in accordance with the provisions of section 11-4a of the general statutes, to the joint standing committees of the General Assembly having cognizance of matters relating to energy and public health, with the authority's recommendations concerning the necessary mechanisms for administering such a program. Such report shall include, but not be limited to, recommendations concerning (1) the manner in which such program will be established by the authority, (2) the application process for such program, (3) the role of each electric distribution company in administering such program, (4) the funding mechanism for such program and the cap on the funding to support such program, (5) the documents or identification to be used as proof of such spoiled food items or refrigerated medication, (6) whether the program shall be limited to customers within certain income levels, and (7) any legislative changes necessary to implement such program.

APPENDIX O

**DIVISION OF EMERGENCY MANAGEMENT & HOMELAND SECURITY,
*PROPOSED PROCESS FOR ENHANCEMENT OF STATE PREPAREDNESS PLANNING***



STATE OF CONNECTICUT
DEPT. OF EMERGENCY SERVICES & PUBLIC PROTECTION
DIVISION OF EMERGENCY MANAGEMENT & HOMELAND SECURITY



TO: The Honorable Governor Dannel P. Malloy
FROM: William J. Hackett, State Emergency Management Director
Division of Emergency Management and Homeland Security (DEMHS)
Department of Emergency Services and Public Protection (DESPP)
RE: Proposed Process for Enhancement of State Preparedness Planning
DATE: January 3, 2012

EXECUTIVE SUMMARY:

In the aftermath of Tropical Storm Irene and the October Nor'easter, the Witt Report noted that "public sector emergency response planning at the state and local levels does not adequately focus on actions needed in a significant power outage and assignment of responsibilities in mitigation, preparedness, response, and recovery in utility disruption events. State and local plans call for reports from power companies, but do not [specifically] address multi-agency actions or coordination needed to address energy disruption." Therefore, you directed me to outline a process for improving the State's planning and preparedness, particularly with regard to large scale power outages. **The purpose of this work is to:**

- **Improve information-sharing during an emergency between state and local officials, and our utility providers;**
- **Provide clear, specific guidance on the inter-related roles and responsibilities of state and local officials, and the private sector, including utilities, in mitigation, preparedness, response, and recovery, particularly in utility disruption events.**

This proposal includes the possible need for a consultant to assist with this effort, who will be able to apply expertise and experience in preparedness planning at the state and federal level to enhance and expand Connecticut's existing plans. The proposal also outlines goals, objectives, and implementation steps. **The three identified goals are:**

1. **To enhance the existing State Response Framework and local plans to create more comprehensive planning to identify in detail multi-agency, multi-jurisdictional response and coordination actions, roles and responsibilities;**
2. **To increase the quality of communications between local and state governments and utilities during emergencies;**

3. To increase utilities' interface with Connecticut emergency management systems.

Among the major implementation steps that have been identified are:

- Develop a more comprehensive storm preparation and response plan that enhances existing planning by providing specific assignment of responsibilities in mitigation, preparedness, response and recovery activities that will apply to all hazards, including utility disruption events;
- Establish and convene a multi-jurisdictional, multi-discipline Energy and Utilities Policy Working Group;
- Create an All-Hazards Energy and Utilities Plan as an annex to the State Response Framework, to address response to and management of widespread utility outages;
- Create an Energy and Utilities Annex to the required template for Local Emergency Operations Plans (LEOPs).

The proposed timeline for this initiative is as follows:

- January: Identify Working Groups, and establish process for identifying consultant;
- January/February:
 - Release Request for Proposal (RFP) for consultant;
 - Review and evaluate responses to RFP and select consultant;
 - Convene Working Groups to identify issues and establish timelines for
 - Enhanced State Response Framework;
 - All-Hazards Energy and Utility Plan, and;
 - All-Hazards Energy and Utility Annex template for Local Emergency Operations Plans;
- February/March: Working Groups and consultant develop plans described above;
- March/April/May: Working Groups and consultant produce draft products;
- June/July: Finalize drafts, and review/exercise;
- August 1, 2012: Finalized products ready.

BACKGROUND:

On August 27, 2011, Connecticut was hit by Tropical Storm Irene, the most severe tropical storm to affect the State since Hurricane Gloria in 1985. Then, on October 29, 2011, an historic October Nor'easter dumped snow on leaf-covered trees, bringing down limbs and power lines and causing even more severe power outages and damage.

Preparedness planning for emergencies is constantly evolving: plans are always in the process of being revised, updated, and improved. DEMHS and its local, state, federal and private partners

perform planning and preparedness activities, including training and exercise, throughout the year. Existing plans are reviewed and updated. New plans are put into place. As each emergency incident unfolds, we take the lessons learned to improve our planning for and response to the next inevitable event. Tropical Storm Irene and the October Nor'easter demonstrate the importance of the planning and preparation that must take place during the times when we are not responding to an incident.

Across the state, countless local employees, officials, and volunteers assisted residents before, during, and after these storms. These tireless efforts represent the culmination of years of all-hazards planning, training, exercise, and other preparations at the local, state, tribal, private sector, and federal levels. Emergency planning is accomplished largely through the collaboration of municipalities, state agencies, and the private sector, working within 5 DEMHS Regions. In 2005, working with other state agencies and local municipalities, DEMHS established 5 Regions to encourage and enhance multi-town, regional emergency planning. A regional emergency planning team (REPT) was established in each region. Each REPT includes representation from each geographical jurisdiction within the DEMHS Region, as well as representation of each emergency management/homeland security discipline (for example, fire, police, public works, emergency medical services).

Working with DEMHS, the 5 REPTs make recommendations on the use of federal grant funds. Capabilities have been built through the judicious, carefully planned use of federal homeland security and emergency management grant funding. These capabilities were tested by Tropical Storm Irene and the October Nor'easter, but they are also used on a weekly, if not daily, basis. At every emergency, large and small, first responders across the state apply the planning, training, and resources gained from years of preparation.

Each REPT has developed a Regional Emergency Support Plan, to help identify assets and procedures available during an emergency. Resource sharing and cost effective programming are hallmarks of this regionalization initiative, which builds on Connecticut's strong mutual aid tradition.

Over the last two years, DEMHS has also improved the procedures for coordinating responses and supporting municipalities by developing a State Response Framework (SRF), which outlines the roles, plan resources, and operating procedures for a state emergency management response during a crisis. After the record-breaking winter snowstorms of 2011, revisions were made to the SRF, and Version 2 was released in August of 2011. The State Response Framework and the Natural Disaster Plan, as well as local emergency operations plans, provide the mechanism for response to storms that may affect the State this winter as well.

The State's emergency plans were tested during these last two storms. Although less than 60 days had passed between Irene and the October snowstorm, we were able to implement some immediate changes, including:

- Establishment of a Shelter Guidance Task Force;
- Delivery of commodities directly to towns;
- Frequent, direct communications between the utilities and municipal leaders, and;
- 24/7 staffing of the DEMHS Regional Offices, using DEMHS staff bolstered by Department of Correction staff.

In addition, Recovery and Mass Care Working Groups have been activated to address emerging issues. We intend to more fully develop and implement these changes, so that we can be better prepared for that next inevitable event. As the utilities change their procedures, we will work together to change our procedures as well. In order to accomplish this work, DEMHS anticipates the likelihood of both short-term and long-term budgetary needs, including an increase in our current staffing level.

Proposed Process for Plan Review

GOAL: To enhance the existing State Response Framework to create a more comprehensive plan identifying in detail multi-agency, multi-jurisdictional response and coordination actions, roles and responsibilities.

Objective: Review all existing plans and enhance the current State Response Framework to memorialize in detail the roles and responsibilities of the local, state, and private sectors before, during, and after emergencies, particularly those involving large or extended power outages.

Objective: Using existing plans as a foundation, build out the current State Response Framework to develop support and incident-specific annexes, in a manner similar to the National Response Framework. For example, integrate the Natural Disaster Plan as an annex to the State Response Framework.

Objective: Using the State Emergency Operations Center Task Forces as a starting point, identify state-level Emergency Support Function (ESF) groups, including primary and secondary state agency leads, and memorialize in the State Response Framework. (ESFs are defined as discipline-oriented working groups, such as fire, law enforcement, energy, communications, and public works).

Objective: Review and enhance the current template for Local Emergency Operations Plans, using, in part, the FEMA Comprehensive Preparedness Guide (CPG) 101. The result should be a functional local plan that identifies departmental responsibilities and serves as a crosswalk to the State Response Framework. Integrate with existing Regional Emergency Planning Team structure, as well as with the Regional Emergency Support Plan in each DEMHS Region.

Implementation Steps:

1. Convene multi- agency, multi- jurisdiction group to work with consultant:
 - a. To review current State Strategic Plan, State Response Framework, and existing plans, and draft documents meeting Objectives 1-3;
 - b. To review current local plans and templates, and draft documents meeting Objective 4, including:
 - i. An Energy and Utilities Annex to the required template for Local Emergency Operations Plans (LEOPs);
2. Develop and convene Multi-Partner Energy and Utilities Policy Working Group, combining ESF 2 (Communications) and ESF 12 (Energy) leadership and subject matter experts, as well as consultant, including:
 - DEEP/PURA
 - DESPP/DEMHS
 - Local representatives from each of the 5 DEMHS regions
 - Statewide Interoperability Coordinator
 - State Consumer Counsel
 - CT Red Cross
 - United Way 211
 - CT Military Department
 - Office of State Attorney General
 - Office of Policy and Management
 - Fuel, Commodities, Communications EOC Task Force Leaders
 - DOT
 - CT Emergency Management Association (CEMA)
 - Connecticut Conference of Municipalities (CCM)
 - Council of Small Towns (COST)
 - Representative of 9-1-1 dispatch centers
 - Utilities, including:
 - CL&P, United Illuminating, Norwich, Wallingford
 - AT&T, Verizon, etc
 - Cable companies
 - Millstone;
3. Convene DEMHS working group, to work in collaboration with consultant, as well as ESF 2 and ESF 12 working groups, to implement recommendations of Energy and Utilities Policy Working Group;
4. Write an All-Hazards Energy and Utilities Plan as an Annex to the existing State Response Framework Version 2 to address widespread utility outages;

- i. Include checklist specifically for actions to be taken in the event of utility outages. Must include glossary of terms used by utilities, such as line crews, tree crews, “Make Safe” crews, etc... Also must include more detailed information flow;
 - ii. Memorialize membership, checklists, resources, and actions of Fuel Management Task Force as part of ESF 12 responsibilities during emergency;
- 5. Review and revise State Emergency Operations Center procedures;
- 6. Review and update as necessary the list of statutory authorities related to energy emergencies, including statutory and regulatory enforcement mechanisms;
- 7. Amend State EOC Standard Operating Procedures (SOPs) to include requirement that utilities provide, as requested, daily Incident Action Plan, or comprehensive schedule of each day’s activities, including where they are going to be working, how many trucks and personnel are going to each town, etc...;
- 8. Review State EOC SOPs to update and enhance other action items, including enhancing state-local-utility-private sector conference call agendas, usage.

GOAL: Increase the quality of communications between local and state governments and utilities during emergencies.

Objective: Work with Emergency Support Function (ESF)12 (Energy) and ESF 2 (Communications) to enhance quality of communications to and from utilities; memorialize process and expectations related to information sharing.

Implementation Steps:

- 1. Designate the ESF 12 Energy Working Group, including local, state, and private sector representation, and establish as permanent committee of the DEMHS Statewide Advisory Council;
- 2. Amend bylaws of current ESF2 Communications Committee of the DEMHS Statewide Advisory Council to expand role of ESF 2 to include public communications restoration and related issues;
- 3. Convene state/local Technology Working Group to provide enhanced technical real-time interface among partners, including:
 - o Review of Web EOC;
- 4. Working with State GIS Council and PURA, convene GIS Working Group, including utilities, to enhance GIS information flow from utilities to state and local EOCs;
- 5. Embed utility representatives in the DEMHS Regional Offices to enhance information flow.

GOAL : Increase utilities' understanding of Connecticut emergency management systems.

Objective : Work with utilities to ensure that every utility company representative involved in emergency planning, preparedness, response, and/or recovery is trained in the National Incident Management System (NIMS) Incident Command System (ICS), as well as the operational flow of communications within the Connecticut state/local emergency management system.

Implementation Steps:

1. Review existing utility training programs and personnel participation levels;
2. Develop ICS program designed for utilities personnel involved in Connecticut;
3. Include active utility participation in state and local exercises;
4. Determine whether there needs to be a law or regulation in place to enforce this requirement.