Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

DRAFT DECISION
2013-2015 ELECTRIC AND NATURAL GAS CONSERVATION AND LOAD MANAGEMENT PLAN

Draft Decision
August 23, 2013

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I. EXECUTIVE SUMMARY

The Department is pleased to approve the 2013-2015 Electric and Natural Gas Conservation and Load Management Plan, which represents a significant ramp up in funding for energy efficiency programs that will help Connecticut residents and businesses reduce their energy bills. These increased investments in efficiency are critical to achieving the State's goal of securing cheaper, cleaner, more reliable energy. Consistent with the findings of the 2013 Comprehensive Energy Strategy for Connecticut, this approval highlights the primary role of energy efficiency in reducing the state's energy consumption while growing its economy and reducing harmful pollutants associated with energy use.

The increased funding for the conservation and load management programs approved in this Decision is designed to complement numerous other initiatives the State has undertaken to reduce energy costs in Connecticut. While the ratepayer-supported energy efficiency programs provide essential incentives to help residents and businesses undertake efficiency measures, even larger savings are achievable by doing more comprehensive retrofits to buildings and systems.

When combined with innovative new financing programs offered by the Connecticut Clean Energy Finance and Investment Authority and performance contracting, the level of program investment approved in this Decision constitutes an enormous step forward in ensuring that all Connecticut customers have the tools they need to affordably reduce their energy costs. These investments put us on the path to capturing all cost-effective efficiency, which the 2013 Comprehensive Energy Strategy found would, over time, create 5,500 new jobs in our state, cause air emissions to decline between 5% and 10%, and position Connecticut as a national leader in innovative approaches to achieving all cost-effective energy efficiency.

Together with these accessible, affordable financing options, the expanded programs approved in this Decision will enable Connecticut businesses and residents to achieve even greater savings. The Department believes that complementary public and privately funded efforts are key to securing a cheaper, cleaner, more reliable energy future for Connecticut.

II. SUMMARY OF APPROVAL OF 2013-2015 C&LM PLAN

Pursuant to Conn. Gen. Stat. § 16-245m(d), as amended by Public Act 13-298, *An Act Concerning Implementation of Connecticut's Comprehensive Energy Strategy and Various Revisions to the Energy Statutes*, the Commissioner of the Department of Energy and Environmental Protection (the Commissioner) approves the 2013-2015 Electric and Natural Gas Conservation and Load Management Plan (2013-2015 C&LM Plan or the Plan), subject to the conditions and modifications described herein. The Plan was jointly submitted by Connecticut's electric distribution companies (EDCs) Connecticut Light and Power (CL&P) and United Illuminating (UI), and Connecticut's natural gas local distribution companies (LDCs) Yankee Gas (Yankee), Connecticut Natural Gas (CNG), and Southern Connecticut Gas (SCG) (collectively, the Companies), in collaboration with the Connecticut Energy Conservation Management Board (Energy Efficiency Board or EEB).

The Plan was submitted to the Commissioner on November 1, 2012[1], and a revision of the Plan was submitted February 25, 2013[2], in response to requests from the EEB to provide additional energy savings. The Companies provided documentation supportive of the Plan in their *Connecticut Program Savings Document, 8th Edition for 2013 Program Year.* In the proposed Plan, the Companies proposed to expand electric program spending from the base level (Base Budget) to a level sufficient to fund all energy efficiency that is cost-effective or lower cost than acquisition of equivalent supply (the Expanded Budget).

This approval is based in part on the Commissioner's determination that the Plan is consistent with Connecticut's 2013 Comprehensive Energy Strategy (CES) and Integrated Resource Plan (IRP). The Plan advances the implementation of state policy objectives focused on implementation of all cost-effective energy conservation and efficiency measures and market transformation initiatives.

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[1] *See* The Connecticut Light and Power Company, The United Illuminating Company, Yankee Gas Services Company, Connecticut Natural Gas Corporation, and Southern Connecticut Gas Company,"2013-2015 Electric and Gas Conservation and Load Management Plan," *available at* http://www.dpuc.state.ct.us/DEEPEnergy.nsf/$EnergyView?OpenForm&Start=1&Count=30&Expand=12&Seq=5 (2013-2015 C&LM Plan).

[2] Revised Base Budgets and Revised Expanded Budgets to the 2013-2015 C&LM Plan, submitted on February 25, 2013, are available at http://www.dpuc.state.ct.us/dockcurr.nsf/8e6fc37a54110e3e852576190052b64d/807238a1b359a16685257b1d006f0242?OpenDocument. References in this Draft Decision to the February 25 submission are denoted by with an "r".

Although the Department has not yet held a public comment period on its decision regarding the Plan, the Department has received ten written comments on the Plan.[3] These comments have been considered as part of DEEP's review and approval of the Plan. The comments are summarized in Appendix A to this Decision and are referred to where relevant in the text of this Decision.

DEEP welcomes written comments on this Draft Decision and will hold a public meeting to receive verbal comments on the record.[4] DEEP will summarize and respond to comments received on the Draft Decision in an appendix to the Final Decision.

III. INTRODUCTION

A. BACKGROUND

The EDCs and LDCs are required to develop a plan to implement cost-effective conservation and load management (C&LM) programs, pursuant to Conn. Gen. Stat. § 16-245m, as amended by Public Act 13-298. The Energy Efficiency Board advises and assists the EDCs and the LDCs in the development of C&LM plans, in accordance with Conn. Gen. Stat. § 16-245m(d)(1), as amended by Public Act 13-298.

Prior to 2011, gas and electric C&LM plans were reviewed and approved on an annual basis by the former Department of Public Utility Control (DPUC). In 2011, Public Act 11-80, *An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut's Energy Future*, created a new Department of Energy and Environmental Protection (DEEP or the Department); established a new Bureau of Energy and Technology Policy (BETP) within DEEP; and reorganized the former DPUC within DEEP and renamed it the Public Utilities Regulatory Authority (PURA). Public Act 11-80 reassigned to DEEP the authority to review, approve, modify, or reject the electric C&LM plan, and retained with PURA—as the successor agency of the DPUC—jurisdiction to review, approve, modify, or reject the gas C&LM plan.

On November 1, 2012, CL&P, UI, Yankee, CNG, and SCG, in collaboration with the EEB, jointly submitted to both BETP and PURA the 2013-2015 C&LM Plan, which proposes C&LM programs and budgets for both gas and electric conservation for a three-year period beginning January 1, 2013. Pursuant to a letter dated March 5, 2013, BETP requested that PURA consider the Plan in a new docket, integrated with Docket Nos. 12-08-11 and 12-11-05, opened to consider requests

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[3] DEEP received comments from New England Conservation Services, Clean Water Action/Clean Water Fund, Northeast Energy Efficiency Partnerships, Connecticut Fund for the Environment, New Opportunities, Inc., Next Step Living, Inc., Emily B. Nissley, Gian Morresi, Chris Schweitzer, and Charles Emerson.

[4] The public notice for the meeting and instructions for how to submit written comments are included in the notice of this Draft Decision found on the Department's Internet website at: http://www.ct.gov/deep/publicnotices.

from the EDCs to establish conservation adjustment mechanisms (CAMs) to increase ratepayer funding for electric conservation programs.[5] In order to improve the consistency and efficiency of review of the C&LM programs, BETP proposed to conduct discovery on the electric portion of the 2013-2015 C&LM Plan as a party in the PURA proceeding rather than conducting a separate evidentiary proceeding at BETP on the electric portion of the Plan.

PURA opened Docket No. 13-03-02 to review the electric and gas 2013-2015 C&LM Plan, and granted BETP party status in that proceeding.[6] On April 2, 2013, PURA granted procedural requests submitted jointly by BETP, the Office of Consumer Counsel (OCC), the Attorney General's Office (AGO), the EDCs, and the LDCs to conduct a joint proceeding for Docket Nos. 13-03-02, 12-08-11, and 12-11-05 (PURA C&LM Proceeding). BETP issued interrogatories to the EDCs and LDCs as a party in the PURA C&LM Proceeding, and participated in hearings held by PURA on April 24, April 25, and May 1, 2013 in that proceeding.

While the PURA C&LM Proceeding was under way, Public Act 13-298 was enacted. Effective June 5, 2013 (the date of passage), Section 16 of that Act amended Conn. Gen. Stat. § 16-245m(d) by assigning to the DEEP Commissioner the authority to approve, modify, or reject the 2013-2015 C&LM Plan, including both electric and gas portions of the Plan.[7] This Draft Decision approving the 2013-2013 C&LM Plan and budgets is issued in accordance with that section, relying on the record developed in the PURA C&LM Proceeding to date.

In approving the 2013-2015 C&LM Plan, the Department relies on the record developed in the PURA C&LM Proceeding, including briefs submitted by the EDCs and LDCs, Environment Northeast (ENE), Connecticut Industrial Energy Consumers (CIEC), and the OCC. It is indicated in the text of this Decision where DEEP has relied on information or statements submitted by the parties in the PURA C&LM Proceeding.

B. STATUTORY FRAMEWORK GOVERNING THE C&LM PLAN BUDGET

Funding for the state's electric and gas C&LM programs derives from a variety of sources. Since 1998, electric C&LM programs have been primarily funded by a charge of three mills per kilowatt hour (kWh). This conservation charge or "3 mill charge," collected from electric ratepayers, is mandated under Conn. Gen. Stat. § 16-245m(a). The electric C&LM budget has also been supported by proceeds from the sale of CO_2 emission allowances to the power sector

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[5] *See* PURA Docket Nos. 12-08-11, "Application of The United Illuminating Company for a Conservation Adjustment Mechanism," and 12-11-05, "Application of The Connecticut Light and Power Company for a Conservation Adjustment Mechanism," *available at* http://www.ct.gov/pura/docketsearch.

[6] *See* PURA Docket No. 13-03-02, "PURA/BETP Consideration of 2013-2015 Conservation and Load Management Plan," *available at* http://www.ct.gov/pura/docketsearch.

[7] Section 16 of Connecticut Public Act 13-298 also deleted language in Conn. Gen. Stat. § 16-245m(b) requiring PURA to approve the C&LM plan prior to making disbursements from the Energy Conservation and Load Management Fund required to carry out the C&LM plan.

through the Regional Greenhouse Gas Initiative (RGGI), revenues from the ISO-New England Forward Capacity Market (FCM), and revenues from the sale of Class III Renewable Energy Credits.[8] In recent years, the total of these revenue sources has amounted to approximately $100 million annually, with approximately $80 million derived from revenues provided by CL&P's ratepayers and approximately $20 million derived from revenues provided by UI's ratepaying customers.

Additionally, Conn. Gen. Stat. § 16-245m(d), as amended by Public Act 13-298, provides for PURA to ensure that additional revenues required to fund the approved C&LM budget are "provided through a fully reconciling conservation adjustment mechanism for each electric company of not more than three mills per kilowatt hour of electricity sold to each end use customer of an electric distribution company during the three years of any Conservation and Load Management Plan [and] a fully reconciling conservation adjustment mechanism for each gas company of not more than the equivalent of four and six-tenth cents per hundred cubic feet during the three years of any Conservation and Load Management Plan."[9]

By statute and regulation, Connecticut has established a legal framework that supports expanded investments in the state's C&LM programs. In 2007, Public Act 07-242, *An Act Concerning Electricity and Energy Efficiency* (Conn. Gen. Stat. § 16a-3a), required the state to give priority to the procurement of energy capacity through efficiency measures, specifically stating that "resource needs shall first be met through all available energy efficiency and demand reduction resources that are cost-effective, reliable and feasible."[10] In 2008, Connecticut produced its first IRP for the procurement of energy resources to satisfy the energy and capacity requirements of the electricity sector. The 2008 IRP recommended a 25% increase in funding for electric energy efficiency programs in 2009, and continuing increases after that until ultimately achieving the all cost-effective level.[11] In 2009, the Energy Efficiency Board contracted with KEMA Consulting to conduct a new electric energy efficiency potential study for Connecticut. This study was completed in early 2010. The study found that the technical and total economic potential is 36% of base energy use, and total achievable potential (the achievable potential from all energy efficiency policies) is 31% of base energy use, with program achievable potential estimated to be 23% of base energy use and an additional 8% electric

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[8] As a participant in the Regional Greenhouse Gas Initiative (RGGI), Connecticut auctions CO_2 emission allowances to the power sector, and invests the majority of the proceeds (an average of $3.5 million annually) in the electric C&LM programs. The consumer benefits provided through energy efficiency programs—in the form of energy bill savings, demand-induced reductions in wholesale electricity prices, improved electric system reliability, and job creation—outweigh the minimal impact of the RGGI program on electricity prices.

[9] Conn. Gen. Stat. § 16a-245m, as amended by Public Act 13-298.

[10] Connecticut Public Act 07-242, Section 51, codified at Conn. Gen. Stat. § 16a-3a.

[11] The Brattle Group, Connecticut Light & Power, and The United Illuminating Company, "Integrated Resource Plan for Connecticut," (January 1, 2008), *available at* http://www.brattle.com/_documents/UploadLibrary/Upload656.pdf.

energy savings identifiable as achievable through building codes, new lighting standards, and naturally occurring conservation.[12]

In 2011, Public Act 11-80 created the new Department of Energy and Environmental Protection and 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."[13] These goals guide DEEP's exercise of its new authorities and responsibilities, including the periodic development and implementation of an IRP and the CES,[14] and the review and approval of the Plan. Public Act 11-80 also established a new weatherization goal, which mandates weatherization of 80% of the state's residential units by 2030.[15] The 2012 IRP, issued by DEEP on June 14, 2012, incorporated many of the findings of the 2010 KEMA potential study, and called for expanded funding for energy efficiency programs in order to mitigate an increase in electricity rates expected to occur after 2017. The 2012 IRP recommended that Connecticut capture all cost-effective efficiency that is cheaper than supply, as the most beneficial way to meet resource needs and reduce costs for consumers. The 2012 IRP concluded that by increasing the electric C&LM program budget to $206 million annually, Connecticut can cost-effectively achieve an annual savings of approximately 2% of electric consumption, "reducing energy consumption by 0.4% per year on net if the economy grows as expected."[16]

Consistent with the recommendations of the IRP, on July 19, 2012, DEEP issued a final determination on the 2012 electric C&LM plan, approving an expanded budget for electric efficiency and recommending that PURA establish a CAM to collect the revenues needed to fund the expanded budget. PURA subsequently opened Docket Nos. 12-08-11 and 12-11-05 to consider requests from the EDCs to establish such CAMs. Proceedings in those dockets were still pending when the EDCs and LDCs filed the 2013-2015 C&LM Plan in November 2012. As described in more detail below, the EDCs' plan included budgets for both base and expanded levels of funding. The LDCs' CAMs are currently recovering the revenues to support the Base Budget for natural gas programs.[17]

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[12] KEMA, "Connecticut Electric Residential, Commercial, and Industrial Energy Efficiency Potential Study," (April 2010), *available at* http://www.ctenergyinfo.com/CTElectricEEReport05032010FinalKEMAf2.doc.

[13] Connecticut Public Act 11-80, Section 1, codified at Conn. Gen. Stat. § 22a-2d(a).

[14] Conn. Gen. Stat. §§ 16-3a and 16a-3d, as amended by Connecticut Public Act 13-298.

[15] Conn. Gen. Stat. § 16-245m(d)(1), as amended by Connecticut Public Act 11-80.

[16] Connecticut Department of Energy and Environmental Protection, "2012 Integrated Resource Plan for Connecticut," (June 14, 2012), p. ii, *available at* http://www.ct.gov/deep/lib/deep/energy/irp/2012_irp.pdf.

[17] *See* PURA Docket No. 11-10-03RE01, "PURA Review of the Connecticut Energy Efficiency Fund; Gas Conservator and Load Management Plan for 2012 – Reconsideration" (directing that gas revenues to support additional gas program activity should be "held in abeyance . . . until there is a corresponding Expanded Electric Conservation Plan in place). Yankee interpreted "abeyance" to mean cease collection of funding in order to match expected conservation expenditures with expected revenues. Yankee requested, and PURA granted, that its CAM rates properly align revenues and spending, and returned the revenues intended for expanded gas conservation spending. *See also* PURA Docket No. 13-01-30, "PURA Annual Review of the Conservation Adjustment

Pursuant to Conn. Gen. Stat. § 16a-3d, as amended by Public Act 13-298, DEEP is required to prepare a Comprehensive Energy Strategy for the state once every three years, addressing all fuels and all sectors out to a 2050 planning horizon, incorporating the findings of the IRP and the C&LM plan, and including strategies to achieve measures that reduce demand for energy.[18] The 2013 CES, issued by DEEP on February 19, 2013, called for an expanded commitment to "all cost-effective" energy efficiency.[19] The CES estimated that by 2022, Connecticut homes and businesses could reduce energy use by up to approximately 20% and achieve net savings of $8 billion by funding electric efficiency at the "all cost-effective" level identified in the 2012 IRP, and by funding natural gas and fuel oil efficiency at approximately $120 million annually.[20]

Recent legislation, including legislation implementing the CES, has modified the sources and mechanisms for funding Connecticut's C&LM programs. Public Act 13-303, *An Act Concerning Connecticut's Clean Energy Goals*, amended the definition of Class III sources to provide that, after January 1, 2014, the ratepayer-supported C&LM programs will no longer be eligible to receive Class III renewable energy credits (RECs).[21] Public Act 13-247, the budget implementation legislation, granted the Commissioner discretion to allocate RGGI proceeds to CEFIA for efficiency measures through July 1, 2015, provided that at least $5 million in proceeds must be allocated to the EDCs for C&LM programs, on a pro-rated basis.[22] These additional RGGI proceeds that are allocated to CEFIA will in part support Commercial and Industrial financing programs that invest in energy efficiency. Public Act 13-298 directed the EDCs and LDCs to submit a combined electric and gas C&LM plan every three years beginning on November 1, 2012, including a "budget sufficient to fund all energy efficiency that is cost-effective or lower cost than acquisition of equivalent supply."[23]

Public Act 13-298 also provided for the recovery of additional revenues to support C&LM activity. Specifically, with respect to the electric C&LM budget, Section 16 of Public Act 13-298

Mechanism Reconciliation Including Sales and Cost Forecasts Filed by Connecticut Natural Gas, The Southern Connecticut Gas Company and Yankee Gas Services Company Credits" (approving CNG and SCG annual CAM rates, which were adjusted to "return the dollars held in abeyance"). Therefore, the LDCs' CAM rates are only recovering funds to support base conservation spending.

[18] Connecticut Public Act 13-298, Section 23, amending Conn. Gen. Stat. § 16a-3d.

[19] Connecticut Department of Energy and Environmental Protection, "2013 Comprehensive Energy Strategy for Connecticut," (February 19, 2013), (2013 CES), p. ii, *available at* http://www.ct.gov/deep/cwp/view.asp?a=4405&Q=500752&deepNav_GID=2121.

[20] Because no recent potential study has been completed in Connecticut for fuel oil, or for natural gas in the residential sector, these figures for natural gas and fuel oil efficiency funding were estimated by reference to gas and oil efficiency potential studies from Massachusetts and Vermont, and were included in the CES for illustrative purposes only. *Id*. at p. 5.

[21] Connecticut Public Act 13-303, Section 2, amending Conn. Gen. Stat. § 16-1(a)(44).

[22] Connecticut Public Act 13-247, "An Act Implementing Provisions of the State Budget for the Biennium Ending June 30, 2015 Concerning General Government," Section 131.

[23] Connecticut Public Act 13-298, Section 16, amending Conn. Gen. Stat. § 16-245m.

states that to the extent that the C&LM budget approved by DEEP exceeds the revenues collected pursuant to existing funding sources, PURA shall "ensure that the balance of revenues required to fund such budget is provided through a fully reconciling conservation adjustment mechanism of not more than three mills per kilowatt hour of electricity sold to each end use customer of an electric distribution company during the three years of any Conservation and Load Management Plan."[24] With respect to the gas C&LM budget, Section 16 of Public Act 13-298 further requires PURA to ensure that the revenues required to fund the C&LM budget approved by DEEP "are provided through a fully reconciling conservation adjustment mechanism for each gas company of not more than the equivalent of four and six-tenth cents per hundred cubic feet during the three years of any Conservation and Load Management Plan."[25] Similar to the current three mill charge assessed on retail electric end use, the Department interprets this to mean that the revenues from each of these new conservation adjustment mechanisms are dedicated to program spending, and approves the budgets based on that interpretation.

IV. APPROVED 2013-2015 C&LM PLAN BUDGETS

A. SUMMARY OF APPROVED BUDGETS

The Companies submitted their 2013-2015 C&LM Plan and Base Budgets to EEB and the DEEP on November 1, 2012. Subsequent to the November 1st filing, the EEB indicated it was dissatisfied with the level of energy savings reflected in the C&LM plan and budgets as submitted, and directed the Companies to revise that filing to increase energy savings. To comply with the EEB's directive, the Companies reallocated funds. In a filing dated February 25, 2013, the Companies submitted Revised Base and Expanded Budgets that addressed the reallocation of funds among the programs. Tr. 4/25/13, pp. 39. This decision addresses the Revised Base and Expanded Budgets submitted on February 25, 2013.

Based on the Department's review of the 2013-2015 C&LM Plan, as revised, and based on the record developed as part of the PURA C&LM Proceeding associated with the submittal of this Plan, the Commissioner approves, with conditions, the 2013-2015 C&LM Plan and associated budgets at the levels shown in the tables below. This approval is based in part on the Commissioner's determination that the Plan is consistent with Connecticut's 2013 CES and 2012 IRP.

In this Draft Decision, the Department has made modifications to some programs and has requested improvements to certain programs and in the way information is submitted to demonstrate equitable distribution of funds. These program modifications and requested

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[24] Connecticut Public Act 13-298, Section 16, amending Conn. Gen. Stat. § 16-245m.

[25] Connecticut Public Act 13-298, Section 16, amending Conn. Gen. Stat. § 16-245m.

improvements are discussed in the individual reviews contained in this Decision. In some cases, requested improvements will require action by the EDCs, LDCs and/or the EEB, either on an immediate basis or on a consolidated basis in the Annual Updates to the Plan, as specified in this Decision. The Annual Updates will be submitted no later than March 1 of the intervening years between three-year plans. The Commissioner's more significant requests for revisions and program modifications are identified in the Conditions of Approval table contained in the Compliance Schedule in this Decision.

In calculating the adjustments to these budget tables, the Department considered the gas Base Budgets and the electric Base Budgets in light of changes to the allocations of RGGI proceeds and the elimination in 2014 and 2015 of the eligibility of C&LM programs to be funded by Class III RECs. The total revenues from these sources as well as the existing conservation charge and the newly authorized additional conservation adjustment mechanism were considered in evaluating the proposed Expanded Budgets.

While the Expanded Budgets reflect the costs of achieving all energy efficiency that is cost-effective or lower cost than acquisition of equivalent supply, consistent with Conn. Gen. Stat. § 16a-3a (c), the Department believes that increasing funding to that level should be phased in to enable the companies to build the capacity to deliver that level of quality services. For that reason, and in the interest of ensuring significant increases in program funding in the near term, the budget approved by the Department in this Decision is consistent with a level of funding that can be supplied by the current $0.003 mill charge and an electric CAM of not more than the equivalent of three mills per kilowatt hour that Public Act 13-298 directs PURA to approve.

Specifically, to arrive at an approved budget, the Department reduced the spending level in the proposed Expanded Budgets by approximately one-third for most programs and has made further adjustments based on the analysis of each program, as identified in the specific program review sections of this Decision. If additional funding becomes available for efficiency programs, then the Department would revisit these allocations. Public Act 13-298 similarly directs PURA to fund gas conservation programs through a gas CAM of up to 0.046/ccf, though this Decision approves a gas budget that is the equivalent of $.042/ccf for 2013.

1. Table 1a. 2013 Approved C&LM Budget

2013 Approved C&LM Budgets					
2013 PROPOSED EXPANDED C&LM BUDGETS	**CL&P & UI Proposed Expanded Budget Total**	**Approved Expanded EDC Budget**	**Proposed LDC Expanded Budget Total**	**Approved Expanded LDC Budget**	**TOTAL Allowed EDC & LDC Budget**
RESIDENTIAL					
Residential Retail Products	$ 15,295,280	$ 19,000,000	$ -	$ -	$ 19,000,000
Appliance Rebate Program	$ 550,000	$ -	$ -	$ -	$ -
Total - Consumer Products	**$ 15,845,280**	**$ 19,000,000**	**$ -**	**$ -**	**$ 19,000,000**
Residential New Construction	$ 2,122,595	$ 1,800,000	$ 2,342,566	$ 2,342,566	$ 4,142,566
Home Energy Solutions*	$ 26,644,903	$ 13,989,001	$ 11,290,161	$ 16,290,161	$ 30,279,162
HES potential allocation*		$ 8,900,000			$ 8,900,000
HES Income Eligible	$ 23,411,439	$ 22,037,060	$ 7,979,598	$ 7,979,598	$ 30,016,658
Res. Behavior/Engagement	$ 1,100,000	$ 1,000,000	$ -	$ -	$ 1,000,000
Water Heating	$ -	$ -	$ 149,945	$ 149,945	$ 149,945
Subtotal Residential	**$ 69,124,217**	**$ 66,726,061**	**$ 21,762,270**	**$ 26,762,270**	**$ 93,488,331**
COMMERCIAL & INDUSTRIAL					
C&I LOST OPPORTUNITY					
Energy Conscious Blueprint	$ 13,244,680	$ 12,300,000	$ 4,988,311	$ 4,988,311	$ 17,288,311
Total - Lost Opportunity	**$ 13,244,680**	**$ 12,300,000**	**$ 4,988,311**	**$ 4,988,311**	**$ 17,288,311**
C&I LARGE RETROFIT					
Energy Opportunities	$ 43,010,231	$ 38,500,000	$ 3,287,500	$ 3,287,500	$ 41,787,500
O&M (Services, RetroCx, BSC)	$ 6,569,558	$ 6,500,000	$ 1,297,500	$ 1,297,500	$ 7,797,500
PRIME	$ 951,625	$ 800,000	$ -	$ -	$ 800,000
Total - C&I Large Retrofit	**$ 50,531,414**	**$ 45,800,000**	**$ 4,585,000**	**$ 4,585,000**	**$ 50,385,000**
Small Business	$ 27,354,354	$ 22,500,000	$ 402,000	$ 402,000	$ 22,902,000
Subtotal C&I	**$ 91,130,448**	**$ 80,600,000**	**$ 9,975,311**	**$ 9,975,311**	**$ 90,575,311**
OTHER - EDUCATION *					
SLC/Museum Partners	$ 2,602,165	$ 960,000	$ 450,000	**$ 240,000**	**$ 1,200,000**
EE Communities/Behavior Pilot	$ 2,513,581	$ 1,720,000	$ 150,000	**$ 430,000**	**$ 2,150,000**
K-8 Education	$ 1,001,825	$ 800,000	**$ -**	**$ 200,000**	**$ 1,000,000**
Science Center	$ 208,000	$ 166,400	**$ -**	**$ 41,600**	**$ 208,000**
Subtotal Education	**$ 6,325,571**	**$ 3,646,400**	**$ 600,000**	**$ 911,600**	**$ 4,558,000**
OTHER - PROGRAMS/REQUIREMENTS					
Institute for Sustainable Energy	$ 560,000	$ 448,000	**$ -**	**$ 112,000**	**$ 560,000**
ESPC Project Manager-LBE	$ 144,000	$ 115,200	**$ -**	**$ 28,800**	**$ 144,000**
Residential Loan Program	$ 1,033,400	$ 972,734	$ 300,000	$ 300,000	$ 1,272,734
C&I Loan Program	$ 2,915,350	$ 1,780,350	$ 225,000	$ 225,000	$ 2,005,350
C&LM Loan Defaults	$ 190,000	$ 140,000	$ 225,000	$ 225,000	$ 365,000
C&I Self Funding	$ -	$ 5,000,000	$ -	$ -	$ 5,000,000
Subtotal Programs/Requirements	**$ 4,842,750**	**$ 8,456,284**	**$ 750,000**	**$ 890,800**	**$ 9,347,084**
OTHER - LOAD MANAGEMENT					
ISO Load Response	$ 3,500,000	$ 3,500,000	$ -	$ -	$ 3,500,000
Subtotal Load Management	**$ 3,500,000**	**$ 3,500,000**	**$ -**	**$ -**	**$ 3,500,000**
OTHER - RENEWABLES & RD&D					
RD&D	$ 725,000	$ 575,000	$ 150,000	$ 150,000	$ 725,000
Subtotal Renewables & RD&D	**$ 725,000**	**$ 575,000**	**$ 150,000**	**$ 150,000**	**$ 725,000**
OTHER - ADMINISTRATIVE & PLANNING					
Administration	$ 2,129,395	$ 1,603,510	$ 191,000	**$ 400,878**	**$ 2,004,388**
Marketing Plan	$ 750,000	$ 2,380,000	$ 225,000	**$ 595,000**	**$ 2,975,000**
Planning	$ 1,203,721	$ 960,000	$ 229,500	**$ 240,000**	**$ 1,200,000**
Evaluation Studies	$ 3,493,000	$ 4,000,000	$ 1,507,000	**$ 1,000,000**	**$ 5,000,000**
Evaluation Consultant	$ -	$ 200,000	**$ -**	**$ 50,000**	**$ 250,000**
Information Technology	$ 2,092,500	$ 1,600,000	$ 180,000	**$ 400,000**	**$ 2,000,000**
EEB Consultants	$ 850,000	$ 640,000	$ 74,250	**$ 160,000**	**$ 800,000**
Performance Management Fee	$ 9,265,830	$ 8,721,875	$ 1,778,504	$ 2,021,428	$ 10,743,303
Admin/Planning Expenditures	**$ 19,784,446**	**$ 20,105,386**	**$ 4,185,254**	**$ 4,867,306**	**$ 24,972,691**
TOTAL	**$ 195,432,432**	**$ 183,609,130**	**$ 37,422,835**	**$ 43,557,287**	**$ 227,166,417**

* Potential funds for HES pending results of HES Evaluation and Innovation process.

2. Table 1b. 2014 Approved C&LM Budget

2014 DEEP Approved C&LM Budgets					
2014 PROPOSED EXPANDED C&LM BUDGETS	**CL&P & UI Proposed Expanded Budget Total**	**Approved Expanded EDC Budget**	**Proposed LDC Expanded Budget Total**	**Approved Expanded LDC Budget**	**TOTAL Allowed EDC & LDC Budget**
RESIDENTIAL					
Residential Retail Products	$ 19,989,159	$ 19,000,000	$ -	$ -	$ 19,000,000
Appliance Rebate Program	$ 1,775,000	$ -	$ -	$ -	$ -
Total - Consumer Products	**$ 21,764,159**	**$ 19,000,000**	**$ -**	**$ -**	**$ 19,000,000**
Residential New Construction	$ 2,105,413	$ 1,800,000	$ 1,453,285	$ 1,453,285	$ 3,253,285
Home Energy Solutions*	$ 30,663,102	$ 14,248,497	$ 13,060,165	$ 18,060,165	$ 32,308,662
HES potential allocation*		$ 3,200,000			$ 3,200,000
HES Income Eligible	$ 29,599,593	$ 21,964,522	$ 8,440,758	$ 8,440,758	$ 30,405,280
Res. Behavior/Engagement	$ 4,000,000	$ 3,000,000	$ -	$ -	$ 3,000,000
Water Heating	$ -	$ -	$ 167,461	$ 167,461	$ 167,461
Subtotal Residential	**$ 88,132,267**	**$ 63,213,019**	**$ 23,121,669**	**$ 28,121,669**	**$ 91,334,688**
COMMERCIAL & INDUSTRIAL					
C&I LOST OPPORTUNITY					
Energy Conscious Blueprint	$ 15,382,255	$ 12,300,000	$ 6,374,415	$ 6,374,415	$ 18,674,415
Total - Lost Opportunity	**$ 15,382,255**	**$ 12,300,000**	**$ 6,374,415**	**$ 6,374,415**	**$ 18,674,415**
C&I LARGE RETROFIT					
Energy Opportunities	$ 57,829,395	$ 38,500,000	$ 4,241,000	$ 4,241,000	$ 42,741,000
O&M (Services, RetroCx, BSC)	$ 8,819,113	$ 6,500,000	$ 1,661,000	$ 1,661,000	$ 8,161,000
PRIME	$ 1,266,625	$ 800,000	$ -	$ -	$ 800,000
Total - C&I Large Retrofit	**$ 67,915,133**	**$ 45,800,000**	**$ 5,902,000**	**$ 5,902,000**	**$ 51,702,000**
Small Business	$ 37,574,868	$ 22,500,000	$ 515,000	$ 515,000	$ 23,015,000
Subtotal C&I	**$ 120,872,256**	**$ 80,600,000**	**$ 12,791,415**	**$ 12,791,415**	**$ 93,391,415**
OTHER - EDUCATION *					
SLC/Museum Partners	$ 1,143,633	$ 2,080,000	$ 450,000	$ 520,000	**$ 2,600,000**
EE Communities/Behavior Pilot	$ 2,416,000	$ 1,720,000	$ 150,000	$ 430,000	**$ 2,150,000**
K-8 Education	$ 1,001,825	$ 800,000	$ -	$ 200,000	**$ 1,000,000**
Science Center	$ -	$ -	**$ -**	$ -	**$ -**
Subtotal Education	**$ 4,561,458**	**$ 4,600,000**	**$ 600,000**	**$ 1,150,000**	**$ 5,750,000**
OTHER - PROGRAMS/REQUIREMENTS					
Institute for Sustainable Energy	$ 560,000	$ 448,000	$ -	$ 112,000	**$ 560,000**
ESPC Project Manager-LBE	$ 144,000	$ 115,200	$ -	$ 28,800	**$ 144,000**
Residential Loan Program	$ 2,133,400	$ 1,583,100	$ 319,000	$ 319,000	$ 1,902,100
C&I Loan Program	$ 2,915,350	$ 1,780,350	$ 239,000	$ 239,000	$ 2,019,350
C&LM Loan Defaults	$ 200,000	$ 140,000	$ 239,000	$ 239,000	$ 379,000
C&I Self Funding	$ -	$ 5,000,000	$ -	$ -	$ 5,000,000
Subtotal Programs/Requirements	**$ 5,952,750**	**$ 9,066,650**	**$ 797,000**	**$ 937,800**	**$ 10,004,450**
OTHER - LOAD MANAGEMENT					
ISO Load Response	$ 3,500,000	$ 3,500,000	$ -	$ -	$ 3,500,000
Subtotal Load Management	**$ 3,500,000**	**$ 3,500,000**	**$ -**	**$ -**	**$ 3,500,000**
OTHER - RENEWABLES & RD&D					
RD&D	$ 850,000	$ 575,000	$ 159,000	$ 159,000	$ 734,000
Subtotal Renewables & RD&D	**$ 850,000**	**$ 575,000**	**$ 159,000**	**$ 159,000**	**$ 734,000**
OTHER - ADMINISTRATIVE & PLANNING					
Administration	$ 2,179,395	$ 1,603,510	$ 197,300	$ 400,878	**$ 2,004,388**
Marketing Plan	$ 750,000	$ 2,440,000	$ 300,000	$ 610,000	**$ 3,050,000**
Planning	$ 1,228,721	$ 960,000	$ 240,000	$ 240,000	**$ 1,200,000**
Evaluation Studies	$ 3,493,000	$ 4,800,000	$ 1,507,000	$ 1,200,000	**$ 6,000,000**
Evaluation Consultant	$ -	$ 200,000	$ -	$ 50,000	**$ 250,000**
Information Technology	$ 2,092,500	$ 1,600,000	$ 180,000	$ 400,000	**$ 2,000,000**
EEB Consultants	$ 850,000	$ 580,000	$ 74,250	$ 145,000	**$ 725,000**
Performance Management Fee	$ 11,680,617	$ 8,667,659	$ 1,994,669	$ 2,252,000	$ 10,919,659
Admin/Planning Expenditures	**$ 22,274,233**	**$ 20,851,169**	**$ 4,493,219**	**$ 5,297,878**	**$ 26,149,047**
TOTAL	**$ 246,142,964**	**$ 182,405,839**	**$ 41,962,303**	**$ 48,457,762**	**$ 230,863,600**

* Potential funds for HES pending results of HES Evaluation and Innovation process.

3. Table 1c. 2015 Approved C&LM Budget

2015 DEEP Approved C&LM Budgets					
2015 PROPOSED EXPANDED C&LM BUDGETS	**CL&P & UI Proposed Expanded Budget Total**	**Approved Expanded EDC Budget**	**Proposed LDC Expanded Budget Total**	**Approved Expanded LDC Budget**	**TOTAL Allowed EDC & LDC Budget**
RESIDENTIAL					
Residential Retail Products	$ 23,745,003	$ 19,000,000	$ -	$ -	$ 19,000,000
Appliance Rebate Program	$ 2,260,000	$ -	$ -	$ -	$ -
Total - Consumer Products	**$ 26,005,003**	**$ 19,000,000**	**$ -**	**$ -**	**$ 19,000,000**
Residential New Construction	$ 2,628,021	$ 1,800,000	$ 1,622,285	$ 1,622,285	$ 3,422,285
Home Energy Solutions	$ 38,310,132	$ 14,166,361	$ 14,732,058	$ 19,732,058	$ 33,898,419
HES potential allocation*		$ 4,000,000			$ 4,000,000
HES Income Eligible	$ 36,666,768	$ 22,295,400	$ 8,206,241	$ 8,206,241	$ 30,501,641
Res. Behavior/Engagement	$ 6,270,000	$ 3,000,000	$ -	$ -	$ 3,000,000
Water Heating	$ -	$ -	$ 186,461	$ 186,461	$ 186,461
Subtotal Residential	**$ 109,879,924**	**$ 64,261,761**	**$ 24,747,045**	**$ 29,747,045**	**$ 94,008,806**
COMMERCIAL & INDUSTRIAL					
C&I LOST OPPORTUNITY					
Energy Conscious Blueprint	$ 15,681,897	$ 12,300,000	$ 6,916,415	$ 6,916,415	$ 19,216,415
Total - Lost Opportunity	**$ 15,681,897**	**$ 12,300,000**	**$ 6,916,415**	**$ 6,916,415**	**$ 19,216,415**
C&I LARGE RETROFIT					
Energy Opportunities	$ 72,982,885	$ 38,500,000	$ 4,655,000	$ 4,655,000	$ 43,155,000
O&M (Services, RetroCx, BSC)	$ 10,920,324	$ 6,500,000	$ 1,857,000	$ 1,857,000	$ 8,357,000
PRIME	$ 1,566,625	$ 800,000	$ -	$ -	$ 800,000
Total - C&I Large Retrofit	**$ 85,469,834**	**$ 45,800,000**	**$ 6,512,000**	**$ 6,512,000**	**$ 52,312,000**
Small Business	$ 49,547,888	$ 22,500,000	$ 563,000	$ 563,000	$ 23,063,000
Subtotal C&I	**$ 150,699,619**	**$ 80,600,000**	**$ 13,991,415**	**$ 13,991,415**	**$ 94,591,415**
OTHER - EDUCATION *					
SLC/Museum Partners	$ 1,293,633	$ 984,000	$ 450,000	$ 246,000	**$ 1,230,000**
EE Communities/Behavior Pilot	$ 2,416,000	$ 1,720,000	$ 150,000	$ 430,000	**$ 2,150,000**
K-8 Education	$ 1,001,825	$ 800,000	$ -	$ 200,000	**$ 1,000,000**
Science Center	$ -	$ -	**$ -**	**$ -**	**$ -**
Subtotal Education	**$ 4,711,458**	**$ 3,504,000**	**$ 600,000**	**$ 876,000**	**$ 4,380,000**
OTHER - PROGRAMS/REQUIREMENTS					
Institute for Sustainable Energy	$ 560,000	$ 448,000	$ -	$ 112,000	**$ 560,000**
ESPC Project Manager-LBE	$ 144,000	$ 115,200	$ -	$ 28,800	**$ 144,000**
Residential Loan Program	$ 3,183,400	$ 1,935,681	$ 345,000	$ 345,000	$ 2,280,681
C&I Loan Program	$ 2,915,350	$ 1,780,350	$ 259,000	$ 259,000	$ 2,039,350
C&LM Loan Defaults	$ 225,000	$ 140,000	$ 259,000	$ 259,000	$ 399,000
C&I Self Funding	$ -	$ 5,000,000	$ -	$ -	$ 5,000,000
Subtotal Programs/Requirements	**$ 7,027,750**	**$ 9,419,231**	**$ 863,000**	**$ 1,003,800**	**$ 10,423,031**
OTHER - LOAD MANAGEMENT					
ISO Load Response	$ 3,500,000	$ 3,500,000	$ -	$ -	$ 3,500,000
Subtotal Load Management	**$ 3,500,000**	**$ 3,500,000**	**$ -**	**$ -**	**$ 3,500,000**
OTHER - RENEWABLES & RD&D					
RD&D	$ 975,000	$ 575,000	$ 172,000	$ 172,000	$ 747,000
Subtotal Renewables & RD&D	**$ 975,000**	**$ 575,000**	**$ 172,000**	**$ 172,000**	**$ 747,000**
OTHER - ADMINISTRATIVE & PLANNING					
Administration	$ 2,329,395	$ 1,603,510	$ 197,300	$ 400,878	**$ 2,004,388**
Marketing Plan	$ 750,000	$ 2,440,000	$ 300,000	$ 610,000	**$ 3,050,000**
Planning	$ 1,108,721	$ 960,000	$ 240,000	$ 240,000	**$ 1,200,000**
Evaluation Studies	$ 3,493,000	$ 5,600,000	$ 1,507,000	$ 1,400,000	**$ 7,000,000**
Evaluation Consultant	$ -	$ 200,000	$ -	$ 50,000	**$ 250,000**
Information Technology	$ 2,092,500	$ 1,600,000	$ 180,000	$ 400,000	**$ 2,000,000**
EEB Consultants	$ 850,000	$ 580,000	$ 74,250	$ 145,000	**$ 725,000**
Performance Management Fee	$ 14,328,368	$ 8,712,431	$ 2,141,173	$ 2,397,000	$ 11,109,431
Admin/Planning Expenditures	**$ 24,951,984**	**$ 21,695,941**	**$ 4,639,723**	**$ 5,642,878**	**$ 27,338,819**
TOTAL	**$ 301,745,735**	**$ 183,555,933**	**$ 45,013,183**	**$ 51,433,138**	**$ 234,989,071**

* Potential funds for HES pending results of HES Evaluation and Innovation process.

B. DISPOSITION OF PREVIOUS ORDERS

As noted above, Public Act 13-298 assigned approval of the 2013-2015 C&LM Plan to the Department, and with it, the responsibility for all prior C&LM dockets affecting the electric and gas conservation and load management plans.[26] Accordingly, and to be consistent with the legislative intent of Public Act 13-298, DEEP rescinds: Order Nos. 3 and 4 in the Decision dated Aug. 8, 2012, in Docket No. 12-02-01; Order Nos. 1 and 6 in the Decision dated Jan. 4, 2012, in Docket No. 11-10-03; the Decision dated Sept. 19, 2012, in Docket No. 11-10-03RE01; Order No. 1 in the Decision dated January 6, 2011, in Docket No. 10-10-03; Order No. 4 in the Decision dated March 17, 2010, in Docket Nos. 09-10-03 and 08-10-02; Order No 8 in the Decision dated Sept. 24, 2008, in Docket No. 07-10-03RE01; Order No. 2 in the Decision dated June 7, 2006, in Docket No. 05-10-02; and, Order Nos. 7 and 15 in the Decision dated March 30, 2005, in Docket No. 04-11-01. The full text of each rescinded Order can be found in Appendix C to this Decision.

C. ALLOCATION OF PROGRAM COSTS BETWEEN ELECTRIC AND GAS BUDGETS

Over the past decade, average annual spending on natural gas conservation totaled less than $2 million while electric conservation budgets grew to exceed $100 million annually. As a result, EDC C&LM budgets have funded the majority of the costs of education programs and other initiatives that provide both electric and gas efficiency benefits. Public Act 13-298 combined the regulatory review process for electric and natural gas conservation programs and budgets and authorized a significant increase in spending on both natural gas and electric efficiency programs. This provides an opportunity to more equitably allocate educational and administrative program costs among the EDC and LDC budgets.

Based on the DEEP-approved budgets in this Decision, the ratio of electric to gas spending is approximately 80/20. Accordingly, f**or the programs that do not have direct savings, the Department's approved budgets have allocated these program costs on an 80/20 basis:**

- SLC/Museum Partnership
- EE Communities
- Institute for Sustainable Energy
- Project Manager – LBE
- Administration
- Marketing
- Planning Evaluation Studies
- Evaluation Consultant
- Information Technology
- EEB Consultants

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[26] *See* PURA Docket No. 12-02-01, "PURA Review of the Connecticut Energy Efficiency Fund's Electric Conservation and Load Management Plan for 2012," Final Decision, (August 8, 2012), p. 2, *available at* http://www.ct.gov/pura/docketsearch.

Not all programs are appropriate for a proportionate cost-sharing between electric and gas budgets. For those programs that produce direct savings and benefits to both the electric and gas systems where proportionate cost-sharing is appropriate, new analysis would need to be performed to determine the cost-effectiveness of such programs at new budget levels. **Therefore, the Department requires the Companies to revise and resubmit budgets for such programs in the 2014 Annual Update with proportionately adjusted budgets, or defaulting to an 80/20 basis between the EDC and the LDC budgets, for 2014 and 2015.** This reallocation may be revisited for the 2016-2019 planning period.[27] DEEP welcomes comments on this Draft Decision with respect to which programs with direct savings should be subject to proportionate cost-sharing between the gas and electric conservation budgets.

D. ELECTRIC C&LM BUDGET

The revised Base Budgets, as proposed by the EDCs, total $101,454,742, $102,275,794, and $102,838,953 for 2013, 2014, and 2015, respectively. The EDCs project that this "base" level of spending would provide annual electric savings of about 1% of overall consumption. The EDCs also proposed Expanded Budgets, totaling $195,432,433, $246,142,964, and $301,745,735 for 2013, 2014 and 2015, respectively. This Expanded Budget includes the Base Budget, plus an incremental increase to capture additional cost-effective efficiency. The EDCs project that the proposed Expanded Budget will provide annual electric savings of about 1.7%, 2.1%, and 2.5% of overall consumption in each of the three years covered by the Plan. Tables showing these revised Base and Expanded Budgets can be found in the appendices to this Decision and in the February 25, 2013 revision of the 2013-2015 C&LM Plan.

1. Legislative Changes to Electric C&LM Base Revenues

The legislative changes described above require the Department to restate the projected revenues for electric conservation programs provided in the 2013-2015 C&LM Plan. The following table, Table 2, shows the amount and source of revenues expected to support the EDCs' proposed electric budgets in the 2013-2015 C&LM Plan. As noted above, as the C&LM programs become ineligible for Class III REC payments after January 1, 2014, the expected base revenues for UI and CL&P will be reduced by $2.5 million in 2014 and $2.4 million in 2015. As the table shows, this change will bring CL&P's projected Base revenue totals closer to about $80 million annually and UI's projected annual Base revenue to approximately $20 million for the three-year plan period.

[27] DEEP recognizes that this reallocation may affect program cost effectiveness at an individual program level and will review any changes as part of the review of the Companies' Annual Updates.

Table 2

CL&P/UI C&LM Base Revenues as Adjusted by Connecticut Public Act 13-303 - 2013 through 2015									
	2013			2014			2015		
	CL&P	UI	Combined CL&P/UI	CL&P	UI	Combined CL&P/UI	CL&P	UI	Combined CL&P/UI
$.003/kWh	$65,989,742	$16,515,000	$82,504,742	$66,234,794	$16,641,000	$82,875,794	$66,268,952	$16,770,000	$83,038,952
ISO ODRs	$6,200,000	$1,700,000	$7,900,000	$6,400,000	$2,300,000	$8,700,000	$6,600,000	$2,800,000	$9,400,000
ISO Fwd. Cap.	$3,400,000	$0	$3,400,000	$3,200,000	$0	$3,200,000	$3,000,000	$0	$3,000,000
Class III RECs	$1,800,000	$850,000	$2,650,000	$0	$0	$0	$0	$0	$0
RGGI	$4,000,000	$1,000,000	$5,000,000	$4,000,000	$1,000,000	$5,000,000	$4,000,000	$1,000,000	$5,000,000
Total Rev.	**$81,389,742**	**$20,065,000**	**$101,454,742**	**$79,834,794**	**$19,941,000**	**$99,775,794**	**$79,868,952**	**$20,570,000**	**$100,438,952**

Source of data: 2013-2015 C&LM Plan, p. 321r. Note: For 2014 and 2015, revenue from Class III RECs was eliminated due to PA 13-303.

2. Spending Forward and Carryover

As a general matter, the practice of "spending forward"—i.e., the use of revenue from the subsequent year's expected electric C&LM collections to meet current year program activity—was approved for the EDCs in the PURA Decision dated August 8, 2012, in Docket No. 12-02-01. PURA capped forward spending for each EDC at 15% of their subsequent year's budget. Forward spending was allowed in 2012 to enable the EDCs to maintain the level of spending and program activity that had occurred in 2011, because 2011 program activity and spending exceeded projected 2012 base revenue collection. CL&P and UI believe PURA's ruling allows the EDCs to spend forward annually, if necessary, to meet the current years' program activity.[28] Tr. 4/24/13, pp. 41-56.

CL&P states that it spent $103.1 million in 2012, but did not need to spend forward because its 2012 collections were greater than expected and it had carryover funds from the previous year.[29] As a result, CL&P had $108.4 million available in 2012, resulting in a carryover of about $5.3 million ($108.4 minus $103.1). CL&P states that the $5.3 million in carryover funds is not reflected in its proposed 2013 Base or Expanded Budget and that allocation of these funds will be addressed by the EEB. Tr. 4/24/13, pp. 41-56.

UI needed to spend forward to sustain program activity in 2012, using approximately $750,000 of its 2013 revenues to do so. The 2013 budget does not reflect this $750,000 as available for 2013, as UI has managed its 2013 program spending to accommodate the amount it spent forward. However, based on current and projected program activity, UI will likely need to spend forward from 2014 to avoid program curtailment in the current year. Tr. 4/24/13, pp. 41-56.

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[28] The Department of Energy and Environmental Protection, "Approval of the 2012 Conservation and Load Management Plan" (February 17, 2012), pp. 5-8, *available at* http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/2b676422fd385d94852579a7005aa31c?OpenDocument.

[29] CL&P collected higher than forecasted ISO-NE capacity market payments and RGGI revenues.

Spending forward allows some flexibility to ensure that programs can more gradually adjust to changes in demand, without shutting down and restarting programs abruptly. This flexibility will be enhanced by the shift to a three-year budget and planning cycle, as authorized by Public Act 13-298. However, this practice should not be indiscriminately used by the EDCs. **Therefore, as a general policy, DEEP requires the Companies to detail any proposals to spend forward in the Annual Updates submitted to DEEP in the interim years of any three-year C&LM plan period. The EEB may monitor and approve any forward spending of 15% or less of the subsequent year's budget. Any forward spending above the 15% threshold amount may not proceed without prior authorization by DEEP, which authorization could be requested at any time by the EDCs and LDCs.** Regarding CL&P's $5.3 million carryover, the EEB may allocate the remaining balance to program spending.

3. Expanded Electric C&LM Budget

The EDCs' Expanded Budgets approved in this Decision exceed the base revenues currently collected by the EDCs. The Expanded Budget for electric C&LM programs submitted by the EDCs was designed to achieve the "all cost-effective" level of savings called for in the 2012 IRP—an average of 2.1% over the three years of the 2013-2015 C&LM Plan. The 2013-2015 C&LM Plan as a whole is cost-effective. The Plan is estimated to achieve the 2012 IRP savings level at an average annual cost of approximately $250 million, which is about 25% greater than that estimated in the 2012 IRP.

DEEP continues to be obligated, under Conn. Gen. Stat. § 16a-3a, to give priority to the procurement of energy capacity through efficiency, specifically stating that "resource needs shall first be met through all available energy efficiency and demand reduction resources that are cost-effective, reliable and feasible."[30] While there are additional cost-effective electric savings that could be procured through the 2013-2015 C&LM Plan, the Department considers it appropriate to approve a budget expansion that is lower than the "all cost-effective" level called for in the 2012 IRP for several reasons. When evaluated individually, certain residential programs, such as the Home Energy Solutions and New Construction programs, are not cost-effective, and need to be further evaluated before their budgets are increased to the expanded level called for in the Plan. Even for programs that are cost-effective, the Department believes that budgets should be ramped up gradually, in order to maintain the quality of the programs while expanding their scope.

The Expanded Budget approved by DEEP will not exceed the available base revenues plus the incremental three mills described in Public Act 13-298. The Department anticipates PURA will initiate a proceeding to satisfy the legislative requirements of Section 16 of Public Act 13-298.

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[30] Conn. Gen. Stat. § 16a-3a.

E. GAS C&LM BUDGET

Most of the programs in the 2013-2015 C&LM Plan provide efficiency savings for both electric and gas systems. Therefore, the gas C&LM budget proposed by the LDCs is closely tied to the budgets and savings targets of the electric C&LM budget. Unlike the electric C&LM revenues, which derive from multiple sources, the revenues to support the gas C&LM budget are derived solely from a CAM that is currently in place for the three LDCs.

The LDCs proposed a gas Base Budget to correspond to the electric Base Budget, which totals $24,118,792, $23,539,159, and $24,061,516, for 2013, 2014 and 2015, respectively (*see* Appendix B, Table 3). The LDCs project that this level of spending will provide annual gas savings of about 0.3% of firm sales during the 2013-2015 C&LM Plan. The LDCs also proposed an Expanded Budget, to correspond to the Expanded Budget for electric C&LM programs. The LDCs' proposed Expanded Budget totals $37,422,835, $41,962,303, and $45,038,883, for 2013, 2014 and 2015, respectively. The LDCs project that this level of spending will provide annual gas savings of about 0.6% of firm sales in each of the three years covered by the Plan.

To fund the gas Expanded Budget, DEEP anticipates that PURA will need to increase the level of funding for gas C&LM programs through the CAM, as authorized by Public Act 13-298, to ensure recovery of the funds necessary to implement the gas conservation plan being approved herein. Regarding the gas Expanded Budget, the Department used sales data submitted in this proceeding to estimate the total revenues that could be recovered through a CAM rate of $.046 per hundred cubic feet (ccf). As shown in Table 3 below, the amount of revenues needed to fund the gas C&LM Expanded Budget can be recovered through a CAM rate that is less than the $.046/ccf maximum set by Section 16 of Public Act 13-298.

Table 3
2013-2015 Yankee Gas/CNG/SCG Proposed Base Revenue

Estimated Natural Gas Revenues @ Forecasted Sales Sales (ccf)			
Utility	2013	2014	2015
Yankee	453,348,750	461,796,800	470,168,490
CNG	311,055,168	317,752,411	326,232,727
SCG	272,459,045	274,692,715	281,598,965
1 Total Sales	1,036,864,976	1,054,243,940	1,078,002,197
2 CAM/ccf	$0.046	$0.046	$0.046
3 Total Revenue @ $.046/ccf	$47,695,789	$48,495,221	$49,588,101
4 DEEP Approved Budget	$ 43,557,287	$ 48,457,762	$ 51,433,138
Source of data: Response to Interrogatory RA-5.			

F. COST EFFECTIVENESS

1. Cost-Effectiveness Methodology

By law, programs included in the 2013-2015 C&LM Plan 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, and that the value of those savings and benefits is greater than the costs of the programs.[31] The Companies submitted detailed programmatic cost and savings information for the Expanded Budget in Table B of the 2013-2015 C&LM Plan. The methodologies used to develop that cost and savings information are described in detail in Chapter 9 of the Plan.

There are several types of cost benefit tests that can be applied to C&LM programs. Different tests compare different categories of costs and benefits, such as costs and benefits to the electric or natural gas system, to the participant, and to society. The Electric System Test (EST) has been the primary test used by the former DPUC to evaluate the cost-effectiveness of all electric conservation programs. The EST includes a full range of electric system costs and benefits including: avoided energy costs, avoided generation, distribution and transmission capacity costs, and energy and capacity price suppression benefits. Similarly, the Gas System Test (GST) considers only costs and benefits to the natural gas system. The Total Resource Test (TRT) includes avoided fossil fuel costs, water savings, reduced maintenance costs to the participant and environmental benefits associated with reduced emissions. While the EST and GST do not include some of the participant or societal benefits included in the TRT, they also do not include the cost incurred by participants. The former DPUC approved low income programs, such as Home Energy Solutions-Income Eligible (HES-IE) that failed the EST as long as they passed the TRT.

Effective June 5, 2013, Section 16 of Public Act 13-298 made an important change to the cost-effectiveness screening requirements. The Act updated the definition of cost-effectiveness to include "all energy savings" produced by the C&LM programs. [32] This change will require DEEP to include oil heat efficiency savings in calculations of cost-effectiveness. For example, the current EST only includes electric system benefits and the GST only includes gas system benefits. Fossil fuel savings are included as a benefit in the TRT for electric conservation programs that fund oil measures. It would also be appropriate to include fossil savings as a benefit in the TRT for gas conservation programs. The gas programs, however, currently do not subsidize oil conservation measures. Therefore fossil fuel savings are not included in the TRT for gas conservation programs at this time.

Public Act 13-298 eliminated an annual cap of $500,000 on oil subsidies in the HES Program, eliminated a statutory maximum of $99 for the participant cost (i.e., "co-pay") of a HES

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[31] *See* Conn. Gen. Stat. §§ 16-245m(d)(3), (d)(4).

[32] *See* Connecticut Public Act 13-298, Section 16, amending Conn. Gen. Stat. § 16-245m.

assessment, and assigned to the EEB authority to set the HES assessment co-pay amount.[33] Oil conservation is currently subsidized in the HES and HES-IE programs by electric ratepayer support, and the 2013-2015 C&LM Plan proposed a level of electric ratepayer subsidy of HES heating measures for oil customers above $500,000. The EEB's further determination of the appropriate co-pay amount for different fuel types will affect the cost-benefit ratio for the HES program going forward.

Public Act 13-298 also amended Conn. Gen. Stat. § 16-245m(d)(3) to provide that "[i]f a program is determined to fail the cost-effectiveness test as part of the review process, it shall either be modified to meet the test or shall be terminated, unless it is integral to other programs that in combination are cost effective."[34]

In addition to these legislative changes, the results of the 2013 Avoided Energy Supply Cost Study suggest that there may be a need to reevaluate the assumptions about Demand Reduction Induced Price Effects (DRIPE) benefits currently used in the EST.[35] In cost-benefit analysis, DRIPE is included as a benefit of energy efficiency investments, together with avoided energy, capacity, distribution and transmission benefits. DRIPE are derived from both capacity and energy benefits of C&LM programs. DRIPE values are estimated from the impact of C&LM programs, which result in small incremental decreases in market prices of electricity and capacity applied to all units sold.[36]

As shown in Table 4, since 2009, DRIPE has increased in duration (number of years), is calculated to have a downward impact on prices, and now accounts for 28% of energy and capacity benefits. For program year 2008 (the first year that DRIPE was incorporated in the benefit-cost analysis), DRIPE capacity benefits were estimated to last four years, from 2010 to 2013, and DRIPE energy benefits were estimated to last four years, from 2008 to 2011. For the 2013-2015 C&LM Plan, DRIPE capacity benefits are estimated to be positive for 11 years (2016-2026) and DRIPE energy benefits are calculated to have an impact on electricity prices for 12 years (2013 to 2024).[37]

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[33] *See* Connecticut Public Act 13-298, Section 31, amending Conn. Gen. Stat. § 16a-46h.

[34] Connecticut Public Act 13-298, Section 16, amending Conn. Gen. Stat. § 16-245m(d)(3).

[35] Synapse Energy Economics, Inc. has developed DRIPE estimates as part of the regional Avoided Energy Supply Cost Study, which is updated every two years. Synapse last conducted a DRIPE study in 2011, and the study has been updated in 2013. Synapse Energy Economics, Inc., "Avoided Energy Supply Costs in New England: 2013 Report," (July 12, 2013) *available at* http://www.synapse-energy.com/Downloads/SynapseReport.2013-07.AESC.AESC-2013.13-029-Report.pdf.

[36] *See* 2013-2015 C&LM Plan, ch. 9.

[37] The Connecticut Light and Power Company and The United Illuminating Company, "Conservation and Load Management Plan 2008, (October 1, 2007), p. 220*, available at* http://energizect.com/sites/default/files/2008_CLM_FINAL.pdf; The Connecticut Light and Power Company and The United Illuminating Company, "2009 Conservation and Load Management Plan" (October 1, 2008), p. 235, *available at* http://energizect.com/sites/default/files/2009_CLM_FINAL.pdf, The Connecticut Light and Power Company, The United Illuminating Company, Yankee Gas Services Company, Connecticut Natural Gas

Table 4

DRIPE as a Proportion of Electric System Benefits (Combined CL&P & UI)					
Program Year	Energy Benefits	Capacity Benefits	DRIPE	DRIPE as % of Energy Benefits	DRIPE as % of Energy and Capacity Benefits
2007	0.00	0.00	0.00	0.0%	0.0%
2008	242,617	79,081	59,751	24.6%	18.6%
2009	225,056	54,815	55,443	24.6%	19.8%
2010	281,380	42,247	73,468	26.1%	22.7%
2011	198,688	21,375	49,317	24.8%	22.4%
2012	281,494	46,422	103,580	36.8%	31.6%
2013	242,779	38,054	86,579	35.7%	30.8%
2014	342,504	52,714	117,649	34.3%	29.8%
2015	435,826	68,498	143,823	33.0%	28.5%
Source: Annual C&LM Plans, Table B1					

In the PURA C&LM Proceeding, witnesses for the Companies and EEB testified that, in general, DRIPE estimates are affected by the timing of new capacity additions and retirements, elasticity of customer demand, and the percentage of capacity that load serving entities require from the Forward Capacity Market. However, witnesses offered no specific reason or empirical support to explain why DRIPE has risen substantially since 2008. Tr.4/25/13, pp. 313-332. The evidence record also indicates that while DRIPE benefits are calculated as part of a regional Avoided Cost study, New England states have the opportunity to apply these benefits differently. In Connecticut, DRIPE is applied as a regional benefit; however, Massachusetts applies Massachusetts-only DRIPE benefits. Tr.4/25/13, p. 329.

DEEP is reviewing the new avoided cost values in the recently released 2013 Avoided Energy Supply Cost study and considering how those values may impact the cost-effectiveness determinations of energy efficiency programs in Connecticut. Specifically, DEEP is reviewing the rationale for how the DRIPE benefits are applied in future C&LM program benefit-cost

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Corporation and The Southern Connecticut Gas Company, "2010 Electric and Natural Gas Conservation and Load Management Plan" (October 1, 2009), p. 284, *available at* http://energizect.com/sites/default/files/2010_CLM_FINAL.pdf, The Connecticut Light and Power Company, The United Illuminating Company, Yankee Gas Services Company, Connecticut Natural Gas Corporation and The Southern Connecticut Gas Company, "2011 Electric and Natural Gas Conservation and Load Management Plan" (October 1, 2010), p. 330; *available at* http://energizect.com/sites/default/files/2011_CLM_FINAL.pdf; The Connecticut Light and Power Company, The United Illuminating Company, Yankee Gas Services Company, Connecticut Natural Gas Corporation and The Southern Connecticut Gas Company, "2012 Electric and Natural Gas Conservation and Load Management Plan" (September 30, 2011), p. 327; *available at* http://energizect.com/sites/default/files/2012_CLM_FINAL.pdf; 2013-2015 C&LM Plan, p 307.

calculations, including the DRIPE methodology, the application of Connecticut-only versus regional benefits, and other issues that arise out of the 2013 Avoided Energy Supply Cost study and out of regional and national efforts to standardize cost-effectiveness evaluations.

Pending the outcome of that review, and in light of the legislative changes discussed in this section, the Department intends to consider revising its methodology for applying cost-effectiveness testing to the C&LM program to appropriately incorporate DRIPE and consider how it should value "all energy savings" as specified in Public Act 13-298. DEEP will initiate a public process to receive public input on the development and adoption of such methodology. While that process is under way, and for the purposes of the review of the 2013-2015 C&LM Plan, which was largely developed prior to the legislative changes, DEEP will continue to apply the Electric System Test as the primary test of cost-effectiveness of electric programs and the Gas System Test as the primary test of cost-effectiveness for the gas programs, with the exception of HES-IE, for which the Total Resource Test will remain the primary test. **The Department has, in accordance with statutory requirements, screened the programs to be implemented pursuant to the 2013-2015 C&LM Plan, and finds them to be cost-effective under the EST, GST, or TRT for the reasons described in more detail below.**

2. Natural Gas Plan Cost-Effectiveness

The cost-effectiveness screening filed in the 2013-2015 C&LM Plan indicates that, under the GST, the 2013-2015 C&LM Plan *as a whole* is cost effective from a gas ratepayer perspective.[38] The combined overall benefit-cost ratio for the three LDCs is 1.26 in 2013, 1.34 in 2014, and 1.39 in 2015 under the 2013-2015 C&LM Plan.

a) Cost Effectiveness of Gas Residential Programs

The individual programs in the 2013-2015 C&LM Plan are cost-effective under the GST with the exception of the Residential New Construction Program for SCG, which has a benefit-cost ratio of approximately 0.90 for 2013-2015. Although DEEP will allow the Residential New Construction Program to continue at the level proposed in the 2013 Expanded Budget, **the LDCs and EEB must propose program design changes to improve the cost-effectiveness of the Residential New Construction Program and submit recommendations to DEEP in accordance with the Compliance Schedule in this Decision.** DEEP will then review the revised SCG New Construction program for 2014 and 2015 and adjust the budget for those program years in accordance with the revised program's cost-effectiveness.

The LDCs also provided the benefit-cost ratios for each program using the TRT. In addition to the cost and benefits to the electric system test, the TRT includes the cost to the participant and water savings for some of the residential programs. While the TRT includes some water savings for residential programs, none are included for commercial and industrial (C&I)

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[38] *See* 2013-2015 C&LM Plan, pp. 98r-100r, Table B – 2013, 2014, and 2015 Comparison of Natural Gas Conservation Programs – Increased Savings Budget.

programs and no other participant or societal benefits are included in the TRT at this time. With the addition of participant costs and little or no additional benefits, most of the programs are not cost effective for gas customers using the TRT. The only programs that pass the TRT are HES and HES-IE. The only program that does better under the TRT than the GST is HES-IE.

b) Cost-Effectiveness of Gas C&I Programs

The 2013-2015 C&LM Plan represents a continued integration of gas and electric C&I programs. These programs are designed and implemented to reduce duplicative efforts and streamline services for customers. Programs are designed to include gas savings, and program participants also qualify to receive incentives for gas as well as electric measures. The O&M and Sustainable Energy Management programs educate and train C&I customers to manage efficiently all energy costs, including gas.

Expanding funding efficiency programs for Connecticut's C&I customers, particularly industrial customers, is consistent with the priorities of the 2013 CES. Natural gas accounts for 22% of energy expenditures for Connecticut industry. The 2013 CES also identified industrial customers (manufacturing, agriculture, and construction),[39] particularly manufacturing, as underserved in the C&LM programs.[40]

Integrating gas saving opportunities into CL&P programs to improve energy efficiency in industrial processes is a priority in the 2013-2015 C&LM Plan. This will improve industrial operations and have spillover economic benefits for the state. The industry sector generates the highest economic multiplier effect of all economic sectors; every dollar in manufacturing output generates an additional $1.35 in economic activity in other sectors of the Connecticut economy.[41] Although DEEP will not restrict or limit gas revenues to fund projects for commercial customers, we believe that the Companies should prioritize gas program dollars toward improving gas efficiency in specific industrial and manufacturing processes.

Gas system programs have a B/C ratio above one for the gas system test. However, the C&I gas programs generally have B/C ratios of slightly less than one for the total resource test.

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[39] The industry sector comprises manufacturing, agriculture and construction. Manufacturing accounts for 80% of Connecticut's Gross State Product in the industry sector. 2013 CES, p. 36.

[40] 2013 CES, p. 41

[41] *Id.* at pp. 36-37.

Table 5

			Cost Benefit Results			
			Combined Gas Companies			
	2013		2014		2015	
	Gas	Total	Gas	Total	Gas	Total
	System	Resource	System	Resource	System	Resource
	Test	Test	Test	Test	Test	Test
Energy Conscious Blueprint	1.36	0.98	1.41	1.02	1.47	1.06
Energy Opporunities	1.75	0.71	1.83	0.75	1.92	0.78
O&M	1.65	0.63	2.12	0.8	1.84	0.69
Small Business	1.9	0.79	1.98	0.83	2.07	0.86
All C&I	1.55	0.8	1.67	0.86	1.69	0.87

Source: 2013-2015 C&LM Plan, pp. 98r – 100r

The 2013-2015 C&LM Plan describes and itemizes the components of the electric and gas B/C tests.[42] According to the C&LM Plan, the cost and benefits for electric and gas Total Resource Tests are additive; to avoid double-counting of benefits, natural gas benefits and costs are not counted in Total Resource Test for the electric companies' programs. The Total Resource Test for electric programs includes savings from reduced maintenance costs associated with installations of new lighting and equipment. The electric Total Resource Test also includes environmental benefits from reduced emissions of NO_x, SO_x, CO_2 and mercury. In the case of gas programs, the Total Resource benefits add water savings, for residential programs only.[43] **The Department finds that the gas C&I programs are cost-effective, based on the results of the Gas System Test. The Companies should explain in their 2014 Annual Update whether gas Total Resource B/C measures below 1.0 point to any areas for gas C&I program improvements.**

3. Electric Plan Cost-Effectiveness

The information provided in Table B of the C&LM Plan indicates that the Plan *as a whole*—including funding for all programs at an expanded level—is cost effective from an electric ratepayer perspective. The 2013-2015 C&LM Plan includes a benefit-cost analysis of the electric conservation programs using both the EST and TRT. As noted above, the EST has been the primary test used by the former DPUC to evaluate the cost-effectiveness of all electric conservation programs, except HES-IE. The former DPUC has approved low income programs provided they pass the TRT. The overall benefit-cost ratio for the Expanded Plan is 1.7 using the TRT (or 1.9 using the EST) for CL&P and 2.1 (2.1 EST) for UI in 2013, 1.8 (2.1 EST) for CL&P and 2.0 (2.3 EST) for UI in 2014, and 1.7 (2.1 EST) for CL&P and 1.9 (2.4 EST) for UI in 2015. The

[42] 2013-2015 C&LM Plan, pp. 300-302.

[43] *Id.* at pp. 299-312.

overall annualized cost rate justifies an expansion of the C&LM effort, given that the 2013-2015 C&LM Plan is cost-effective and the cost is less than the acquisition of equivalent supply. Specifically, the annualized cost rate of the 2013-2015 C&LM Plan is 4.6 cents/kWh for CL&P and 4.3 cents/kWh for UI in 2013, and is 4.2 cents/kWh for CL&P and 3.9 cents/kWh in 2014, and is 4.4 cents/kWh for CL&P and 4.1 cents/kWh for UI in 2015.[44]

a) Cost-Effectiveness of Electric Residential Programs

Individually, the residential electric conservation programs are cost effective using the EST, with the following exceptions:[45]

- C&LP's Residential Behavior Program (not cost-effective in 2014),
- CL&P's Appliance Rebate Program (2013),
- CL&P's HES Program (2013, 2014, 2015 when oil costs are included);
- UI's HES Program (2013, 2014, when oil costs are included); and
- CL&P's and UI's HES-IE Program (2013, 2014, 2015).

Although the EDCs assert in Table B of the 2013-2015 C&LM Plan that HES is cost effective using the EST, a footnote indicates that oil spending was not included in the benefit cost analysis for the HES program.[46] When the benefit-cost ratio is recalculated with oil costs included, the ratio for the HES program drops to 0.9 for CL&P each year, and therefore is not cost effective using the EST. The results are similar for UI in 2013 and 2014, but the benefit cost ratio does become positive in 2015. **DEEP requires that all costs and benefits be included in the cost-effectiveness tests in all future submittals.** The HES program and HES-IE Program are not cost-effective under the EST because they include incentives for oil savings measures that are paid for by electric ratepayers. All of the programs, including HES and HES-IE, are cost effective using the TRT. The benefits of the oil savings in HES and HES-IE are included in the TRT, with the result that the HES and HES-IE programs have a positive benefit-cost ratio.

Having reviewed the programmatic cost and savings information the Department concludes that overall the Expanded Budget, including HES-IE, is cost-effective. This decision 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 TRT. The former DPUC has allowed oil subsidies to a limited extent in the HES program, but still required this program to be cost effective under the EST.[47]

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[44] *Id*. at pp. 38r-40r, Table B 2013, 2014, and 2015 – CL&P Comparison of Conservation Programs – Increased Savings Budget, and pp. 66r-68r, Table B 2013, 2014, and 2015 – UI Comparison of Conservation Programs.

[45] *Id*. at pp. 39r-40r, Table B 2014 and 2015 – CL&P Comparison of Conservation Programs – Increased Savings Budget.

[46] *Id.*

[47] As noted above, the treatment of oil savings in the cost effectiveness of HES could be changed as the Department updates its cost effectiveness methodology pursuant to Connecticut Public Act 13-298.

b) Cost-Effectiveness of Electric C&I Programs

As indicated in Tables 6 and 7 below, a comparison of Electric Test Benefit-Cost (B/C) ratios for C&I programs in the original 2012 Expanded Plan and the annual B/C ratios of the 2013-2015 C&LM Plan indicate a decline in cost-effectiveness in the revised estimates. For C&I programs as a whole, the average B/C ratio for the Plan has declined from 9% to 15% compared to the original 2012 Expanded Plan. In the case of UI, B/C ratios are projected to rise 7% to 13% in the 2013-2015 Plan, compared to the original 2012 Expanded Plan B/C estimates.

Table 6—CL&P
C&I Program B/C Ratios: Electric System Test
2012 Expanded Plan versus 2013-2015 C&LM Plans

CL&P				
	Original Expanded 2012[a]	2013-2015 Revised Expanded Plan 2013[b]	2013-2015 Revised Expanded Plan 2014[c]	2013-2015 Revised Expanded Plan 2015[d]
Energy Conscious Blueprint	3.2	2.9	2.9	3.1
Energy Opportunities	3.4	2.8	2.9	3
O&M Services	4.5	2.9	3.1	3.4
Prime	1.5	2.8	3	3.2
SBEA	3	2.6	2.8	2.9
Average	3.3	2.8	2.9	3
Percent difference from 2012 B/C Ratios		-15.15%	-12.12%	-9.09%
Average of 2013-2015 B/C ratios				2.9
Percent different b/n 2012 and average				
2013-2015 B/C ratios				-12%

[a] Original 2012 Expanded Plan, Table B, p. 354
[b] 2013-15 Revised Expanded Plan, Table B, p. 38r
[c] 2013-15 Revised Expanded Plan Table B, p. 39r
[d] 2013-15 Revised Expanded Plan, Table B, p. 40r

Table 7 UI C&I Program B/C Ratios: Electric System Test
2012 Expanded Plan versus 2013-2015 C&LM Plans

UI				
	Original Expanded 2012[a]	2013-2015 Revised Expanded Plan 2013[b]	2013-2015 Revised Expanded Plan 2014[c]	2013-2015 Revised Expanded Plan 2015[d]
Energy Conscious Blueprint	3.9	3.53	3.7	3.88
Energy Opportunities	3.39	3.34	3.36	3.15
O&M Services	1.64	2.85	3.12	3.18
Prime	1.36	1.24	1.9	2
SBEA	2.37	2.73	2.81	2.97
Average	2.96	3.17	3.29	3.31
Percent difference from 2012 B/C Ratios		7.09%	11.15%	11.82%
Average of 2013-2015 B/C ratios				3.26
Percent difference b/n 2012 and average 2013-2015 B/C ratios				10.00%

[a] Original 2012 Expanded Plan, Table B, p. 354
[b] 2013-15 Revised Expanded Plan, Table B, p. 66r
[c] 2013-15 Revised Expanded Plan Table B, p. 67r
[d] 2013-15 Revised Expanded Plan, Table B, p. 68r

According to CL&P, revisions in assumptions with regard to the timing of the Lead By Example program for state projects adversely affected the cost-effectiveness of C&I programs in the 2013-2015 C&LM Plan. Because 50% of customer incentives for state projects are funded with state bonds, an assumed slower roll-out of state projects in the 2013-2015 C&LM Plan is aligned with actual program experience in 2012. This slower pace of state projects results in higher cost rates, hence, lower B/C ratios for C&I programs in the 2013-2015 C&LM Plan, particularly for SBEA and EO projects incorporating performance contracts. Tr. 4/25/13, p. 383-384; CL&P LF-1, pp. 1 and 7. CL&P indicated that it is undertaking a higher percentage of comprehensive projects than anticipated in 2012. These projects produce deeper savings, but also involve greater up-front costs for the customer. Customer incentives are higher on comprehensive projects, up to 50% versus 40% on typical C&I projects, which tends to lower benefit-cost ratios. Tr., 4/25/13, p. 395, CL&P LF-1, pp. 1 and 7. In the case of UI, fewer state buildings are located in UI's service territory, so the impact of Lead by Example projects had little effect on UI C&I B/C ratios. Tr., 4/25/13, pp. 386.

The Companies indicated that building codes and changes in baseline assumptions have little effect on the revisions to the C&I B/C assumptions. Although revised building codes are scheduled to take effect in 2014, the impact on programs would be somewhat delayed because the current building code would still apply to buildings already in the permitting and construction pipeline. Tr., 4/25/13, pp. 398-399.

The Department has reviewed the savings and cost data and finds that the C&I programs remain cost-effective. CL&P has provided documentation that its lower B/C ratios are primarily the result of downward revisions in the number of Lead by Example projects and a higher

percentage of comprehensive projects than were initially projected in the 2012 Expanded Plan. The C&I program budgets and savings projections in the 2013-2015 Expanded Plan reflect a shift in priority toward "broader and deeper" energy savings through comprehensive energy retrofits, and promoting strategic energy management for C&I customers. As the Companies transition toward a "broader and deeper" strategy, the Department and the C&I Committee will monitor program costs with the expectation that greater program experience will lower unit costs of program delivery.

4. Overall Costs of the 2013-2015 Plan

The 2012 IRP recommended that Connecticut capture all cost-effective electric efficiency, which is a cheaper resource than supply, as the most beneficial way to meet resource needs of the electric system in a way that reduces costs for consumers. The 2012 IRP concluded that Connecticut can cost-effectively achieve an annual savings of approximately 2% of electric consumption—resulting in a 0.4% decline in the annual growth rate for energy consumption—by roughly doubling the C&LM program budget from $105 million to $206 million annually. At the $206 million budget level, the 2012 IRP concluded that annual energy savings for 2013 would reach 601 GWh (up from 224 GWh in the base case, an increase of about 168%), and that annual demand savings would reach 125 MW in the all cost-effective model (an increase of 331% above 29 MW in the Base case). The 2012 IRP also estimated that the cost of conservation would decline significantly in the years ahead as conservation spending increased. Specifically, the cost per kWh was estimated to decline 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 dropped from $3,414/kW to $1,115/kW, a reduction of $2,299/kW, or approximately 67%.

During the hearings and in their briefs in the PURA C&LM Proceeding, CL&P and UI explained why the costs are higher than envisioned in the 2012 IRP. The IRP's estimates of energy savings and incremental costs are based on the 2008 KEMA Potential Study, which in turn relies on dated information from 2007. The costs included in the 2012 IRP are based on programmatic investments, including costs that are not evaluated individually for cost-effectiveness, such as the costs associated with educational and marketing programs, and that are not reflected in the KEMA Potential Study.

The 2013-2015 C&LM Plan proposes to spend 25% more than the $206 million budget outlined in the 2012 IRP, while achieving a level of savings that is approximately 5% lower than the levels projected in the expanded efficiency scenario of the 2012 IRP.[48] In 2014, the average cost rate on a lifetime basis is 4.6 cents/kWh for CL&P and 4.0 cents/kWh for UI, compared to an average

[48] The annual budgets over the three year period average $247.7 million compared to $206 million in the IRP, an increase of 20%. At the same time, the average savings are approximately 5% lower: 573 GWh in the 2013-2015 Plan, as compared to 601 GWh in the 2012 IRP.

cost rate of 3.4 cents/kWh for both Companies, in the 2012 IRP. Demand savings are also lower than those projected in the IRP, resulting in higher costs on a $/kW basis.

Overall program costs in the 2013-2015 C&LM Plan are higher than those in the 2012 C&LM Plan. The costs of some programs have increased rather significantly. CL&P's HES Program increased from 4.2 cents/kWh in the 2012 C&LM Plan to approximately 5.9 cents/kWh in the 2013-2015 C&LM Plan. The cost of HES-IE has also increased: UI's cost for HES-IE jumps from 5.3 cents/kWh in the 2012 Plan to 11.8 in the 2013 Expanded Budget. The cost of CL&P's HES-IE is projected to be 9.4 cents/kWh in 2013.

Incremental spending increases also face challenges in delivering cost effective energy savings. The two new residential programs are very expensive. The Appliance Rebate program begins at 12.3 cents/kWh in 2013, although it declines to 9.5 cents in 2015. The Behavior Program appears to be even more expensive, at 13.4 cents/kWh in 2014 and 10.5 cents/kWh in 2015, although there is some clarity needed to reach a common understanding of what is or is not included in the Behavior Program cost rate. Understanding and addressing these cost factors is essential to preserving the quality and benefits of programs going forward.

Although the 2013-2015 C&LM programs are more expensive than estimated in the 2012 IRP, DEEP concludes that most programs remain very cost effective and the cost rates for most programs are reasonable, even though the energy savings outlined in the 2012 IRP will not be achieved at an annual cost of $206 million. For example, the costs of the C&I programs are low, averaging only 3.3 cents/kWh in 2013. Residential programs have historically been more expensive, and it is more difficult to increase residential programs while maintaining or increasing cost effectiveness. In the Plan, all programs have been ramped up on an equal basis including those that are the most expensive and those that subsidize oil conservation. The phase out of incandescent bulbs, higher efficiencies for appliance and improved building code standards all mean that a significant amount of residential conservation will occur in the years to come without the need for ratepayer subsidies. These events make it more costly to pursue incremental residential conservation through the utility programs and will place additional pressure on program planners to maintain costs and cost effectiveness going forward. **The EEB and the EDCs will need to be vigilant to improve the cost effectiveness of programs by shifting a higher share of the costs to participants through education, promoting new financing options, and implementing a shift to more performance contracting, all key elements called for in the 2012 IRP.**

G. DETERMINATION OF EQUITY IN FUNDING DISTRIBUTION

Pursuant to Conn. Gen. Stat. § 16-245ee, before approval of any C&LM plan submitted by the EEB, DEEP must determine that an equitable amount of the funds for C&LM programs are "deployed among small and large customers with a maximum average monthly peak demand of one hundred kilowatts in census tracts in which the median income is not more than sixty per

cent of the state median income."[49] This requirement is consistent with the 2013 Comprehensive Energy Strategy's focus on "increasing the participation of a broad set of ratepayers," including low-income residents.[50]

Based on its evaluation of available data, DEEP finds that the overall funding for C&LM programs has been equitably distributed by the EDCs among small and large customers with a maximum average monthly peak demand of at least 100 kW, and in communities identified by the Connecticut Department of Economic and Community Development (DECD) as distressed communities during 2011 and 2012.[51] DEEP's 2011-2012 Equitable Distribution Report (Appendix D) provides the evaluation of data from 2011 and 2012. As noted in this report, strong program participation by residential and C&I ratepayers is what drives the effectiveness of the EDC's C&LM programs. The EDCs' annual data for 2011 and 2012, especially data from UI, indicates an improving degree of success as a result of enhanced marketing efforts that target customers in more disadvantaged areas of the EDCs' respective service territories. In large part, a higher share of incentives appears to have been directed to DECD-identified distressed municipalities.

In previous years, data was collected on a town-by-town basis. However, Conn. Gen. Stat. § 16-245ee refers to the collection of data on a census tract basis. As a practical solution to the lack of census tract-specific data available at this time, distressed municipalities are used as proxy for the targeted census tracts. Going forward, **DEEP directs the Companies to track relevant data on a census tract basis or report to DEEP what steps they are taking to comply with the requirement to track data on this basis.**[52]

For the EDCs combined, DEEP's analysis finds that in 2011, 30.30% ($24.2M) of the total 3 Mill Collections were contributed by customers in the distressed municipalities to support collected C&LM programs. Of the total 2011 C&LM Plan incentives, 31.17% ($26.8M) were received by customers in those municipalities participating in C&LM programs. In 2012, corresponding figures were 30.39% ($24.1M) and 30.53% ($22.56M) of the totals for 3 Mill Collections and Incentives, respectively. Therefore, at this combined overall level, DEEP finds that the EDCs' C&LM program disbursements in the distressed communities more than matched ratepayer contributions in 2011 and virtually matched such contributions in 2012 by percentage.

On a company basis, CL&P accrued 26.97% ($17.1M) of total 3 Mill Collections in 2011 from customers in the distressed municipalities, and paid out 26.81% ($18.4M) of total Incentives to

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[49] Connecticut Public Act 13-298, Section 17, amending Conn. Gen. Stat. § 16-245ee.

[50] 2013 CES, pp. 1-2.

[51] Conn. Gen. Stat. § 32-9p.

[52] *See* Department of Energy and Environmental Protection, "Report to the Joint Legislative Committee on Energy and Technology Regarding the Equitable Distribution of Conservation and Renewable Energy Funds in Connecticut," (July 9, 2012), *available at* http://www.ct.gov/deep/lib/deep/energy/2012_deep_equitable_distribution_of_funds_report.pdf.

customers in those communities. In 2012, CL&P collected 27.05% ($17.1M) of total 3 Mill Collections from such customers, and distributed 24.69% ($14.5M) of total Incentives to customers in disadvantaged communities. While CL&P achieved virtual parity in 2011, it fell short of parity the following year. As for UI, it collected 43.15% ($7.1M) in 2011 3 Mill Collections from ratepayers in distressed municipalities, and at 48.44% ($8.4M), disbursed considerably more in Incentives by percentage to customers in those communities. In 2012, UI continued to achieve significantly greater participation in disadvantaged communities, as it collected 43.65% ($6.96M) of total contributions from customers in distressed municipalities, but expended over 53.0% ($8.08M) of total C&LM program funding to those communities that year.

To further improve future analysis of the equitable distribution of C&LM funding, DEEP requires that:

On or before June 1, 2014, and thereafter annually on March 1, each EDC shall submit to DEEP and the EEB a table containing data for the prior calendar year that include, on a census tract basis or, if not available by census tract, on a town-by-town basis, the amount of conservation program funds assessed and the amount of incentives expended, disaggregated as small or large customers according to the 100 kW peak demand threshold, and further disaggregated by customer class (i.e., residential and C&I).

Additionally, on or before June 1, 2014, and thereafter annually on March 1, each EDC shall submit to DEEP and the EEB a table further disaggregating the residential data component for small customers as follows: Specifically, the residential data component for small customers shall be disaggregated by the HES and HES-IE programs, and identify the total number of projects participating in each program, and disaggregate those project numbers by housing stock (i.e., single family, multi-family (2-4 units), and multi-family (>4 units)). The EDCs shall work together to produce a table format that presents the data from each of the companies in a consistent manner.

V. C&LM PROGRAM REVIEW AND MODIFICATIONS

A. PERFORMANCE INCENTIVES

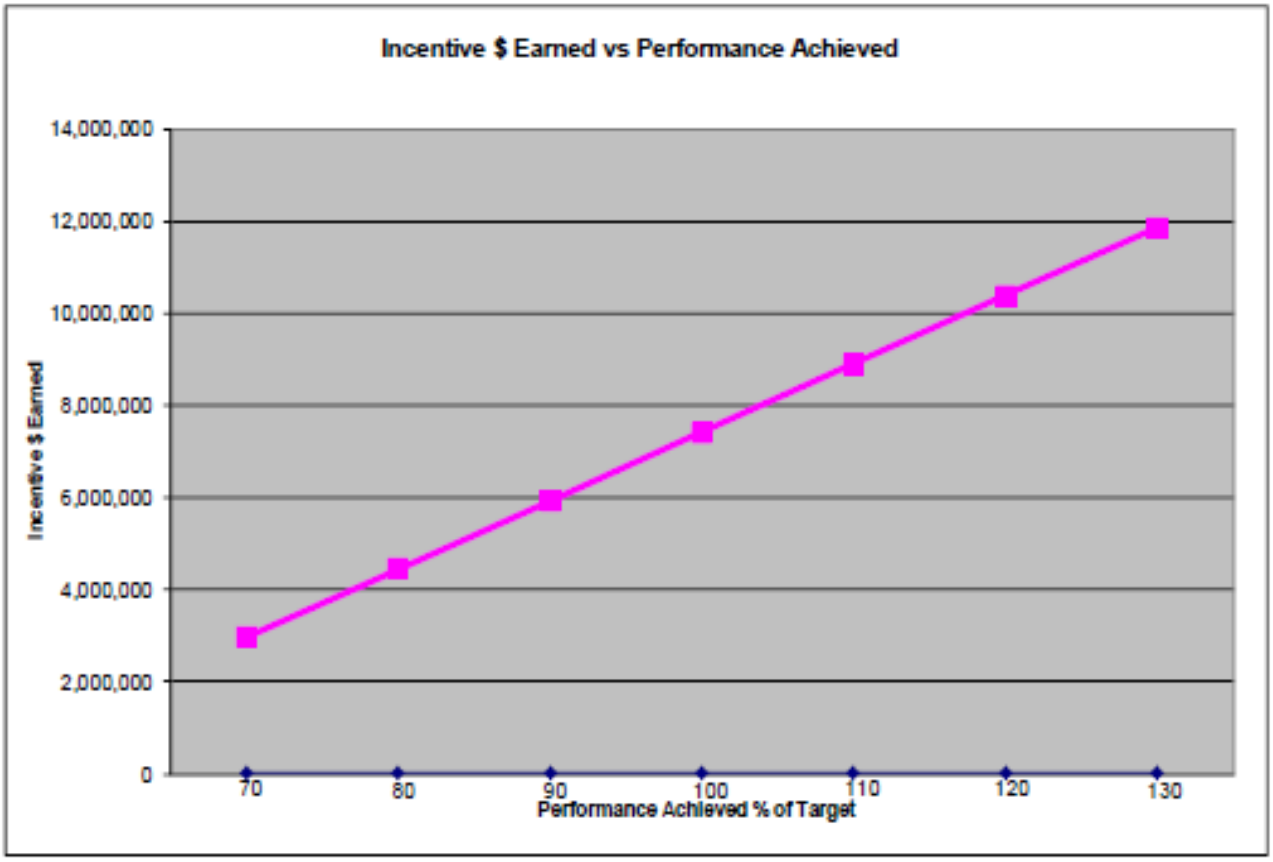
1. EDC Performance Incentives

As administrators of Connecticut's C&LM programs, CL&P and UI are encouraging their customers to reduce energy usage, which is driving down demand for the very commodity their business models are built upon. While revenues have been "decoupled" for UI, and Connecticut law would require that such occur for CL&P in its next rate case, this mechanism only holds the EDC harmless from revenue loss.[53] The authority for establishing performance

[53] *See* Connecticut Public Act 13-298, Section 11, amending Conn. Gen. Stat. § 16-19tt.

incentives has existed since 1991, providing for a real incentive for the EDCs to promote increased conservation and valuable demand reductions.[54] The performance incentives used in the C&LM programs are implemented on a sliding scale that allows for increased rewards with improved program performance. Performance is measured in terms of percentage attainment of the savings goals in an annual C&LM plan. The performance incentive scale is shown in a graphical form, Table 8, below:

Table 8



As can be seen, the Companies begin earning the minimum incentives when they achieve at least 70% of the program's savings goals. If they achieve 130% or more of a goal, they receive the maximum incentive approved by the EEB and the Department. The Companies' achievement of the savings goals is defined by the program savings document (PSD). This PSD contains engineering calculations for free ridership, realization rates, and technically achievable savings. Using these calculations, the Companies predict actual program savings and calculate

[54] *See* Conn. Gen. Stat. § 16a-49 (allowing EDCs and LDCs to earn a rate of return between 1 and 5 percentage points on "prudently incurred" C&LM expenditures approved by PURA and successfully implemented by the company that are either included in the company's rate base or treated as operating costs).

the annual performance incentive earned by calculating the ratio of actual savings to the set goals to generate the percentage of performance.

The OCC filed testimony in the PURA C&LM Proceeding asserting that performance incentives are a valuable and necessary piece of successful conservation programs in the US. The OCC also asserts that the incentives should continue to be determined on an annual basis. However, the OCC believes that the current C&LM performance incentive should be restructured to start when the companies meet a minimum of 80% of the annual goal. Additionally, the OCC further recommends that a penalty should be adopted for poor performance. The OCC recommends that this penalty be structured so that if a utility achieves less than 50% of the target, a penalty equal to 5% of program spending would be assessed. The OCC also believes that potential spending forward incentive impacts should be addressed in the C&LM plan.

The Department agrees that the incentives should only begin when the companies reach a minimum of 80% of goals. This practice is supported by an ACEEE report that found that the average minimum threshold for earning an incentive among states utilizing a threshold is 81%.[55] The Department also agrees that there should be no performance incentive awarded for achieving 50-79% of goals. **The Companies shall therefore adjust the performance incentives tables in the Plan to reflect the revisions described above.**

Additionally, DEEP understands the OCC's recommendation to implement a 5% penalty for performance that is less than 50% of goal. Although this is supported by a National Action Plan for Energy Efficiency (NAPEE) 2007 report[56], which contends that a performance incentive mechanism without a penalty sends mixed signals to the utilities regarding the importance of the mechanism, the department cannot recommend any penalty be implemented based on a lack of legal authority to do so. Conn. Gen. Stat. 16a-49 provides that PURA "shall allow" the gas or electric public service company to earn a rate of return, with no mention of penalizing companies for non-performance. Connecticut's 2013 Comprehensive Energy Strategy "recommends that PURA implement additional performance-based incentives such as authorizing a higher return on equity for success in meeting the State's public policy goals including expanded energy efficiency. Such a 'bonus' should be tied to quantitatively-tracked results in achieving success in restoring service after storm-related outages, a range of efficiency goals, grid reliability, electricity costs, and perhaps other factors. This approach would allow each company to earn a performance-based rate of return based on defined performance

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[55] Hayes, Sara *et al.*, American Council for an Energy-Efficient Economy, "Carrots for Utilities: Providing Financial Returns for Utility Investments in Energy Efficiency," (January 2011), p. 14, *available at* http://www.dpuc.state.ct.us/dockcurr.nsf/8e6fc37a54110e3e852576190052b64d/393859e1291d2b0b85257b600057e48f/$FILE/U111%20(ACEEE%20report).pdf.

[56] National Action Plan for Energy Efficiency, "Aligning Utility Incentives with Investment in Energy Efficiency," (November 2007), p. 6-12, *available at* http://www.dpuc.state.ct.us/dockcurr.nsf/8e6fc37a54110e3e852576190052b64d/393859e1291d2b0b85257b600057e48f/$FILE/NAPEE_Aligning%20Utility%20Incentives%20with%20Investment%20in%20Energy%20Efficiency.pdf.

targets thereby creating substantial incentives to improve results. Similarly, poor performance should result in a reduction in the base-line rate of return."[57]

The Department agrees that annual budgets are estimated projections and therefore not exact. Actual annual energy efficiency budgets change due to many variables such as rate based revenue fluctuations, Forward Capacity Market Auction prices, and the companies' ability to "spend forward" revenues anticipated for the next year's budget to meet energy efficiency program demand. **Therefore, DEEP requires that performance incentives be calculated based upon the actual expenditures and the savings achieved, which are to be scaled proportionally from the projected budget and savings goals to the actual budget at year's end. These calculations shall be done when year-end actual data is available and submitted in an Annual Update to the Department no later than March 1st of interim years.** The Department welcomes comments on whether penalties for poor performance are appropriate and legally supported.

DEEP finds that the performance incentives proposed in the Plan could be adjusted. The purpose of such an adjustment is to move beyond savings estimated by program to focus on ensuring that estimated energy savings translate to deeper measures, for example in insulation and equipment installation. DEEP directs the Companies to work with the EEB to establish for 2014 and 2015 specific, readily measurable performance goals for measures installation, such as for insulation, high efficiency equipment, and appliances, to incent the Companies to aggressively target investment in deeper savings measures needed to achieve the State's long-term energy savings goals.

2. LDC Performance Incentives

In the 2013-2015 C&LM Plan, the LDCs propose to implement a performance incentive mechanism for the successful achievement of natural gas savings goals. In support of their request, the LDCs cite Conn. Gen. Stat. § 16a-49, which allows gas and electric companies to earn a performance incentive to encourage the utilities to implement cost effective conservation measures. The LDCs also assert that similar incentives are used in other states and that performance based-financial incentives for exemplary program delivery are invaluable in delivering successful programs. Performance incentives are consistent with Connecticut's 2013 Comprehensive Energy Strategy, which states that performance incentives, or a performance-based return on equity, give utilities an even stronger incentive to work with customers to boost efficiency and save them money. LDC Response to Interrogatory EN-1.

The LDCs propose a performance mechanism that mirrors the performance mechanism currently applied to the EDCs for administration of electric efficiency programs. Specifically, the maximum performance incentive earned could be equivalent to 5% of the gas C&LM budget, excluding EEB costs, assessment costs, and the performance incentive, if the LDCs achieved

[57] 2013 CES, pp. 105-106

100% of the savings/performance targets identified in the Plan. A higher incentive would be earned if the LDCs surpass the 100% goal, up to 8% of budget at 130% of goal. Conversely a lower incentive would be earned if the LDC does not achieve the 100% target, down to 2% at 70% of goal. There are currently no penalties for poor performance in the proposed Plan. The actual incentive proposed to be earned would be calculated utilizing actual expenditures, excluding the costs noted above, and would be determined by the performance achieved in each of the incentive metrics identified in the matrices developed by the LDCs and EEB, and included in the Plan. These matrices are similar to the EDCs' revenues-earned matrices and are included in the 2013, 2014, and 2015 gas companies' Increased Savings Tables. The goals proposed by the LDCs include "lifetime ccf savings" and "managing program costs" with each of these goals being equally weighted at fifty percent. Yankee Gas Response to Interrogatory EN-1.[58]

The performance mechanism proposed by the LDCs would operate in the same manner as that currently used by the EDCs, which mechanism was subjected to a thorough review in year 2000.[59] Given that Conn. Gen. Stat. § 16a-49 allows the LDCs to earn a performance incentive to encourage implementation of cost effective conservation measures and programs and that the gas and electric programs are now combined in an integrated C&LM Plan, DEEP finds it reasonable to implement a performance incentive for the LDCs. DEEP also notes that the CES supports the use of performance incentives to achieve Connecticut's efficiency goals.

DEEP finds that the performance incentives proposed in the Plan must be adjusted to be more aggressive. The purpose of such an adjustment is focus on installation of deeper measures, for example in insulation and equipment installation, and installation of gas appliances. DEEP directs the Companies to work with the EEB to establish for 2014 and 2015 specific, readily measurable performance goals for measures installation, such as for insulation and high efficiency equipment, to incent the Companies to aggressively target investment in deeper savings measures needed to achieve the State's long-term energy savings goals. For example, the LDCs shall set a goal of at least 50% for the percentage of all residential HES assessments (which demonstrate a need for additional attic insulation) that result in the installation of additional insulation, and the LDCs shall set a goal of at least 35% for the percentage of all oil-to-gas conversions that install high efficiency equipment. These percentages should reflect the context of the Joint Natural Gas Infrastructure Expansion Plan being implemented in Connecticut.[60] These goals shall inform the overall performance incentive, with the effect of modifying the incentive received based on achievement of these

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[58] 2013-2015 C&LM Plan, pp. 115r-117r, 132r-134r, 148r-150r, 419r-421r, 436r-438r, and 452r-454r.

[59] *See* PURA Docket No. 99-09-30, "DPUC of the Connecticut Light and Power Company's Conservation and Load Management Programs for 2000," Final Decision, (May 10, 2000), pp. 44-50.

[60] *See* Yankee Gas Services Company, The Southern Connecticut Gas Company and Connecticut Natural Gas Corporation, "Joint Natural Gas Infrastructure Expansion Plan," (June 14, 2013), *available at* http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/4539e0715c01bd9a85257b8d005af2a2?OpenDocument.

specific goals. Performance incentives for this plan must be coordinated with the Joint Natural Gas Infrastructure Expansion Plan.

B. RESIDENTIAL PROGRAMS

1. Retail Products

The Department believes that a significant increase in the budget for the Residential Retail Products program for 2014 and 2015 is warranted. Specifically, the budget needs to be increased to allow for a concerted educational and marketing effort to catalyze investment in efficient lighting, especially solid state lighting, more commonly referred to as light emitting diodes (LEDs). With enough progress in market movement, ratepayer support for residential lighting might be able to be reduced in 2016, **allowing ratepayer support that has been provided for residential lighting for over a decade to be shifted to incent adoption of other measures.**

The Residential Retail Products Program (Retail Program) is designed to increase consumer awareness, acceptance, and the market share of ENERGY STAR® lighting, appliances and consumer electronics. While the program addresses multiple end use products, about 90% of the budget has been, and continues to be, dedicated to residential lighting.[61] Incentives are offered through three different vehicles, including upstream payments to manufacturers, instant coupons, and mail-in rebates.

In 2012, the EEB conducted an evaluation to determine the penetration of efficient lighting among residential customers (Lighting Evaluation).[62] The Lighting Evaluation found that significant progress has been made in transforming the residential lighting market, such that of the 84.3 million residential sockets statewide, about 40% are now filled with efficient lighting products, up from 30% in 2009.[63] The socket saturation of CFLs is 27%, pin-based CFL tubes is 11%, and LED penetration is 2%, up from less than 1% in 2009. The Lighting Evaluation confirmed that there is increased awareness about CFLs and LEDs and a high degree of satisfaction with these products among Connecticut residential consumers. These findings suggest a significant change from previous studies in which consumers were much less aware of efficient lighting technologies and were dissatisfied with the performance of these products, primarily CFLs.[64]

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[61] 2013-2015 C&LM Plan, p. 157.

[62] NMR Group, Inc., "Connecticut Efficient Lighting Saturation and Market Assessment," (October 2, 2012), *available at* http://www.ctenergyinfo.com/FINAL%20EISA%20Lighting%20Saturation%20and%20Market%20Assessment%20Report%20100212_pdf.pdf.

[63] A 2009 lighting evaluation concluded there were 46 sockets per home. Id. at pp. II-VI.

[64] *Id*.

The Lighting Evaluation also found that although CFL saturation has increased since 2009, the increase seems small when compared to the 12.6 million program-supported CFLs sold in Connecticut between 2009 and 2011.[65] Evidence from the Lighting Evaluation and a similar report conducted in Massachusetts[66] suggests that households are increasingly buying CFLs to replace CFLs. While this limits the opportunity to increase socket saturation, it also prevents backsliding.[67]

The Lighting Evaluation also found that dining room lighting provides significant remaining potential for the installation of efficient lighting, as consumers appear dissatisfied with dimmable CFLs, and, consumers find dimmable LEDs to be superior to dimmable CFLs. The Lighting Evaluation concluded that the EDCs should maintain retail-based incentives on standard CFLs and LEDs, providing incentives for standard CFLs[68] and A-line CFLs[69] to reduce the shelf price to about $3.50 per bulb, or between $5.25 and $6 for specialty CFLs; and providing incentives for LEDs that reduce the shelf price to $12-15. The Evaluation also recommended increased educational efforts about the diversity of efficient lighting options, the impact of Federal lighting standards, and the meaning of terms like lumens, cool white, warm white, etc., utilizing visual and "hands on" displays. The Lighting Evaluation included the following recommendations:

The Lighting Evaluation demonstrates that significant progress has been made since the EDCs began pursuing lighting efficiency in the early 1990s.[70] The question is whether the market has transformed to a point where efficient lighting no longer needs ratepayer support to sustain and grow market share or whether that support should be reduced or eliminated. A factor in answering that question will be the patterns in consumer purchases as federal lighting standards begin to phase out some common incandescent products.

The EDCs acknowledge that the lighting market is rapidly evolving, citing increased consumer awareness and acceptance of CFLs and the array of products available throughout the marketplace. Demand for LEDs is expanding and prices for these products are in flux, with many prices of LED products quickly declining, and adoption of LED technology becoming more mainstream. At the same time, lighting products manufactured to comply with recently implemented Federal standards under the Energy Independence and Security Act of 2007

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65 Lighting sales data was taken from previous annual C&LM plans.

66 NMR Group, Inc., "Results of the Massachusetts Onsite Compact Fluorescent Lamp Surveys,"(October 23, 2012), *available at* http://www.ma-eeac.org/Docs/8.1_EMV%20Page/2012/2012%20Residential%20Studies/Lighting%20Onsite%20Report%2010.23.12%20Final.pdf.

67 *Id.* at p. IV.

68 Standard CFLs refer to common spiral CFLs typically used to replace 60, 75 and 100 watt incandescent bulbs.

69 An A-line bulb is a covered spiral CFL that looks like an incandescent light bulb.

70 In the 1990s the EDCs supported efficient lighting through their individual conservation programs. Since year 2000 the retail lighting has been a mainstay of the Energy Efficiency Fund programs.

(EISA)[71] are becoming available; their impact on consumers remains to be seen.[72] Tr. 5/1/13, pp. 603-613.

Because the Lighting Evaluation was finalized less than 30 days before the November 1, 2012 filing of the 2013-2015 C&LM Plan, the EDCs were unable to adjust this program to include the evaluation's recommendations in the proposed Retail Products Program. The 2013-2015 Plan has not significantly changed the way lighting will be marketed, and as a result, this program will continue to rely heavily on NCPs for the retail sale of efficient lighting. The EDCs are concerned that reducing or eliminating incentives could drive prices for CFLs above that of minimally EISA-compliant products and prove detrimental to market transformation should consumers opt for minimally-compliant bulbs or revert to the use of incandescent lighting. The EDCs support the need for additional education, noting that consumers are likely intimidated by the number of lighting products and the range of available technologies in the marketplace. Id.

In the past, there was greater assurance that estimated savings were valid because CFLs replaced incandescent products. The Lighting Evaluation reveals that that assumption is no longer valid. Of particular concern is the Lighting Evaluation's finding that socket penetration has not significantly increased despite the sale of 12.6 million program supported CFLs over the last three years. This finding suggests that much of the lighting being discounted under the program is being purchased to replace existing CFLs (i.e., repeat sales).[73] This finding requires the **EDCs to better target the market segment that has not yet replaced incandescent bulbs throughout their home.**

Regarding claimed savings and socket penetration, the Department reviewed the 2012 Massachusetts Home Energy Services Impact Evaluation (Mass. HES Evaluation).[74] The Department believes this evaluation can guide its determination in this matter because, similar to Connecticut, the Massachusetts HES program provides the direct installation of CFLs in residential applications.[75] Given Connecticut's penetration rate for efficient lighting these

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71 Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 Stat. 1492 (2007).

72 2013-2015 C&LM Plan, p. 167.

73 The concept of repeat sales calls into question whether free ridership for this program is understated and claimed savings overstated. This in turn calls into question the accuracy of CL&P's proposed CAM lost revenue adjustment which relies on claimed program savings to calculate revenue recovery. Therefore, values used in the PSD must be examined as well.

74 The Cadmus Group, Inc., "Massachusetts Home Energy Services Impact Evaluation," (August 2012), (Mass. HES Evaluation). a*vailable at* http://www.ma-eeac.org/Docs/8.1_EMV%20Page/2012/2012%20Residential%20Studies/MA%20RRLI%20-%20Home%20Energy%20Services%20%202011%20Impact%20Evaluation%20Report_FINAL_04SEPT2012.pdf.

75 Mass. HES Evaluation, pp. 25-26 (internal citations omitted) Regarding claimed savings and socket penetration, the Department reviewed the 2012 Massachusetts Home Energy Services Impact Evaluation (Mass. HES Evaluation). The Department believes this evaluation can guide its determination in this matter because, similar to Connecticut, the Massachusetts HES program provides the direct installation of CFLs in residential applications.

findings raise further concerns about continuing to support NCPs and Lighting Fairs that are likely fueling repeat sales. To maximize savings, Connecticut consumers are likely installing CFLs in high use sockets and fixtures, leaving low-use opportunities such as closets, as some of the remaining potential. These possibilities are not reflected in the program presented to the Department.

Providing incentives upstream through Negotiated Cooperative Promotions (NCP) enables consumers to pay a discounted price at the point-of-purchase. By eliminating redemption costs, NCPs simplify the consumer's purchasing experience while reducing overall program costs. Additionally, by applying the incentives at the wholesale rather than the retail level, the Companies influence a large portion of the total market by impacting the greatest number of purchase decisions. While the EDCs will provide more incentives for LEDs as the technology evolves, the 2013-2015 Plan does not propose significant programmatic changes and proposes to continue to focus on the CFL market using NCPs to promote this technology.[76] Tr. 5/1/13, pp. 600-613. The Department directs the EDCs to update the Plan to focus on the LED market, which would also be more reflective of the actual progress the EDCs are making in advancing LED market share.

The EDCs use NCPs to buy down the cost of common CFLs sold in multi-packs to a price of between $0.75 and $1.00 per bulb. The Lighting Evaluation suggests that discounts to this level may not be necessary to sustain the market for common CFLs.[77] Point-of-purchase signage at home improvement stores appears to indicate the Fund supports a $3 buy down for each four-pack of common CFLs.[78] Eliminating the discount would result in a price that is within the range suggested in the Lighting Evaluation as acceptable. The Department shares the concerns expressed by the EDCs regarding the impact that the reduction or elimination of incentives for common CFLS could have on the market. However, these concerns must be market-tested.

Education should also be increased at the point-of-purchase during high-traffic periods and at as many locations as possible. Although this effort will initially be done by the EDCs and their support staff (e.g., lighting vendors), the staff at retail outlets must also be trained so as to achieve economies of scale. Regarding adoption of EISA compliant bulbs, if Connecticut accelerates its efforts to educate consumers and increase adoption of efficient lighting, especially LEDs, adoption of the least-efficient EISA-compliant bulbs may be avoided.

The EDCs plan to continue providing incentives for specialty CFLs, such as dimmable bulbs. The Lighting Evaluation finds that consumers are dissatisfied with the performance of dimmable

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[76] *Id.*

[77] The Department notes that the Lighting Evaluation did not conduct a pricing study, but recommends that one be considered.

[78] As an example, a four-pack with a retail price of $4.47 includes signage that states "$7.47 – price without discount" and a four-pack with a retail price of $6.96 includes signage that states "$9.96 – price without discount."

CFLs, but are much more satisfied with the dimming capabilities of LEDs. In addition, LEDs provide similar savings as CFLS, longer life expectancy, fewer environmental concerns (i.e. mercury content) and the cost of this technology is declining. **The Department concludes the EDCs should discontinue providing incentives for dimmable CFLs and should instead use these funds, as well as funds available due to the reduction in CFL incentives, to support expansion of the LED market.** The Department is not suggesting the EDCs discontinue incentives for other specialty CFLs, such as three-way bulbs.

The residential efficient lighting market is rapidly expanding and evolving. At the same time consumers are becoming more aware of the value of energy efficiency and ways to achieve efficiency in their personal lives. As a global, long-term goal, the EEB and EDCs must leverage these circumstances to expand this market with an eye toward reducing then eliminating ratepayer support for these technologies. **Therefore, the EDCs must work with the Evaluation Committee to develop a strategy to monitor this market, with the possible prudent use of carefully scoped evaluations, to achieve this transition.**

The Department supports the continued use of incentives to affect transformation of the residential lighting market in the near term. However, past marketing strategies may not be targeting the market segment that is *unlikely* to invest in CFLs. **Therefore, the EDCs must examine this matter and submit recommendations for program delivery in 2014 and 2015.** The Department supports expanding education and targeting marketing to better inform consumers about their lighting options. Expanding education should increase awareness and in turn drive consumer demand for these products, providing additional opportunities to reduce incentives. Lighting Fairs may need to shift their focus from CFLs to LEDs and education as their primary mission.

While the Department is approving an expanded budget for Retail Products, **for 2014 and 2015, the EDCs must demonstrate that the Retail Products Program has been modified to address changing market conditions. Such demonstration shall be submitted in accordance with the Compliance Schedule, included in this Decision. The Retail Products Program for 2014 and 2015 must be redesigned by the EDCs and EEB to address the findings and recommendations contained in the Lighting Evaluation as well as the directives in this Decision.**

For 2014 and 2015, the performance incentive for the lighting component of the Retail Products Program must be revised to move from the broad estimate of energy savings to another, more targeted metric, such as overall saturation of efficient lighting, market share, etc. If the EDCs do not properly address this issue they will not earn a performance incentive for this program in those years.

2. Appliance Rebate Program

CL&P proposes to implement an appliance rebate program under its Expanded Budget. In addition to rebates, this program would target replacement and retirement of older units. UI

did not propose an appliance rebate program under its Expanded Budget. Table 9 demonstrates CL&P's proposed budget for this program.[79] Tr. 5/1/13, pp. 638-640.

Table 9

Appliance Rebate Program - Revised February 25, 2013									
	2013			2014			2015		
	CL&P	UI	Combined CL&P/UI	CL&P	UI	Combined CL&P/UI	CL&P	UI	Combined CL&P/UI
Base	-	-	-	-	-	-	-	-	-
Expanded	$550,000	-	$550,000	$1,775,000	-	$1,775,000	$2,260,000	-	$2,260,000
Source of data: Table A1, pp. 24r and 320r									

The proposed Appliance Rebate Program is very expensive with an estimated lifetime cost of 12.3 cents/kWh in 2013, and is not cost effective in 2013. The cost declines to 9.6 cents/kWh for the remaining two years and becomes marginally cost effective at that time.[80]

The EDCs do not generally offer rebates on appliances (defined as refrigerators, clothes washers, freezers and dishwashers) because the market has evolved to a point where widespread incentives are no longer necessary. There are limited energy savings between baseline appliances and a more efficient model. However, opportunities remain to encourage the early replacement of older, inefficient appliances, primarily refrigerators, which the utilities address through rebates offered under the HES program.[81]

Massachusetts offers a program similar to Connecticut's HES, the Massachusetts Home Energy Services program. Similar to Connecticut, Massachusetts offers rebates for replacement of older, inefficient refrigerators. A 2012 evaluation of the Massachusetts Home Energy Services program found savings of 714 kWh per replacement of eligible older refrigerators.[82] The Department believes the results of the Massachusetts study suggest that opportunities remain to achieve significant energy savings by targeting certain appliances, specifically older working refrigerators and second refrigerators, which are generally older, less efficient models. The best way to target these appliances is through the HES program where vendors can isolate and identify these opportunities. As a result, the Department has determined that appliance rebates should continue under HES, but that the proposed Appliance Rebate Program is not approved. The Department finds that the proposed program is very expensive on a cent/kWh basis compared to other conservation options and is only marginally cost effective. Further, the market for these products has evolved to a point where widespread incentives to those already purchasing new appliances are no longer necessary.

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79 2013-2015 C&LM Plan, pp. 24r and 320r.

80 *Id*. at pp. 38r-40r.

81 *Id*.

82 Mass. HES Evaluation, p. 25.

Although the Department does not accept the proposal, DEEP finds that there may be lower cost opportunities to target other appliances or electronics, an area of electric growth that has not traditionally been the focus of the Fund**. Additionally, the increase in gas conversion activity provides cost effective opportunities to target replacement of electric dryers and water heaters with gas models, or in the case of water heating, solar thermal systems. Based on the foregoing the Department directs the EDCs and the LDCs to explore the cost effectiveness of offering rebates for other appliances, electronics, and replacement of electric appliances in gas conversion application, then present a revised Appliance Rebate Program for 2014, in accordance with the Compliance Schedule in this Decision, if cost-effective opportunities are identified.** As noted above, HES vendors are uniquely positioned to target the early retirement of inefficient appliances. To maximize this opportunity, DEEP believes the HES program should include prescriptive appliance incentives for HES and Home performance with Energy Star vendor. Additionally, EEC metrics should include aggressive appliance targets.

3. Residential New Construction

The objective of the Residential New Construction (RNC) program is to reduce energy use and peak demand in new housing. Related objectives include increasing builder and consumer awareness of energy-efficient building practices, and to affect permanent market movement to more energy-efficient residential new construction in Connecticut.[83] The target market of the RNC program is any residentially metered single or multifamily unit being built in Connecticut. Based on data from the CT's Department of Economic and Community Development a total of 2,451 housing permits YTD in 2012 were issued in Connecticut, of which 795 units participated in the RNC program YTD 2012, reflecting about a 32% market share.[84]

To have the most widespread effect on the market, in the 2013-2015 C&LM Plan the EDCs intend to focus on:

- Building codes and Energy Star Certified Homes;
- Low Load Homes;
- High Performance Building Certifications; and,
- Outreach and Education.

In addition to encouraging construction of homes that exceed current efficiency standards, the Residential New Construction program provides ongoing training and outreach, which is critical to expanding awareness and enforcement of building codes. As noted by the EDCs, "code compliance is integral to reducing energy consumption and compliance rates increase with

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[83] 2013-2015 C&LM Plan, p. 165.
[84] *Id*.

awareness of the code and a better understanding of the purpose and inherent benefits" of building to these standards.[85]

As noted above, the Residential New Construction programs in the 2013-2015 C&LM Plan are cost-effective under the GST with the exception of the Residential New Construction program for SCG, which has a benefit-cost ratio of approximately 0.90 for 2013-2015. Although DEEP will allow the Residential New Construction Program to continue at the level proposed in the 2013 Expanded Budget, **the LDCs and EEB must propose program design changes to improve the cost effectiveness of the Residential New Construction Program and submit recommendations to DEEP in accordance with the Compliance Schedule in this Decision.** DEEP will then review the revised SCG New Construction program for 2014 and 2015 and adjust the budget for those program years in accordance with the revised program's cost-effectiveness. **Based on its review the Department approves the Residential Base and Expanded Budgets proposed by the EDCs**.

4. Home Energy Solutions

Home Energy Solutions (HES) is Connecticut's flagship residential program. The HES program has been recognized nationally by the American Council for an Energy-Efficient Economy (ACEEE) as an "Exemplary State Energy Efficiency program." Since 2007, the Companies, in coordination with the EEB, PURA, and BETP, have developed and deployed a program that other states emulate, particularly in terms of overall customer participation and energy savings. The HES program has gained national recognition by providing more Home Performance with Energy Star projects than any other program in the country.[86]

As a result of the HES program, over the last five years a "home energy performance" industry has emerged that did not previously exist, employing hundreds of Connecticut residents and serving tens of thousands of customers annually. Through collaboration with and guidance from EEB consultants, the EDCs have implemented processes and protocols to realize increased energy savings, monitor vendor performance, and increase customer satisfaction. Vendors who do not meet these standards risk being removed from the program.[87] As a result of these efforts, the Energy Efficiency Fund now supports a mature HES program model that is being continually refined and improved to meet Connecticut's residential energy efficiency goals.

The 2013-2015 C&LM Plan proposes to transform HES to a true market-based program with a strong emphasis on leveraging private investment by partnering with new low-cost financing options, a focus on deep energy retrofits, and improving the sales presentations regarding the value of those retrofits to customers. The Companies acknowledge this will not be an easy transition, but through a steady but gradual reduced dependence on ratepayer subsidy, more

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[85] *Id*. at p. 166.

[86] *Id*. at pp. 152-155.

[87] *Id*.

customers can be served and more efficiency savings can be captured with the same amount of ratepayer funding. In turn this will draw more vendors into offering services and require them to focus on developing their own business model in order to be successful. The Companies state that an increase in the marketing of the program will be required at every junction so as to continually attract more customers to utilize the program and to better use that initial engagement to make the value proposition that will get customers to directly invest in or finance the additional efficiency measures recommended by the vendors without as much or any ratepayer subsidy.[88]

Tables 10 and 11 demonstrate the proposed Base and Expanded Budgets for HES under the electric and natural gas portions of the 2013-2015 C&LM Plan. As the tables show, the EDCs propose doubling the annual HES budget in 2013 and 2014 and nearly tripling it in 2015 under the Expanded Budget, while the LDCs would increase the HES budget on average by 60% during this time.

Table 10-Electric

Proposed Home Energy Solutions Program Budget									
	2013			2014			2015		
	CL&P	UI	Combined CL&P/UI	CL&P	UI	Combined CL&P/UI	CL&P	UI	Combined CL&P/UI
Base	$11,480,000	$2,509,011	$13,989,011	$11,609,000	$2,639,497	$14,248,497	$11,429,000	$2,737,361	$14,166,361
Expanded	$21,153,571	$5,491,332	$26,644,903	$25,250,000	$5,413,102	$30,663,102	$31,965,000	$6,345,132	$38,310,132
Source of data: Table A1, pp. 24r and 320r									

Table 11-Gas

Proposed Home Energy Solutions Program Budget												
	2013				2014				2015			
	YGS	CNG	SCG	Combined LDCs	YGS	CNG	SCG	Combined LDCs	YGS	CNG	SCG	Combined LDCs
Base	$1,730,000	$1,686,570	$1,560,176	$4,976,746	$1,920,000	$1,643,368	$1,509,953	$5,073,321	$2,120,000	$1,697,370	$1,570,976	$5,388,346
Expanded	$2,429,000	$2,805,966	$2,744,632	$7,979,598	$2,545,500	$3,002,034	$2,893,224	$8,440,758	$2,662,000	$2,894,029	$2,650,212	$8,206,241
Source of data: Table A1, pp. 93r and 397r												

During the PURA C&LM proceeding, there was significant discussion regarding the overall effectiveness of, and savings provided by, the HES program. PURA staff raised concerns about the number of participants who use more energy after receiving HES services and are therefore not achieving actual bill savings. PURA requested that the EDCs demonstrate the electric and gas consumption of a sampling of 100 HES participants, before and after participation in the program. The data shows that 84% of 100 randomly selected CL&P HES participants demonstrated savings that were below the average savings claimed under the program, while 98% of customers identified by UI in its response to the same interrogatory had savings below the savings claimed under the program. CL&P and UI Responses to Interrogatory Nos. EN-4 and EN-5. A significant percentage of customers experienced an increase in energy usage after receiving a HES assessment, suggesting that many customers are not achieving the savings

88 *Id.*

claimed by C&LM program administrators. Response to Interrogatory Nos. EN-4 and EN-5. In response to concerns that the 100-participant sample size was too small to provide meaningful conclusions, PURA requested billing data for a sample of nearly 2,000 HES participants for 2010 and 2011. The data from the expanded sample showed similar results. Late Filed Exhibit No. 28.

The parties in the PURA C&LM proceeding raised concerns about the billing data analysis. ENE asserted that the 100 customer data set is unreliable, is not a study, and falls far short of best practices in the evaluation profession and should not be relied on by policymakers or regulators in assessing this program. Furthermore, ENE states that this small-scale data set cannot conceivably outweigh the rigorous engineering analysis and years of efficiency implementation experience reflected in the PSD, which governs the companies' conservative savings calculations. Id. As noted by OCC, the initial 100-customer sample size selected by PURA was small and focused only on consumption in the year before and year after an HES assessment. However, the sample was expanded in Late Filed Exhibit No. 28 to include thousands of electric and gas program participants across two years. This data did not adjust for such things as occupancy, installation of new equipment, such as central air conditioning or other factors that can impact consumption.

The evidence presented in response to Interrogatory Nos. EN-4 and EN-5 and Late Filed Exhibit No. 28 highlights the need for an evaluation of the HES program to verify program savings and cost-effectiveness, result that drive the performance incentives and sales adjustment within a CAM. OCC is troubled by the lack of a current or credible program impact assessment. As a result, OCC does not support additional funding for HES until a comprehensive impact assessment has been completed. The EDCs support having a comprehensive impact evaluation conducted on the HES and HES-IE programs. UI Brief, p. 5; CL&P Brief, p. 16; OCC Brief, pp. 9-14; Response to Interrogatories EN-4 and EN-5, Late Filed Exhibit No. 28.

To the extent that BETP, PURA, or other state agencies may have concerns about the HES program, ENE believes those concerns can be effectively addressed during the course of the Plan's ramp up through the normal evaluation channels already available to the parties. ENE believes this path forward provides the best and fairest balance of policy action and policy caution, particularly in light of the all cost-effective efficiency procurement mandate found in Connecticut statute. ENE Reply Brief, pp. 1-4.

The EEB Evaluation Committee has launched an evaluation of the HES program, which will provide an assessment of the program's effectiveness in achieving energy savings. In light of the issues raised in the PURA C&LM Proceeding, the Department does not recommend increasing HES budgets at this time, pending the results of the HES Evaluation. As recommended by CL&P, the Department will conduct a Technical Meeting concurrent with the EEB's HES Evaluation currently underway to provide additional opportunities for stakeholder input into this critical evaluation process. The Department will initiate a separate "HES

Innovation" public process to solicit ideas and recommendations for program design changes that will improve the performance and cost-effectiveness of the HES program.[89] At the conclusion of the HES Evaluation and the HES Innovation processes, the Department will reconsider increasing the budget for the HES program, if appropriate, using the "Contingent Funds" identified in the approved budget. **DEEP requires that an evaluation of the HES program be completed, and/or program design changes developed through the HES Innovation proceeding being implemented, before funding beyond the Base Level is approved for 2014 and 2015. This must be submitted in accordance with the Compliance Schedule in this Decision.** DEEP is holding HES funding level temporarily while DEEP considers improvements to the program. Meanwhile, DEEP is shifting funds to HES-IE to bolster this program.

a) Market Transformation

The 2013 Comprehensive Energy Strategy (CES) discussed the history and future of HES, stating that the program has evolved from a pilot effort provided through a handful of vendors in 2007 to a program that delivers comprehensive energy efficiency services to thousands of homes annually. The HES program has supported development of a robust Home Performance industry in Connecticut. The program has created jobs, developed a structure to train energy service professionals, saved energy, and helped provide a cleaner, healthier Connecticut for future generations. Yet, as noted in the CES, "[d]elivering the current [HES] program is expensive and the Energy Efficiency Board needs to explore ways to reduce costs and increase access to efficiency services, while maintaining customer confidence in the quality of the services being provided."[90] At present, the HES program provides a high proportion of the deemed savings to program's participants through the direct installation of lighting, and air and duct sealing at an average cost of $1,000 per home. Tr. 5/1/13, p. 643. Reducing the cost to ratepayers of delivering these efficiency measures will require educating residents to better understand and value residential efficiency investments, spurring an industry of home performance contractors to sell that value proposition to potential customers and providing accessible, attractive financing to facilitate those investments with reduced or no ratepayer subsidy. As noted in the 2013 CES, "efforts by the home energy performance contractors to establish a recognized industry may be a way to provide quality services as a market-based industry outside of, and in addition to, the HES program."[91]

It is critical that the HES program design be continually improved to minimize the costs and maximize the benefits of the program, and to support market transformation. DEEP looks

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[89] DEEP notes that Section 16 of Public Act 13-298 modified the benefits that can be claimed by program administrators in determining benefit-cost ratios while Section 30 removed the restrictions placed on program administrator to modify customer co-payments and also eliminated the spending cap for homes heated by oil and propane. The benefit-cost ratios for the programs submitted under the 2013-2015 C&LM Plan did not incorporate these changes.

[90] 2013 CES, p. 15.

[91] *Id.* at p. 16.

forward to soliciting public input on potential improvements to HES program design through the HES Innovation proceeding, discussed above. In the meantime, for the purposes of this Decision, there are several steps that need to be taken towards those goals in the near term:

- With respect to minimizing costs, Public Act 13-298 removed a statutory cap on the co-pay amounts for the HES program, and empowered the EEB to determine the co-pay amount. **DEEP therefore requests that the EEB reconsider whether the current co-pay for HES is appropriate, and whether such co-pay amounts should be increased in order to reduce the ratepayer subsidy for the program while not negatively impacting participation levels.**

- With respect to maximizing benefits, as discussed in the Retail Products analysis, the HES program provides an opportunity to capture significant remaining lighting savings within the residential sector. The requested changes to the Retail Products program, discussed above, should be incorporated into the HES program by better targeting sockets with working incandescent bulbs and older less efficient fluorescents for early replacement with CFL or LED products, and encouraging market expansion of LED technology through direct installation and education, while discontinuing direct installation of common CFLs in low use applications, such as closets, basements and garages from the program.

- With respect to market transformation, as discussed in the Marketing and Residential Financing analyses, **the Companies and EEB must develop marketing analyses and marketing campaigns targeted to specific residential segments that are designed to not only drive participation in HES, but also to encourage uptake of deeper measures, use of financing, and understanding of the concept and value of home performance**.[92] **Therefore, the Department directs the Companies to include, in the 2014 Annual Update a plan for the implementation of a marketing campaign to increase awareness about the concept and value of home performance.** DEEP has increased the annual marketing budget to implement such a campaign and other marketing/educational efforts discussed throughout this Decision.

- **Licensing of home performance professional was identified in past PURA and Department rulings as a necessary part of market transformation.** Licensing was also identified in the CES as needed to promote growth in this market and provide confidence to customers that enlist the services of these home improvement professionals.[93] **The Companies and EEB should advance efforts to level the playing**

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[92] For the average use of bulbs in these applications, *see* The United Illuminating Company and Connecticut Light & Power Company, "Connecticut Program Savings Document, 8th Edition for the 2013 Program Year," Table 1: Hours of Use per Day by Location, p. 95, *available at* http://www.ctenergyinfo.com/2013%20Program%20Savings%20Documentation%20-%20Final.pdf.

[93] 2013 CES, p. 24.

field by establishing standards for home energy performance professionals through licensing or registrations, requiring third-party certification, or an alternative standard-setting mechanism. The Companies must provide a progress report in the 2015 Annual Update.

The 2013 CES also recommended development of a voluntary residential building energy use labeling program, noting that homeowners could be provided a label or information sheet at the time of an HES assessment that summarizes a building's energy efficiency performance. This document could be included as part of the seller's information when the building is on the market. Such a labeling program would help buyers make informed decisions and would reward sellers who have invested in efficiency, by increasing the value of their homes in the real estate market. By establishing a uniform metric for evaluating the efficiency of residential properties a labeling program could also help the State meet the requirements of part of the 80% weatherization goal in Public Act 11-80 while facilitating transformation of this market. **The Companies and EEB must provide, in the Compliance Schedule in this Decision, a plan certifying HES service providers or vendors to provide home energy labels and that labels be provided as part of the program.**

b) Allocation of HES Costs Between Electric and Natural Gas Budgets

One way to improve the cost-effectiveness in the HES program under the Electric System Test is to increase the gas contribution for measures that reduce heating fuel usage. For example, the 2013-2015 C&LM Plan indicates that electric ratepayers pay 35% of Duct Sealing for gas heated homes without central air conditioning and that 40% of the $600 rebate to encourage high efficiency gas furnaces and 25% of the $1000 rebate is paid by electric ratepayers.[94]. These rebates should be fully supported by gas ratepayers. **The Companies must propose an update to the Plan that allocates 100% of the cost for gas heating measures to gas customers, in accordance with the Compliance Schedule in this Decision. Further, the Companies should more evenly distribute the funding for oil measures between gas and electric customers and submit specific recommendations for such reallocation in accordance with the Compliance Schedule in this Decision.**

The EDCs seek regulatory approval to assign HES costs to natural gas budgets in situations where a conversion from propane or fuel oil to natural gas is targeted or imminent. Historically, costs and savings for HES have been allocated based on the *primary fuel used to heat the home at the time the HES assessment is performed*. For example, if a home heats with fuel oil, costs and savings of providing a HES assessment would be allocated to fuel oil while the cost to serve a home that is heating with natural gas would be allocated to the gas budget. It is important for customers converting to natural gas to implement conservation measures *prior to*

[94] 2013-2015 C&LM Plan, pp. 192-194.

or as part of the conversion. This will maximize customer savings and could potentially result in lower heating system conversion costs because the home (once weatherized) may require a smaller heating system.

Thousands of customers are switching to natural gas and most of these homes are not receiving HES services. Under the Natural Gas Infrastructure Expansion Plan called for in the CES and Public Act 13-298, as many as 280,000 or more residences and businesses will be switching to natural gas over the next decade (beginning in 2014) and most will be oil- or propane-to-gas conversions. The 2013-2015 C&LM Plan's Expanded Budget would provide HES services to over 4,000 annual customer conversions to natural gas. To do so, the Companies propose to assign HES costs to natural gas budgets for those who are planning or are in the process of converting to natural gas. The Companies have embraced this strategy as a means to lower the cost burden on electric ratepayers because at present, customers who heat their homes with fuel oil have the costs of implementing HES core services and recommended measures subsidized by the EDCs' energy efficiency revenue sources.[95] Response to Interrogatory BETP-16; Tr. 4/25/13, pp. 454-460.

CL&P proposes to apply this policy to all "on-main" customers, while UI would apply it in situations where a conversion from propane or fuel oil to natural gas is targeted or imminent, that is, where a customer has contacted the LDC, committed to the conversion and is waiting to be scheduled for new heating equipment. Tr. 4/25/13, pp. 454-460. OCC agrees that customers who are in the process of switching from oil or propane to natural gas should be able to participate in the program as gas customers, but that this policy should not apply to all "on-main" customers. Instead, customers must be able to demonstrate they are in the process of converting to natural gas or installing gas heating equipment by providing, for example, estimates from licensed contractors or confirmation from the LDC that a service line is being installed. OCC Brief, p. 7.

The Department believes it is critical to target HES services to gas conversion customers. Once oil or propane customers convert to gas and experience lower energy costs, they likely will experience lower energy costs and their interest in efficiency will likely wane. Customers who convert to natural gas will save natural gas—not fuel oil or propane—over the life of any weatherization measures delivered through HES. At the same time, they will be supporting gas conservation through their monthly gas bills. Therefore, to better align program costs and savings, lower the cost burden on electric ratepayers, and encourage customers to weatherize their home, it is reasonable to use natural gas revenues to fund measures for customers who are in the process of, or planning to convert their home heating systems to natural gas.

Based on the foregoing, the Department approves the Companies' request to assign HES costs to natural gas budgets in situations where a non-gas customer has committed to converting to natural gas and is waiting to be scheduled for a service installation or the installation of new

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[95] *Id*. at p. 155.

heating equipment. This assignment of costs also applies in situations where a customer is using gas for cooking and/or domestic hot water but not for home heating, and has committed to converting their heating equipment to natural gas. For streamlined accounting purposes, **the Companies must propose an update to the Plan in accordance with the Compliance Schedule in this Decision, which allocates 100% of the costs of HES core services to natural gas budgets for any HES participant who becomes a gas customer (or newly converts their home heating equipment to natural gas) in the same calendar year in which they received HES services.** The Department welcomes comments and will consider alternative approaches that will ensure efficient compliance with this directive.

c) Driving Deeper Measures through HES

As noted in the 2013 Comprehensive Energy Strategy, "[t]he HES program has traditionally focused on participation (i.e., the number of homes served annually), and relied on relatively high subsidies to deliver these results."[96] The CES therefore called for not only increasing participation in the program, e.g., through expanding the HES budget, but also for ensuring that more HES participants install "deeper" efficiency upgrades as follow-on measures after the HES visit. The CES identified that between 2007 to 2011, only about 10% of the residential customers who receive home energy services through the Home Energy Solutions (HES) program actually install some of the recommended deeper measures.[97] Increasing that percentage will improve the cost-effectiveness of the overall HES program. The Companies, with the guidance of the EEB, have taken several steps to increase the uptake of "deeper" savings, by establishing low-interest financing and increased rebates for insulation; increased rebates for boilers and furnaces; sales training for HES vendors and technicians; and adopting savings goals for the HES vendor scorecard that make it difficult to stay in the program without selling add-on measures. **The Companies must establish targets, as soon as practicable, for the number and type of deeper measures that they intend to achieve through the HES program in 2014 and 2015.**

d) Deeper Measures & Natural Gas Conservation

Over the next decade, the LDCs will be working to expand natural gas service to 280,000 residential and business customers in Connecticut as part of a Natural Gas Infrastructure Expansion Plan now under review by PURA. This Expansion Plan is mandated by Section 50 and 51 of Public Act 13-298, and was recommended in the 2013 Comprehensive Energy Strategy. For a summary of estimated customer additions by year for the three LDCs, see Tables 12 and 13 below.

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[96] 2013 CES, p. 15.

[97] *Id*.

Table 12

SCG and CNG Residential Customer Additions by Year											
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Total**
On-Main	3,800	5,100	6,900	8,100	10,700	12,100	12,800	14,900	14,900	14,900	104,200
Low Use	4,700	4,700	4,700	4,600	2,300	1,200	500	200	200	100	23,200
Off Main	3,800	4,100	4,500	3,900	3,900	3,900	4,000	4,100	4,300	4,400	40,900
Source: Connecticut's Gas LDCs Joint Natural Gas Infrastructure Expansion Plan, p. 25.											

Table 13

Yankee Residential Customer Additions by Year											
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Total**
On-Main	3,000	2,700	3,300	3,800	4,200	4,200	4,200	4,200	4,200	4,200	38,000
Low Use	1,100	1,100	1,200	1,400	1,500	1,200	900	700	600	300	10,000
Off Main	700	1,300	1,900	2,400	2,800	3,100	3,400	3,500	3,600	3,600	26,300
Source: Connecticut's Gas LDCs Joint Natural Gas Infrastructure Expansion Plan, p. 54.											

The total number of residential customer additions for all LDCs is estimated to reach 17,100 in 2014 and 19,000 in 2015. The potential for these additional customers informs the planning for HES participation and energy targets for 2014 and 2015.

The following table, Table 14, provides HES participation and energy targets under the 2013-2015 C&LM Plan Expanded Budget for natural gas. Although the target "Units Homes & HVAC" and "Annual Savings" referenced in the table below include some HVAC rebates, the vast majority of the units are homes.

Table 14

	2013				2014				2015			
LDC	**Units Homes & HVAC**	**Annual Savings (ccf)**	**Lifetime ccf**	**Per unit (ccf)**	**Units Homes & HVAC**	**Annual Savings (ccf)**	**Lifetime ccf**	**Per unit (ccf)**	**Units Homes & HVAC**	**Annual Savings (ccf)**	**Lifetime ccf**	**Per unit (ccf)**
Yankee	4,773	584,112	12,062,210	122	4,950	666,621	13,848,183	135	5,389	761,337	16,036,509	141
CNG	5,050	546,029	10,767,605	108	5,875	640,051	12,331,641	109	6,450	766,557	13,992,725	119
SCG	4,670	504,264	9,933,552	108	5,469	593,716	11,404,144	109	5,819	691,883	12,494,683	119
TOTAL	14,493	1,634,405	32,763,367		16,294	1,900,388	37,583,968		17,658	2,219,777	42,523,917	
Source of data: Three Year Plan, pp. 98r, 99r, and 100r.												

As Table 14 shows, the LDCs have targeted more homes under HES than the 4,000 gas conversions expected in the 2013-2015 C&LM Plan. As discussed above, it is imperative that the Companies target customers during the gas conversion process before these consumers lose the financial motivation to improve their home's efficiency. Therefore, the LDCs must sharpen their focus under HES to address as many customers converting to natural gas as possible. The majority of the savings (i.e., ccf goals) for the HES program rely on the delivery of

Core Services for which the customer contributes a relatively small amount through their co-pay. Although there are some savings associated with deeper measures (e.g., additional insulation, HVAC equipment) that are embedded in the totals, the Department believes much more can be done to encourage the investment in additional deeper measures and thereby achieve greater savings, i.e., increased goals. This effort must be supported by a significant marketing campaign to be undertaken around residential energy efficiency, specifically Home Performance.

This requires that HES services be increased. To accommodate this increase the Department has allocated an increase of $5 million to the LDC budget for HES to encourage residents to select deeper efficiency measures, such as high efficiency furnaces, insulation, and appliances, as they elect to convert to gas. Based on the foregoing, the Department directs that the per unit ccf goal increase by 8% in 2014 and by 10% in 2015. These goals are intended to be met through customer investment, not by increasing the number of homes served under the program.

Table 15 demonstrates the historical and targeted number of units under the gas water heater program. Compared to historical program activity, the table shows a modest increase in the goal for this program in 2013 and going forward.

Table 15

	2009	2010	2011	2012	2013	2014	2015
LDC	Units	Units	Units	Units	Units	Units	Units
Yankee	160	303	179	104	293	347	426
CNG	119	119	119	119	119	119	119
SCG	143	143	143	143	143	143	143
TOTAL	422	565	441	366	555	609	688
Source of data: Three Year Plan, pp. 98r, 99r, 100r, 629, 647, and 665.							

Given that thousands of residential customers will be converting to natural gas the goals for this program for 2014 and beyond are significantly understated. The Department requires the following goals for this program:

Table 16

	2013	2014	2015
LDC	Units	Units	Units
Yankee	293	400	500
CNG	119	238	357
SCG	143	286	429
TOTAL	555	924	1,286

The LDCs have requested approval of a performance incentive mechanism. The ability to earn a performance incentive means the LDCs should be required to meet meaningful goals, not

simply meet past performance standards. **Therefore, the LDCs' ability to earn a performance incentive for HES will be based, among other things, on meeting the targets in Table 16. DEEP directs the Companies to work with the EEB to establish for 2014 and 2015 specific, readily measurable performance goals, including the goals in the above table.**

5. Home Energy Solutions-Income Eligible

The Department is committed to ensuring that energy efficiency programs are designed and implemented to achieve equitable participation among all customer classes, consistent with the 2013 Comprehensive Energy Strategy's focus on "increasing the participation of a broad set of ratepayers," including low-income residents.[98] The expansion of energy efficiency should be achieved through policy approaches that maximize participation among the majority of customers, especially low-income individuals, senior citizens and residential renters. The HES-IE component of the HES program is targeted to customers whose income is at or below 60% of the state median income.

The Department approves an Expanded Budget for the HES-IE program, in order to ensure that more income-eligible residents can access energy savings. Improving the marketing of this program will be critical to ensure that customer demand increases with the availability of increased funding for the program. The Department believes that one of the best ways to target HES-IE customers and inform them of the services available, is for the EDCs to work closely with the Community Action Agencies (CAPs). The CAP agency staff members have had lengthy interactions with clients and can discuss HES-IE services and benefits in depth and can act as an important liaison between the customer and the EDC. **The EDCs must work closely with the CAP Agencies to increase HES-IE market penetration, and to consider opportunities for integrating HES-IE program implementation with implementation of the federal DOE Weatherization Assistance Program.**

The EDCs state that they will continue to meet quarterly with the Connecticut Housing Finance Authority (CHFA) in order to leverage CHFA applicants' information as leads for the HES-IE program. The loan applicants are primarily in existing multi-family buildings, either HUD or state funded.[99] The Department believes this provides an excellent opportunity to ensure that services and measures available through Energy Efficiency programs are utilized by all eligible customers. In addition to working with CHFA the EDCs have reported great success in working with local housing authorities to service HES-IE multi-family housing units. Tr. 4/25/13, pp. 278-280.

UI currently contacts its Matching Payment Program (MPP) participants by mail. The company does this on a monthly basis and all new MPP participants are contacted. CL&P stated that it would consider a similar marketing effort. The Department recommends that CL&P undertake

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[98] *Id.* at pp. 1-2.

[99] 2013-2015 C&LM Plan, p. 188.

such a direct mail campaign for MPP customers and notes that CL&P is in the process of segmenting its residential customer data so that it can more strategically target its residential customers. Tr. 4/25/13, p. 281.

The EDCs have identified that there is a need for trained technicians in the marketplace and they are addressing that need by working in conjunction with CEFIA to make sure the workforce is properly prepared and trained. The local vocational technical schools have participated win the development of "e-houses". The students actually construct energy efficient homes and they learn how to install high-efficiency heating and cooling equipment and PV systems. Tr. 4/25/13, p. 283-284. The EDCs believe the e-house program is empowering students with actual hands-on training, applying the plumbing, insulation, mechanic and design trades as well as conducting marketing efforts. The students are learning the newest best practices and using the newest most efficient design and materials so they will not be intimidated by the latest in high-efficiency technology. Tr. 4/25/13, p. 285. The Department strongly supports this program and notes that many of the vocational-technical schools are located in distressed municipalities. This important curriculum will provide many future jobs in areas that are the most economically vulnerable.

CL&P is presently holding strategic planning sessions to determine how to better use customer contact interactions both via the web and its customer call center to present efficiency programs and opportunities to all customer segments including HES-IE customers. Tr. 4/25/13, p. 282. UI is utilizing its DROID field tool to provide accurate, timely information to customers in the hope of encouraging deeper efficiency measures. UI is also in the process of adapting its DROID tool so that it can be used as a Department of Energy approved assessment tool for the WAP Program and income eligible customers. Tr. 4/25/13, pp. 273-275. The Department supports these efforts and encourages the EDCs to share the results of these efforts with each other to increase services to HES-IE customers. Both companies agree that the success rate of efforts to reach absentee landlords will continue to make access to all eligible households difficult but that renewed attempts to make contact and inform landlords of the benefits of high efficiency equipment and reduced maintenance costs may improve the situation. The Department commends the EDCs in the success of its lead and asbestos remediation efforts and notes that it is estimated that another 800 homes will be able to be served through the Healthy Homes Initiative. Tr. 4/25/13, p. 292.

Marketing, outreach and education should be cornerstones of the HES-IE program and the use of a multi-prong approach that includes CAP agency involvement, vocational-technical education programs, door to door canvassing, local housing authority contacts, CHFA quarterly meetings, educational events, MPP participant education, and customer contact information are all necessary to ensure that conservation programs are equitably serving all classes of customers.

6. Residential Behavior/Engagement

The Department supports the development and expansion of a customer engagement programs. These programs can motivate thousands of households to make behavioral changes that can result in a significant reduction in energy usage. The Residential Behavioral Program has been run as a pilot program to investigate customer savings motivations and to achieve energy conservation through induced behavioral changes. In the 2013-2015 C&LM Plan, CL&P proposes to ramp up the program to cover its entire service territory, proposing a $4 million budget in 2014 and $6.3 million in 2015. Although the program appears to fail the EST in 2014, it reaches a benefit-cost ratio of 1.0 in 2015.[100] Additionally, some clarity is needed to reach a common understanding of what is or is not included in the Behavior Program cost rate. Understanding and addressing these cost factors is essential to inform decisions about this program.

The CL&P customer behavior pilot program, conducted mostly in 2011, used data from 48,000 CL&P residential customers that had billing data available for 12 months prior to the study period and had higher than average electric usage. OPower, the entity that implemented the customer behavior program, randomly assigned the customer households to a treatment group (participants) versus a control group (non-participants). OPower explained to the participants that the non-participants were "neighbors." Even though the non-participants were not necessarily in close proximity to the participants, the non-participants had comparable household characteristics, e.g., house size and whether or not they heat with electricity. The treatment group was further sub-divided into a group that received the HERs report on a monthly basis (monthly treatment group) and a group that received the HERs report every three months (quarterly treatment group). A subset of the monthly treatment group received HERs for eight months to test persistence of savings (persistence group) while the remaining monthly treatment group received HERs for 12 months. The pilot program uses an "opt out" program design whereby customers are automatically enrolled in the program unless they elect to opt out.

An evaluation of the Year 1 CL&P Pilot Customer Behavior Program (Study) was conducted by NMR Group, Inc., Tetra Tech and Hunt Allcott (collectively, Research Team).[101] The evaluation, issued on March 4, 2013, is both a process and impact study. The research team conducted an initial baseline survey of participants and nonparticipants, interviewed focus groups later in the implementation period, and conducted a final follow-up survey with participants and non-participants to test the level of customer engagement in the pilot program. The impact analysis consisted of billing analysis to measure whether the Home Energy Reports (HER) pilot program

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[100] *Id.* at Table B, pp. 39r-40r.

[101] NMR Group, Inc., Tetra Tech and Hunt Allcott, "Evaluation of the Year 1 CL&P Pilot Customer Behavior Program," (March 4, 2013), (Research Team Study), *available at* http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/8525797c00471adb85257b2b005f2564/$FILE/FINAL%20CLP%20Behavioral%20Year%201%20Program%20Report%20030613.pdf.

resulted in significant energy savings for participants and whether these savings persisted in the absence of receiving the reports. Currently, Year 2 of the pilot program is underway.[102] For the program impact evaluation, the Research Team used a 13-month period for baseline energy use and 14 months to measure energy savings. Using Ordinary Least Squares regression analysis, the Research Team indicated that no outliers or other data points were eliminated in the participant and non-participant data sets. The usage data were weather normalized. Tr., 5/6/13, pp. 45, 49.

The Research Team found that overall energy use declined by 9.2 MWh, a reduction of 1.7% compared to the control group, which was found to be statistically significant. The analysis revealed that the monthly treatment group reduced energy usage more than those receiving quarterly HERS reports. Households with the highest electric use had the greatest reduction in energy use. The Research Team reported savings in both summer and winter months. The persistence group had similar energy savings until the program ended for this group. The persistence group had no significant savings two months after they no longer received the HERs reports.[103] Tr. 5/6/13, pp. 16-17. The Study indicated that the HERs program resulted in a statistically higher percentage of treatment households participating in Home Energy Services (HES) program than the control group, although the participation rate was low for both groups (0.445% versus 0.295%). At the Technical Meeting, the Research Team testified that the estimated energy cost savings per high usage household in the CL&P Behavioral Pilot program is $75 per year. Tr., 5/6/13, p. 80.

For the process evaluation, the Researchers conducted an initial baseline survey of 300 participants and non-participants, conducted a focus group with 21 participants during program implementation, and conducted a survey with approximately 600 participants and non-participants at the end of the program. Surveys measured participants' satisfaction and engagement with the HERs reports. Tr., 5/6/13, p. 21.

The process evaluation revealed a moderate engagement and satisfaction with the program. Although 95% of participants were aware they were receiving the report, more than 40% of respondents could not recall a specific energy tip from receiving HERs. While approximately 40% of participants in the follow-up survey were aware of the option to establish an on-line account, fewer than 2% had done so. Slightly more than half, 56% of participants, found the information in the HERs to be somewhat useful (36%) or very useful (20%). Follow-up survey results indicated that participants had a moderate level of satisfaction with the program: 40% of respondents reported a positive overall satisfaction with the program, 43% responded with a rating of 3 on a 5-point scale, or a neutral rating, and 26% reported dissatisfaction with the program (1 or 2 out of 5 points). Tr., 5/6/13, pp. 21-24. Some participants in the focus groups were confused by the definition of "neighbor", and some believed that their "neighbors" were not comparable to their household. Focus group members responded that

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[102] *Id.* at pp. I and II.

[103] *Id*. at pp. II-III.

they believed the program would be more useful if it provided more specific diagnostic information about their household energy usage. [104] Tr., 5/6/13, pp. 29-31.

The Research Team indicated that an additional process study is scheduled to evaluate the engagement and satisfaction of average use residential customers. Tr. 5/6/13, p. 41-42. OPower indicated that there are numerous residential behavioral persistence studies that have already been conducted in other regions. Tr., 5/6/13, pp. 78-79; OPower comments 5/28/13, pp. 4-9. OPower stated that the CL&P pilot program resulted in significant and cost-effective energy savings. OPower Comments, p. 1. OCC expressed its concern with the drop-off of savings associated with the subgroup that no longer received the HERs. OCC believes that a behavioral program could be more cost-effective if the majority of the participants used a web-based program. However, OCC pointed out that less than 2% of the participants used the web application that was offered. OCC Comments, pp. 2 and 3.

The impact analysis of the CL&P HERs pilot program highlights important progress and specific opportunities for improving the design of cost-effective behavioral program. There are a range of program design options: whether to limit the program to high usage customers, how the program should reach customers (mail, email, community-based, integration with existing customer engagement systems such as online billing system), what variables should comprise the peer group or "neighbors," and what feedback information should be delivered to the customer (frequency of communication, permanent/enduring feedback signal, generic versus customized energy and demographic information, direct reporting such as through an electronic App). One program design option currently being considered is a web-based customer engagement system that integrates behavioral change techniques with customer interaction with the utility's web-based information and billing system.

As the result of an RFI issued in 2012, the EEB Residential Committee reviewed several proposals for customer engagement programs. **While DEEP supports a behavioral customer engagement program, particularly if integrated into utilities' existing customer relationship systems, before the Department commits to fully expand a behavioral program, the Department directs the EEB to review evaluations of such programs in other states, the RFI proposals, and if necessary, review additional program designs addressing the broader design options noted above. The Department directs the EEB Residential Committee to propose a customer engagement strategy which will include recommendations on program design and delivery, including the potential integration with the Companies existing and developing customer relationship systems, in accordance with the Compliance Schedule in this Decision. The Department is therefore approving a budget to allow the EEB to investigate this matter further and to consider the cost savings that could be realized if behavioral customer engagement is integrated with the utilities' existing customer engagement systems. The program and budget for 2014 and 2015 will be reviewed and potentially increased further once the EEB submits a formal recommendation.**

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[104] *Id*. at p. III.

7. Residential Financing & ECLF

An increasingly important component of the Department's strategy to meet the state's energy efficiency goals is using limited ratepayer and public funds to leverage private capital investment in energy efficiency. At the same time as the Department is approving a significant increase in ratepayer support for efficiency programs, it is working to expand the low-cost financing opportunities for homeowners and businesses that are essential to overcome the upfront cost barrier of, one of the key obstacles to installation of "deeper" residential efficiency measures. Connecticut has pioneered in making low-cost financing available for residential efficiency, by developing innovative financing products through the C&LM programs, and by establishing the country's first "green bank," the Clean Energy Finance and Investment Authority, to attract private capital investment in residential efficiency. As noted in the 2013 Comprehensive Energy Strategy, "the development of these financing programs is critical to moderate ratepayer costs of energy efficiency programs over time," by scaling up the investment of private capital in clean energy, lowering the cost of borrowing, and ultimately, allowing ratepayer resources to be scaled back.[105]

Under the C&LM Program, the EDCs currently provide third-party consumer financing for energy improvement projects recommended through the Home Energy Solutions (HES) program. On June 1, 2011, at the conclusion of a year-long residential financing pilot program, the EDCs introduced a new residential loan program offering subsidized, low-interest loans with on-bill repayment to residential customers who participate in the HES program and make qualified energy efficiency improvements to their homes. This loan program is administered by the Connecticut Housing Investment Fund (CHIF) and was one of the first in the nation to offer on-bill repayment of energy efficiency measures for residential customers.[106]

The CL&P residential loan program (CEEF Revolving Residential Loan Fund) is managed by CHIF, which uses the Connecticut Energy Efficiency Finance Company, a 501(c)(3) Special Purpose Entity, to administer the loan program and leverage Connecticut Energy Efficiency Fund monies. UI's residential loan program is also administered by CHIF, which markets and originates loans, which loans UI then purchases from CHIF using their own capital which allows UI to service these loans themselves. In the Final Decision in Docket No. 12-02-01, dated August 8, 2012, PURA approved the use of EDCs' 2011 carryover dollars to establish a revolving fund for residential loans. The use of C&LM revenues as the source of capital, rather than utility capital, reduces the costs to ratepayers of providing customers with lower interest rates for these loans.[107] Tr. 5/1/13, pp. 587-596.

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[105] CES at 7.
[106] 2013-2015 C&LM Plan, p. 287.
[107] *Id*.

Pursuant to the Department's February 17, 2012, Approval of the 2012 Conservation and Load Management Plan (2012 Base Determination),[108] the EDCs have directed C&LM funds to support revolving funding of the CHIF-administered residential loan program. To date, CL&P has assigned approximately $11.5 million to this program, has an available balance of about $9 million, and believes the balance can support residential loan activity through 2013 and into 2014. CL&P supports the assignment of additional C&LM revenues to this loan program but believes the Department should modify the allocation methodology required in the Department's 2012 Final Expanded Determination (i.e., fixed annual percentages) and instead only assign funding to this program as needed to sustain loan activity. To date, UI has allocated about $600,000 to this program and has an available balance of about $50,000, which balance will likely be exhausted by August 2013. UI states that it can provide its own capital to sustain this program if necessary. Tr. 5/1/13, pp. 576-590.

Pursuant to the Department's July 19, 2012, Final Determination to Approve 2012 Conservation and Load Management Expanded Plan and Budget (2012 Expanded Determination),[109] CL&P was directed to allocate 10.5% of its overall residential C&LM budget annually in 2013, 2014 and 2015 to the revolving loan fund while UI was required to allocate 12.5% of its residential budget to this program for that same period.[110] In accordance with this directive, CL&P allocated revenues to the residential revolving loan fund under its Original Base and Expanded budgets. However, to increase direct energy savings, as directed by the EEB, in this 2013-2015 Plan CL&P eliminated the allocation to the revolving loan funding under its Revised Base Budget and significantly reduced the allocation under its Revised Expanded Budget. UI did not allocate revenues to residential revolving loan funding under its Original Base Budget but did allocate some revenues under its Original Expanded Budget, although at less than the 12.5% directed by the Department. To satisfy the EEB directive to increase energy savings, UI reduced the amount allocated to this program under its Revised Expanded Budget. UI believes the directive regarding revolving loan funding contained in the Department's 2012 Expanded Determination only applied to Expanded Budget scenarios.[111] UI Response to Interrogatory BETP-25.

Funds allocated under the EDCs' Base Budgets are statutorily required to support the Energy Conservation Loan Fund (ECLF), a program that is separate and distinct from the residential loan program discussed above. Therefore, the Base Budget for each EDC only assigns funding

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[108] The Department of Energy and Environmental Protection, "Approval of the 2012 Conservation and Load Management Plan," (February 17, 2012), *available at* http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/2b676422fd385d94852579a7005aa31c/$FILE/2012%20CLM%20Base%20Plan%20Final%20Approval.pdf.

[109] The Department of Energy and Environmental Protection, "Final Determination to Approve 2012 Conservation and Load Management Expanded Plan and Budget," (July 19, 2012), (2012 Expanded Determination) *available at* http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/990c945cf211b4ce85257a400069a90a/$FILE/7-19-12%20Final%20Determination%20Expanded%20Plan.pdf.

[110] *Id*. at p. 24.

[111] *Id*.

to the ECLF program and no dollars specifically to the CEEF Residential Revolving Loan Fund. Tr. 5/1/13, p. 574.

A variety of financing products are now—or will soon be—available to Connecticut's residential sector today, each with slightly different eligibility criteria and credit requirements. These products include, but are not limited to, the Energy Conservation Loan and CEEF Revolving Residential Loan Fund, described below; the Smart-E residential financing product recently developed by CEFIA and offered through credit unions and community banks through most of the state; the Cozy Home Loan, launched as a pilot by HDF for income-eligible homeowners; a residential furnace and boiler replacement program slated to launch in the 2013-2014 heating season, pursuant to Public Act 13-247; an on-bill financing program to be developed and administered by CEFIA pursuant to Public Act 13-298; and others.

This diversity of financing products ensures access to financing for a broad range of measures for customers with different types of income levels, credit scores, debt-to-income ratios, and bill repayment histories. At the same time, it is essential to make the presentation of multiple financing options as simple and seamless as possible for the customer, through vendor training, coordinated marketing, and simplified presentation on the EnergizeCT website. The ratepayer-supported C&LM financing products should be positioned in the market in such a way that they do not undermine financing products offered by the private market. It is also important to evaluate uptake of financing on an ongoing basis to identify the extent to which ratepayer-supported interest rate buydowns, rebates, and other incentives are actually needed to reach the target levels of deeper measures, or to encourage customers to bundle additional measures.

To achieve these goals, the EDCs, EEB, and CEFIA have developed a preliminary agreement to harmonize the CEEF Residential Revolving Loan Fund with CEFIA's Smart-E Loan. The capital for Smart-E comes from local lending institutions, such as credit unions. The Smart-E Loan targets residential customers with higher credit scores, and the CEEF Residential Revolving Loan Fund can service customers who do not qualify for a Smart-E Loan, essentially carving the market into two segments. Tr. 5/1/13, p. 592. The Department is working to align both products to provide a state-wide product to address all customers and to develop a seamless process for customers and vendors. During 2013 and the first quarter of 2014, DEEP will convene a regular meeting of these entities to track the uptake of financing through both programs under the preliminary agreement, in order to facilitate any needed changes to the agreement or to the loan program design.

While this process is ongoing, the Department rescinds its past directive concerning fixed percentage allocations to the revolving loan fund**. For 2013, the Department finds that CL&P's revolving loan fund balance is adequate to support this program. For 2013 the Department finds that UI's revolving loan fund balance is inadequate to support this program and directs UI to allocate at least the minimum funds needed to fund the program at the level needed to support loan activity, through the end of the first quarter of 2014.** To be clear, this directive

applies to the EDCs under both their Base and Expanded Budgets and until otherwise modified by the Department.

C. COMMERCIAL AND INDUSTRIAL PROGRAMS

As the Conservation and Load Management Plan enters its fourteenth year, the commercial and industrial programs are mature, cost-effective and nationally recognized. The EEB, the Companies and the Department have worked together so that the programs deliver comprehensive energy services and are standardized to deliver a consistent marketing approach and customer experience across the state. However, there are still significant challenges to improve energy efficiency for C&I customers to fulfill the goals set in the 2013 CES.

As part of the CES, the Department established an energy strategy for C&I customers. The CES determined that the C&LM programs should focus on broader participation in hard-to-reach sectors. This includes medium-to-small customers and small manufacturing. The CES established a priority to provide the industrial sector with deeper, comprehensive energy services and specialized efficiency programs to improve industrial processes. The CES supports the leveraging of private capital through innovative financing mechanisms, including CEFIA's Green Bank, standardized energy efficiency performance contracts, and the C-PACE program. In addition the CES supports improved building efficiency standards for new construction and retrofits as well as a mechanism or benchmarking building efficiency and disclosing efficiency scores at the time of rental or sale.[112] For the planning period 2013-2015, the Department seeks to build upon existing C&LM programs and integrate them with the investment and financing opportunities now available through CPACE and energy performance contracting to advance the energy priorities of the 2013 CES.

Because C&I customers consume more energy, to fund their share of the 2013-15 Expanded C&LM budgets, it is essential they fund a proportionally higher share of C&LM programs and budgets. As part of the planning process in monthly C&I meetings, the EEB, the Companies and the Department have worked together to develop a strategic plan to reach a broader market and to affect energy changes "deeper" and more comprehensively to help them to move toward sustainable energy management. To achieve "broader and deeper" savings, the EEB, the Companies and the Department have developed strategic priorities to accomplish these aims:

- Customer segmentation and enhanced customer focus to reach underserved markets
- Promotion of strategic energy management for businesses

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[112] 2013 CES, pp. 36-69.

- Enhanced training and consultation: building code training, Lead by Example and performance contracting initiatives
- Enhanced financing strategies to develop low cost financing opportunities
- Leveraging strategic partnerships with EPA Energy Star program, state agencies, community and business organizations.[113]

The Department finds that the priorities established in the 2013-2015 C&LM Plan are consistent with the 2013 Comprehensive Energy Strategy. In this Decision, the Department points to program areas that can create greater opportunities to carry out the goals of the 2013 Comprehensive Energy Strategy and strategic priorities of the 2013-2015 C&LM Plan.

1. Broadening C&I Participation

The 2013-2015 C&LM Plan has prioritized reaching customer segments and improving customer focus as a means to reach underserved markets. The Companies the C&I Committee have taken important steps toward reaching underserved markets by providing market data analyses as part of monthly C&I meetings. As part of this data analysis, a market analysis study by Energy Market Innovations, Inc. (EMI) provided key information to enable the Energy Opportunities (EO) and Energy Conscious Blueprint (ECB) programs to target remaining savings opportunities and to encourage additional comprehensive energy efficiency projects.[114]

EMI examined four years of program-tracking data from the ECB and EO programs. A market trend report presented at the C&I committee in March 2013 evaluated historical data on customer participation, identified underserved markets by business size and NAISC, and identified types and sizes of businesses that have lower completion rates for C&I projects. Based on its market analysis, EMI's findings and recommendations include:

- The Companies should increase efforts to engage manufacturing facilities to complete additional comprehensive projects as a part of the ECB program since only 20% of industrial and manufacturing facilities participated in ECB engaged in comprehensive projects (more than one end-use) between 2008 and 2011.
- Educational and health care facilities segments present additional opportunities for the ECB program to achieve cost-effective savings. They typically have long operating hours, high and predictable occupancy rates, and high construction and remodeling standards.

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[113] 2013-2015 C&LM Plan, pp. 209-252.

[114] Energy Market Innovations, Inc., "Large Commercial & Industrial Research: Participant Trend Analysis," (February 7, 2013), *available at* http://energizect.com/sites/default/files/EMI%20Large%20CI%20Participant%20Trend%20Report%20-%20Final.pdf.

They account for a smaller proportion of the ECB program participation, but achieved higher-than-average kWh savings per account between 2008 and 2011.

- Retail and office buildings segments account for a significant portion of savings in the EO program. Although it is possible that that there are limited opportunities given retail and office building operations, the Companies should target these segments as part of the comprehensive initiative.

- Industrial facilities have had lower participation rates in comprehensive projects in the ECB program, and represent a potential area of increased participation.

- While the Companies employ extensive data collection, there are opportunities for improving the consistency of data collection and analysis between two electric companies, establishing a common classification scheme and lexicon across the state for projects, measures, customers, and facility types. Improved and standardized data tracking will also have the benefit of improving data access and precision, and reducing the cost of subsequent evaluation studies.

In October 2012, the consultant responsible for advising the EEB regarding program evaluation measurement, and verification (Evaluation Consultant) initiated a Small Business Energy Advantage (SBEA) Data Mining Evaluation. The purpose of the study is to assess market sectors that are highly represented and underrepresented among SBEA participants, characterize the composition of installed measures (lighting only, comprehensive, etc.), evaluate the customer experience, and measure the levels of savings by SBEA sector.

The Department supports continued use of market trend analysis by independent evaluators and by the Companies' staff as an important component in broadening participation among all market segments, sizes and types of business customers. This data-intensive and strategic approach will necessitate participation and coordination with the Evaluation Committee and the Evaluation Consultant. The C&I Committee shall also work with the Evaluation Committee and its consultant to improve data tracking and formatting to facilitate data analysis and reduce costs for future evaluation studies.

2. Customizing Program Delivery for Large Customers

In its 2012 Expanded Determination, the Department directed the Companies and the EEB to consider, for the 2013-2015 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.[115] The Department also concluded 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.

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[115] 2012 Expanded Decision, pp. 11 and 12.

The Department reiterates its support for a self-directed program. Such a program is consistent with goals of the 2013 Comprehensive Energy Strategy to customize program delivery to meet the needs of industrial customers. A self-directed program will also reap the benefits of moving to multi-year budgets for the C&LM programs, which provides the Companies certainty to commit C&LM C&I incentive dollars ahead of collections, at a level more appropriately sized to major efficiency investments for larger customers. A self-directed program will utilize more directly the expertise of large C&I customers and implement comprehensive projects and process improvements that are tailored to their facilities. At the Plan funding level, the C&I Committee and the Companies shall develop a self-directed program, which contains the following best practices: (1) establish escrow accounts, rebates or rate credits for participants, and shall not permit customers to "opt out" of some or all of their ratepayer charge to the CEEF; (2) establish a threshold for customer size (minimum kW) and type; (3) the Companies and the customers shall collaborate to set capital project-based energy savings goals (expressed as energy load) over a specific time period, e.g., two to five years, for each customer; (4) data tracking, cost-effectiveness, measurement and verification, and program evaluation should meet or exceed the standards of the C&I programs; (5) participants' collections should include costs of evaluation, administration, and low income program collections; and (6) data collection should be established with the goal of comparing cost-effectiveness with traditional programs for large C&I customers. The EEB and the Companies should also evaluate developing a "use it or lose it" provisions for participating accounts, with an auction of unused dollars.[116] **The Companies, together with the EEB, must develop a self-directed program that will be in place at the time that Plan revenues are available. A progress report on this development must be included in the Annual Updates.**

3. Improving Program Delivery for Underserved Markets

The Office of Energy Efficient Business (OEEB), established in Section 119 of Public Act 11-80 and administered through DEEP, is designed as a direct outreach and single point of contact program for energy efficiency services to small businesses in underserved areas across Connecticut. The Connecticut Center for Advanced Technology Inc. (CCAT) currently administers the OEEB program, which is funded with RGGI proceeds and Federal funding, and not through the ratepayer or RGGI revenues associated with the C&LM budget.

The OEEB has launched outreach efforts to underserved businesses and communities by mapping and identifying small businesses in underserved areas and participating in stakeholder meetings with community and business groups. The OEEB identifies small businesses' efficiency opportunities available through CEEF's electric and gas utility programs, as well as identifying financially attractive renewable energy technologies. The OEEB is a resource for

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[116] Chittum, Anna, "Follow the Leaders: Improving Large Customer Self-Direct Programs," ACEEE Report Number IE112 (October 2011).

providing assessment services and information on loans and grants for energy efficiency and renewable energy. In addition, the OEEB helps businesses determine whether they could obtain a more favorable competitive rate for natural gas and/or electric generation service, and an analysis of fuel switching opportunities.

Because the OEEB is funded and operates outside of the C&LM programs, it is important that the OEEB be closely coordinated with the C&LM C&I programs to ensure that the outreach and marketing strategies developed by the OEEB better target underserved businesses are incorporated into C&LM program administration, and that the market segment analysis currently being developed for the C&LM program is shared with OEEB to better enable the OEEB to target underserved communities. OEEB's participation in C&I meetings and technical seminars held by the Companies will benefit business customers served by OEEB.

4. K-12 and Municipal Buildings Benchmarking

Since 2003, the Institute for Sustainable Energy (ISE) has used U.S. Environmental Protection Agency (EPA) Energy Star Portfolio Manager (Portfolio Manager) as a platform to assist Connecticut K-12 school districts to benchmark their school buildings' energy use. ISE gathers and enters each school's utility billing and energy usage data into the Portfolio Manager program at no charge to school districts, and instructs school facilities managers on how to input energy utility and energy data and use the Portfolio Manager tool. ISE has employed college interns from Eastern Connecticut State University to input school energy data from utility billing data for the initial benchmarking and for updated ISE studies. ISE also conducts free classes to assist school facilities managers in making behavioral changes in operating their buildings to reduce energy costs and in evaluating cost-effective energy saving investments. In a similar fashion, ISE also assists municipalities in their benchmarking efforts.

Conn. Gen. Stat. § 16-245ii requires that, starting on January 1, 2012, electric and gas companies maintain and make available energy consumption data for non-residential buildings, in a format that is compatible for uploading to Portfolio Manager.[117] As yet, the program administrators have not yet fulfilled this requirement. However, the program administrators have been working with the state on a major data transfer project to streamline and automate the storage of energy data to facilitate strategic energy management for state owned and operated buildings. As part of this process, the state is working with the program administrators and an information technology vendor to develop electronic billing and usage data transfer for state facilities. This has required the development of an electronic interchange platform, EDI 810, which enables the transfer of energy usage data from the program administrator to the State. The scheduled completion timeframe is October, 2013. CL&P will also make available for transfer three years of historical data. CL&P Response to Interrogatory BETP-71.

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[117] The data shall be maintained for the most recent 36 months and shall maintain confidentiality of customers.

With regard to state requirements for K-12 schools and municipalities, the program administrators indicated that they are awaiting the revision of Portfolio Manager, completed in summer 2013, to learn about its data access and transfer capabilities. The Companies indicated that an additional challenge will be to clarify the number and type of school and municipal building accounts that will be requested from the utilities. This will require additional information from towns and a coordinating effort between towns and the utilities. CL&P and UI response to BETP-71; Tr. 4/25/13, pp.416-425.

The 2013 Comprehensive Energy Strategy envisions a 20% reduction in primary energy consumptions in Connecticut buildings by 2022.[118] Benchmarking is an important building block for schools and municipalities to transition toward strategic energy management practices to contribute their share of the energy reduction goal. Benchmarking is also an assessment tool to evaluate baseline energy use for performance contracting schools and municipalities. Performance contracting is a centerpiece of the Lead by Example Program, which is also a major initiative in the 2013 Comprehensive Energy Strategy to promote building efficiency.[119]

Electronic data transfer of energy usage data into Portfolio Manager will improve the ability to conduct benchmarking activities for more schools and towns in Connecticut. In addition, the Department and ISE will continue to achieve benchmarking of schools and municipal buildings, as well as assist with data analysis and reporting as well as coordination efforts with other state agencies. ISE may request additional funds, to be transferred from C&I programs, to provide additional benchmarking resources, if needed.

5. C&I Financing

The 2013 Comprehensive Energy Strategy emphasizes working with CEFIA and other organizations to expand financing opportunities to C&I customers as a means to lower upfront capital project costs to customers and leverage the benefit of ratepayer program dollars.[120] In January 2013, CEFIA launched the Commercial Property Assessed Clean Energy (C-PACE) lending program. The C-PACE program, aimed at projects over $150,000, allows C&I customers to access low cost third party financing to undertake energy efficiency and clean energy investments. Capital provided for the loans is secured by a senior lien on the owner's property tax bill, and repaid through an additional assessment on the customer's property tax bill. Because the lien reduces risk for the lender, this allows access to lower interest rate capital.[121]

During 2012, the Department, the C&I Committee, and CEFIA worked together to align marketing materials and measurement and verification procedures for projects undertaken in

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[118] 2013 CES, p. 5.

[119] *Id*. at p. 8.

[120] *Id*. at p. 24.

[121] Energize Connecticut – C-PACE, *available at* http://energizect.com/businesses/programs/C-PACE.

CEEF programs. The Companies have continued to work with CEFIA to coordinate project process and flow, and training and outreach. UI Response to BETP-23. In this way, there is no duplication of a project approval or loan application, so that the C-PACE loan program is a seamless process within CEEF C&I programs.

CEEF also administers the following loan programs for C&I customers.[122]

- The SBEA loan program offers a 0%, on-bill-financed loan to municipal and qualified small business customers, and is offered directly as part of the SBEA contract. CL&P and UI provide the financial capital at a cost of their respective overall allowed rate of return.

- The C&I loan program offers Energy Opportunities (EO) customers subsidized and low interest loans, from $2,000 to $1,000,000, through a third party financing entity. The loan program offers a lower interest rate on comprehensive projects.

- The PURA C&I Energy Efficiency Financing Program provides third-party financing for customers investing in large-scale customer side distributed resources or energy efficiency projects costing more than $1,000,000.

- The Connecticut Hospital Association Trust Loan Program provides third-party financing for the Association's acute care hospitals in CL&P service territory.

The CEEF loan portfolio, together with the C-PACE program, offer lending opportunities from small business loans to financing for large comprehensive projects. The Department and the C&I committee will continue to work with CEFIA to explore loan products that offer low cost options to business customers and Connecticut ratepayers.

The Department will work with the C&I committee, the Companies and CEFIA to look for low cost alternatives for C&I loans that service "medium size" efficiency projects that are larger than SBEA projects, but are smaller than the $150,000 typical loan amount for the C-PACE loan product. In addition, there may be a lower cost alternative to supplement the CL&P's Connecticut Hospital Association loan that would service hospital customers, given the cost of administering the program. CL&P Response to Interrogatory BETP-24.

The SBEA loan program is a candidate for investigating whether there are lower cost capital alternatives than the Companies' cost of capital. Since 2007, the SBEA loan program has had a low default rate of 0.87 and 0.93 for CL&P and UI programs, respectively. CL&P and UI Late Filed Exhibit No. 14. **The Department directs that, as part of an expanded plan, a total of $5 million in ratepayer funds be allocated as finance capital for the SBEA loan program for each of the program years 2014 and 2015**. Setting aside ratepayer funds would not result in

[122] 2013-2015 C&LM Plan, pp. 285-295.

additional risks to ratepayers, since ratepayers already bear the risk for loan default under the current SBEA loan program.

D. MARKETING PROGRAM

The 2013-2015 Marketing Plan centers around the newly-created Energize Connecticut brand. This public-facing brand represents programs and services supported by the Energy Efficiency Fund, the State and CEFIA. All Energize Connecticut branding activities are coordinated through the Marketing Services Committee (MSC). The MSC is made up of representatives from the EEB, CEFIA and the Department, with input from the Companies and PURA. The new website (EnergizeCT.com) has been developed to improve upon and replace CTEnergyInfo.com. Existing and new materials will carry the Energize Connecticut brand in 2013 and beyond.

Table 17

Marketing Program Budget									
	2013			2014			2015		
	CL&P	*UI*	*Combined*	*CL&P*	*UI*	*Combined*	*CL&P*	*UI*	*Combined*
Base	$250,000	$50,000	$300,000	$250,000	$250,000	$500,000	$250,000	$250,000	$500,000
Expanded	$500,000	$250,000	$750,000	$500,000	$250,000	$750,000	$500,000	$250,000	$750,000
Source: Tables A1, pp. 320r and 24r									

The EnergizeCT.com brand and website are an important, foundational step towards the goal, identified in the 2013 Comprehensive Energy Strategy, of developing the marketing and communications tools needed to reach the ambitious goals in the 2013-2015 C&LM Plan. As stated in the CES,

> Creating the most effective programs for boosting energy efficiency in Connecticut's buildings requires extensive data about the market (i.e., the state's buildings and building owners), a system for assessing and responding to the needs of the occupants, and the ability to rapidly measure the success of program efforts. Program administrators, vendors, and contractors would benefit from access to the same marketing, operations and technology tools used by the world's leading brand-name companies, such as advanced database, modeling, and customer relationship management software.[123]

DEEP therefore approves an increased budget for the Marketing Program, above the amount requested by the Companies. This increased budget should be used to retain world-class marketing experts to develop and execute a market segmentation and analysis strategy. As acknowledged in the CES, "[d]ifferent sub-segments of consumers face different barriers that prevent them from benefiting from programs and incentives that could help lower their energy costs." This strategy should inform all aspects of C&LM program implementation, including the

[123] 2013 CES, p.19

design of programs (e.g., positioning rebates or financing products to encourage bundling of deeper measures), the delivery of programs (e.g., through community-based approaches, time-limited and seasonally-tailored campaigns,[124] partnerships with state and local government, etc.), and the development of collateral and messages targeted to persuade specific customer segments, especially those customer segments that are traditionally underserved by the C&LM programs.

The Marketing Committee should ensure that the scope and terms of this marketing services contract furthers the objectives outlined in the 2013 CES and in this Decision, and is harmonized with marketing efforts undertaken by CEFIA. To maximize efficiency, the Companies should be responsible for the day-to-day administration of the contract, with regular oversight and direction on major milestones from the Marketing Committee.

E. EDUCATIONAL PROGRAMS

1. Smart Living Center

The SmartLiving Center (SLC), located in the town of Orange, educates Connecticut residents about energy conservation and efficiency. The SLC features interactive exhibits, energy efficient products, and services aimed at lowering energy use while protecting the environment. The SLC employs professionals who facilitate seminars, special events, and tours to teach children, adults, and business owners the benefits of saving energy.[125]

In its February 17, 2012 approval of the EDC's 2012 Base Conservation and Load Management Plan, DEEP directed the EEB to consider the following options: (1) Relocating the Smart Living Center; (2) Constructing a second facility; (3) Expanding the current SLC to include a do-it-yourself training area; or (4) Utilizing existing energy efficiency training facilities rather than expanding the Smart Living Center.

The EEB supports relocating the SLC to a larger, more centrally-located facility but does not support the construction of a second SLC. A larger center would allow for updating existing exhibits to demonstrate improved technologies and construction of a do-it-yourself training area. Residential visitors would experience a simulation of an energy efficient home while business and commercial customers could learn about efficiency programs, while touring an example of an efficient industrial kitchen and office. CL&P supports maintaining one SLC in UI's

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[124] Seasonal messages should include a "Wait til 8" message to educate consumers about summer peak demand, an autumn lighting message to maximize the naturally occurring increase in lighting sales at this time of year, and other seasonally appropriate messaging. These messages should be designed for repeated use, i.e., year-to-year, to reduce cost and reinforce a consistent message. As an example, the Department directs that a campaign that targets efficient lighting should be launched each summer or autumn when interest in purchasing lighting generally increases.

[125] 2013-2015 C&LM Plan, p. 254.

service territory while the Fund continues to support education through the museum partnership and involvement with the Connecticut Science Center.[126] Tr. 5/1/13, p. 660.

In the 2013-2015 C&LM Plan and Budget submitted by the EDCs in November 2012, the EDCs allocated $2,602,165 in 2013 to the SLC and Museum Partnership line item to support relocation of the SLC.[127] On February 25, 2013, at the EEB's request, the EDCs submitted revised budgets and tables to increase energy savings. The revised budget reallocated approximately $1.3 million originally intended to fund relocation of the SLC to programs that provide direct energy savings.[128] As a result, the EDCs deferred relocation of the SLC, and UI negotiated a one-year extension to the SLC's current lease.[129] Tr. 5/1/13, pp. 655-660.

The revised Expanded Budget would allocate $2,602,165 to the SLC/Museum Partnership line item, which would cover the cost of relocation (Table 18).[130] To summarize, the EDCs would relocate the SLC if additional funding is approved but would not do so under their Base Budgets for the next three years.

Table 18

Proposed SmartLiving Center/Musuem Partnership Budget									
	2013			2014			2015		
	CL&P	UI	Combined CL&P/UI	CL&P	UI	Combined CL&P/UI	CL&P	UI	Combined CL&P/UI
Original Base	$1,500,000	$1,102,165	$2,602,165	$600,000	$543,633	$1,143,633	$750,000	$543,633	$1,293,633
Revised Base	$800,000	$481,746	$1,281,746	$600,000	$481,746	$1,081,746	$750,000	$481,746	$1,231,746
Expanded	$1,500,000	$1,102,165	$2,602,165	$600,000	$543,633	$1,143,633	$750,000	$543,633	$1,293,633
Source of data: Table A1, pp. 24r 320 and 320r									

The Department continues to support its long standing commitment to education and believes the SLC does provide energy savings. While the EEB and EDCs do not attempt to quantify these savings because it would be difficult and costly to do so, the Department continues to recommend that efforts should be increased to demonstrate this savings. Education must be expanded to increase awareness among consumers about energy efficiency and to transform markets for the products needed to achieve the state's energy goals. Therefore, the Department finds that continuation of the SLC will provide a significant and necessary educational resource in Connecticut's efforts to achieve its goals. Based on the foregoing, the Department approves the Expanded Budget for the SLC/Museum Partnership, and concurs with

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126 *Id*.

127 *Id*. at p. 320.

128 The SmartLiving Center and Museum Partnership are educational programs, which do not provide "direct" measurable energy savings. Therefore, they are not quantified and do not directly contribute to energy savings goals. The SLC Original Base Budget of $2,602,165 was reduced to $1,281,746 under the Revised Base Budget.

129 2013-2015 C&LM Plan, p. 320r.

130 *Id*.

the EEB approach to go forward with relocation of the SLC. Table 19 shows the approved budget for the SLC. The Department's adjustment for 2014 is highlighted.

Table 19

Approved SmartLiving Center/Musuem Partnership Budget									
	2013			2014			2015		
	CL&P	UI	Combined CL&P/UI	CL&P	UI	Combined CL&P/UI	CL&P	UI	Combined CL&P/UI
Base	$800,000	$481,746	$1,281,746	$1,500,000	$1,102,165	$2,602,165	$750,000	$543,633	$1,293,633
Expanded	$1,500,000	$1,102,165	$2,602,165	$600,000	$543,633	$1,143,633	$750,000	$543,633	$1,293,633

2. Museum Partnerships

The Discovery Museum in Bridgeport, the Stepping Stones Museum for Children in Norwalk, and the Connecticut Science Center in Hartford feature energy exhibits that provide children and adults with hands-on energy exhibits. Visitors learn about using solar, wind, water, and other natural resources to create energy. The Museums' displays focus on energy efficiency by means of renewable technologies. Visitors learn about the generation, transmission, and distribution of electricity.

In the 2013-2015 C&LM Plan, the EDCs propose allocating Museum Partnership funds toward the Discovery Museum, the Stepping Stones Museum for Children, and the Connecticut Science Center to upgrade and expand exhibits. Some of the upgrades include: (a) an interactive experience demonstrating the electrical transmission system; (b) a Global Energy Musical; (c) short films promoting EE-smarts; and (d) a Conservation Quest exhibit. **The Department approves the EDCs' proposed budgets for this program with no modifications.**

3. eesmarts/K-12 Education/Green LEAF Schools

The EEB and EDCs provide educational programs in a variety of venues. These include school-based programs (K-12 and beyond), public forums, technical training and seminars, educational exhibits and centers, trade shows, and community and grassroots outreach. Connecticut's C&LM-funded energy education programs and initiatives provide a knowledge base needed to become responsible citizens who use energy efficiently. The ratepayer-funded educational programs are diverse in audience and delivery but share one common goal: to educate, empower, and energize the state's businesses, municipalities, residents, and school children to use energy wisely.

The year 2012 saw the addition of a new education program: the Connecticut Green LEAF Schools program. This program is a collaborative effort of four Connecticut state agencies (DEEP, the Department of Construction Services, the Department of Education and the Department of Public Health) along with several other statewide partner organizations. The Institute for Sustainable Energy has been instrumental in managing the first year of the program. The program is designed as a support network for Connecticut schools trying to become "green" in aspects of nutrition, curriculum, and energy. Financial and technical support

for the Green LEAF Schools program is included in the 2013-2015 budgets of the Clean Energy Communities and the eesmarts programs.

The eesmarts Program offers professional development and educational events to schools participating in the Green LEAF Program. eesmarts is also partnering with Project Learning Tree, administered in Connecticut by DEEP staff and the Connecticut Forest and Park Association, to provide professional development on the Green Schools Curriculum.

In response to Interrogatory BETP-73, the EDCs put forth suggested goals for the Green LEAF Schools program. First, the program should have an annual goal to submit three to four Connecticut schools for the federal U.S. ED-Green Ribbon Schools program. Second, the EDCs want to define criteria to become a Connecticut Green LEAF School, as well as annual requirements to maintain status. The EDCs believe these criteria should match those the Clean Energy Communities program requires for schools to receive Scholastic Bright Idea Grants for service learning projects, including:

- Application to be a Connecticut Green LEAF School;
- Creation of a Green Team (made up of students, educators, parents, school facility manager and community partners);
- A service learning project proposal, that must include:
    - An energy-saving improvement plan,
    - Evidence school participated in Department of Public Health's Tools for Schools program,
    - Outreach mechanisms for educating school community on planned energy-saving measures,
    - Measurement/verification plans to track/capture energy savings,
    - Benchmarking school energy data through the U.S. EPA's Portfolio Manager Software, and
    - Estimated energy savings;
- Educational Components:
    - *Acorn*: Show integration of eesmarts materials and/or Project Learning Tree's Green Schools! (PLT Green Schools!) Investigations; and
    - *Oak*: School must have completed at least two of the five PLT's Green Schools! Investigations (required – one of these investigations must be related to energy).

In its first year, Connecticut Green LEAF Schools certified three schools and subsequently put those three schools forward as nominees for federal U.S. Education Department ED-Green Ribbon Schools, and all three were selected for federal recognition. As of now, there are no defined program goals or metrics to evaluate the program's success in subsequent years. The Department recommends that the EDCs develop these goals and metrics to evaluate performance in the program's second year. These same goals and metrics can be used for further refinement in future years. The goals of the Green LEAF Schools program should align with existing educational programs, including PLT and eesmarts. Connecticut Green LEAF Schools can be a valuable tool in the promotion of energy efficiency in buildings and

participation in Energy Efficiency Fund programs. **The Department recommends that the EDCs allocate sustained funding for Green LEAF and develop a plan to integrate the various school-based education programs to ensure that strengths from each program are maximized and any actual or perceived redundancies are minimized. The EDCs may determine an appropriate budget and report back to the Department within their 2014 Annual Update**.

VI. EVALUATION PROCESS AND ADMINISTRATIVE ELEMENTS

A. PROGRAM EVALUATION: PROCESS AND WORK PLAN

Evaluations are performed periodically by the Companies and the EEB to help verify the assumptions and analysis in the Program Savings Document and to make sure that ratepayer dollars are invested in the most cost-effective manner. The Department requires that evaluations be continued to justify savings and program performance and to keep the Program Savings Document as up to date and accurate as possible. **In 2014, these evaluations should include a comprehensive evaluation of the HES program for the reasons articulated in the individual program review of the HES program, in accordance with the Compliance Schedule in this Decision. Additionally, these evaluations should include the Building Code Compliance assessments as outlined in the October 2012 letter from the Connecticut Code Compliance Coalition to DEEP. DEEP directs the Companies to work with the EEB Evaluation Committee to propose a plan for implementation of this assessment, in accordance with the Compliance Schedule in this Decision.** These field assessments are critical to the state's implementation of the latest building codes, which require new constructions and renovations to be built in compliance with new building codes and standards.

As part of its standard procedures for selecting consultants, the EEB Evaluation Committee initiated an RFP process for an Evaluation Consultant toward the end of the contract period for the then existing Evaluation Consultant (Dr. Kim Oswald), in November 2012. In January 2013, the Evaluation Committee interviewed five evaluation teams, and selected the three-member team Skumatz Economic Research Associates (SERA). Following the selection, a two-month transition period commenced in order to transfer the work projects from the evaluation team led by Dr. Kim Oswald to the SERA team.[131] To facilitate the transition, SERA and Dr. Oswald developed a status report and list of remaining tasks on each of the evaluation projects.[132]

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[131] *See* Evaluation Committee Meeting Minutes (November 7, 2012), *available at* http://energizect.com/sites/default/files/2012-11-07%20EEB%20Evaluation%20Committee%20Minutes_F.pdf , Evaluation Committee Meeting Minutes, (December 12, 2012), *available at* http://energizect.com/sites/default/files/121212%20EEB%20Evaluation%20Committee%20Meeting%20Minutes.pdf, and Evaluation Committee Meeting Minutes, (January 9, 2013), *available at*http://energizect.com/sites/default/files/130109_EEB_Evaluation_Committee_Minutes_F.pdf .

[132] Evaluation Committee Transition Update Conference Call, February 26, 2013.

In its March 13, 2013 meeting, the Evaluation Committee refined its process for scheduling the Department and Evaluation Committee reviews of evaluation reports. For any evaluation report or project that incorporates process or impact evaluation, the Department will automatically schedule a technical meeting, and will schedule a joint BETP-PURA technical meeting if an evaluation report has any potential rate impact. For other types of evaluation reports, upon the recommendation of the Evaluation Consultant, the Evaluation Committee will determine whether a presentation or technical meeting is appropriate.

On April 5, 2013, the Evaluation Committee approved an Evaluation Consultant work plan and budget submitted by SERA for the period February 15 through December 31, 2013.[133] SERA developed its work plan by seeking the comments and suggestions of Evaluation Committee members. The work plan details the responsibilities and tasks of SERA, and includes an itemized budget of $251,930. SERA's tasks include: managing Evaluation Committee meetings and providing evaluation report status updates to the Evaluation Committee, representing the Evaluation Committee in various policy forums, developing an evaluation plan, managing evaluation projects and reports, and fulfilling first year transition duties. The Department approved the SERA Evaluation Consultant work plan, with the recommendation that SERA should (1) work collaboratively with the Evaluation Committee to prioritize the tasks in the work plan, (2) identify overlap areas with the Department staff in regional and national efforts, and (3) add a task to summarize an evaluation study's recommended changes to the Program Savings Documentation, cost-effectiveness calculations, and program implementation.

In April 2013, SERA began the process of developing selection criteria and soliciting evaluation priorities for evaluation studies from Evaluation Committee and the EDCs for 2013.[134] From this list of prioritized projects, SERA has begun to rank study proposals. SERA will develop the prioritization and ranking of evaluation studies for 2013 through an iterative process with the Department and the Evaluation Committee. The ranking and selection process is expected to be completed in the fourth quarter of 2013. Since most studies span more than 12 months, this process will establish evaluation study priorities beyond 2013.

Throughout the RFP and transition process, the Evaluation Committee, and the Department in particular, expressed the desire for a more transparent and collaborative process for establishing evaluation study priorities and monitoring ongoing studies. The Evaluation Committee also requested that SERA provide training workshops to the Evaluation Committee on evaluation methodology. SERA has already conducted its first training workshop, on survey sampling and statistics, on May 15, 2013.

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[133] Evaluation Committee Meeting Minutes, (April 8, 2013), Item 4, *available at* http://energizect.com/sites/default/files/130408%20EEB%20Evaluation%20Committee%20Meeting%20minutes%20F.pdf.

[134] *Id*. at Item 6.

Looking forward, the Department emphasizes that the Evaluation Consultant should inform and engage the Department and the Evaluation Committee on evaluation studies early in the planning process, at the prioritization and planning stage as new evaluation studies are considered and as the studies' scopes of work are developed. The Evaluation Consultant should provide a thorough and transparent progress report of studies in the pipeline, including obstacles such as budget overruns and delays in completion. In addition, the Evaluation Consultant should work with the Department and Evaluation Committee to develop a process for transitioning evaluation study results and recommendations into program changes, i.e., development of implementation plans for the EEB C&I and Residential Committees, as well as implementing revisions to the PSD.

The Department envisions a collaborative decision-making process between the Evaluation Committee and the Evaluation Consultant. However, both the committee and consultants shall be advisory to the Department. Although many issues and decisions will be achieved by collaboration and consensus, the Department reserves the right to give instructions and make final decisions on Evaluation Committee budgets and project priorities.

In the context of developing a 2013 Evaluation Plan, the Evaluation Committee discussed its participation and financial support of the Northeast Energy Efficiency Partnerships Evaluation, Measurement and Verification Forum (NEEP EM&V Forum). Since 2008, the C&LM Fund has financed Connecticut's share of the NEEP EM&V Forum, which leads and coordinates regional evaluation studies and projects with funds allocated among Northeast and Mid-Atlantic states. On February 13, 2013, the director of the NEEP EM&V Forum presented the Forum's 2013 priorities to the EEB.

After much discussion of NEEP's 2013 projects, the Evaluation Committee determined that some of the evaluation studies are not directly useful to Connecticut and should not be supported by the C&LM fund. The Evaluation Committee sent a letter dated March 11, 2013, to the NEEP EM&V Forum, which indicates that the C&LM fund will support two studies: the Net Savings Project (PS13-1) and Remaining Useful Life/Early Retirement Project (RE13-4).[135] Connecticut's funding share for these two studies totals $23,527. However, Connecticut will not provide funding support for six other studies totaling $97,540. In the future, the Department and SERA will work with NEEP and the Evaluation Committee to develop studies that will directly benefit Connecticut ratepayers.

1. Evaluation Consultant Budget

The Evaluation Consultant budget of $251,930, approved on April 5, 2013, is for the period February 15, 2013 through December 31, 2013, or approximately 90% of the program year 2013. Of this amount, $22,334 is allocated for transition activities from Dr. Kim Oswald to the

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[135] Evaluation Committee letter to Northeast Energy Efficiency Partnership, (March 11, 2013), *available at* http://energizect.com/sites/default/files/EEB_Eval_NEEP_Letter_4.13.pdf.pdf.

SERA team. These activities include holding periodic meetings among the consultant groups to facilitate the transition, creating reporting formats and procedures, reviewing evaluation procedures. These activities will be unnecessary in 2014 and 2015. **The Department provisionally approves an Evaluation Consultant budget of $250,000 for 2014 and for 2015. This budget level would annualize the 2013 approved budget, minus the amount allocated to transition activities. This approved budget is subject to a future review of 2013 and 2014 budget line items.**

2. Budget for Evaluation Studies

The Plan has the following Evaluation Budget component for the Base and Expanded Plan budget:

Table 20
Revised Evaluation Budget 2013-2015

	2013	2014	2015
Base	$2,949,000	$2,949,000	$2,949,000
Expanded	$3,493,000	$3,493,000	$3,493,000

Source (Base Budget): 2013-2015 C&LM Plan, p. 320r.
Source (Revised Budget): 2013-2015 C&LM Plan, p. 24r.

On December 28, 2012, the EEB approved via electronic vote a revised 2013-2015 Evaluation Budget. On March 20, 2013, the EEB sent the Department a transmittal letter for the Board's approval of the Evaluation budget for the 2013-2015 base and expanded plan. The Department abstained from voting on the revised evaluation budget. The EEB's second revised recommended budget for evaluation studies is represented below.

Table 21
Second Revised Evaluation Budget 2013-2015[136]

	2013	2014	2015
Base (in 000s)	$4,362	$4,379	$4,412
Expanded (in 000s)	$6,000	$7,000	$8,000

The EEB Second Revised Expanded Evaluation budget calls for a near doubling of the evaluation budget, from approximately 1.5% to 2.9% as a portion of total expanded C&LM budget. The EEB proposed budget is a recommended benchmark expenditure, rather than the result of a detailed evaluation plan.

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[136] PURA Docket No. 13-03-02, "PURA/BETP Consideration of 2013-2015 Conservation and Load Management Plan," Evaluation Budget letter, *available at* http://www.dpuc.state.ct.us/dockcurr.nsf/8e6fc37a54110e3e852576190052b64d/fc805a218ff3858d85257b3400659429?OpenDocument.

The EEB Evaluation Committee is in the process of developing a 2013-2015 evaluation work plan based on anticipated study needs and estimated costs of evaluation studies. Members of the Evaluation Committee and the Companies have submitted evaluation proposals and priorities to the Evaluation Consultant. Assessing these recommendations, the Evaluation Consultant will present a detailed draft 2013-2015 evaluation work plan and budget to the Evaluation Committee. The Committee will review this and will recommend a 2013-2015 final work plan to the EEB.

The EEB Evaluation Committee serves in an advisory capacity to the Department, which will assume direct oversight of the evaluation consultant, the process and the studies that are produced. This means that EEB consultants can then be called upon to incorporate study recommendations into program design. Removing responsibility for evaluations from the EEB clarifies the roles of EEB consultants and focuses that role on program implementation.

The Department believes that evaluation studies perform a critical function in determining whether programs are cost-effective and are implemented to achieve maximum savings. Evaluation studies perform an especially important strategic function to assure that ramped up C&I and residential programs are successfully implemented, programs achieve their savings goals, and new savings opportunities are revealed.

The Department supports in principle the EEB proposed base and expanded plan evaluation budgets. DEEP supports the need for building upon the EEB's existing evaluation efforts, but will require that the budget numbers to be grounded in a well-defined work plan. The Department acknowledges that approval of a three year evaluation budget in this Decision will be finalized before a detailed 2013-2015 evaluation work plan has been completed.

The work plan should identify high priority evaluation studies and develop a schedule that will effectively implement these studies and verify program savings. The Evaluation Consultant, along with the Evaluation Committee, needs to oversee the implementation of the work plan to ensure the recommended enhancements are implemented. Evaluation studies should be competitively bid to minimize costs while providing the highest quality evaluations. With higher C&LM budgets, there is more pressure to ensure program performance. Therefore, additional evaluation dollars will be needed, but studies should be ramped up in a manner that is tailored to program changes and enhancements. Special consideration should be given to the appropriate mix of studies. For example, non-impact studies such as market assessments are much lower in cost than impact studies. As DEEP has recommended with the ramp-up of efficiency programs in general, DEEP recommends a gradual and controlled ramp up of the evaluation budget. The budget ramp up should be closely tied to a thoughtful and deliberate identification of high quality evaluations designed to verify program savings. DEEP is also looking for additional ways in which evaluation studies can be leveraged regionally through the Northeast Energy Efficiency Partnership Evaluation, Measurement and Verification (EM&V) Forum.

The Department approves the EEB recommended Expanded Budget for 2013. The Department will review the evaluation work plan to determine budget levels in 2014 and 2015.

B. ENERGY EFFICIENCY BOARD CONSULTANTS

Consultants have been supporting Connecticut's C&LM process since 2000. Initially, there were two consultants, specializing in the C&I and residential sectors, who assisted in program and process development. Over time, as the role of the EEB has developed and expanded, the use of consultants has expanded and now includes multiple consultants with national expertise serving as subject matter experts on a variety of topics to the EEB and assisting the EEB's oversight of the utilities. Conn. Gen. Stat. § 16-245m authorizes expenditures by the EEB for "the retention of expert consultants and reasonable administrative costs provided such consultants shall not be employed by, or have any contractual relationship with, an electric distribution company or a gas company. Such costs shall not exceed five per cent of the total cost of the [P]lan."[137]

The following table, Table 22, lists the consultants currently assisting the EEB and where their costs have been presented in the annual C&LM Budget.[138] Historically, these costs have not been consolidated into a single line item but instead have been grouped into the budget categories identified in the table.

Table 22

Consultant	Budget Category
Managing	EEB
Marketing	EEB
Exec. Administrator	EEB
Residential	EEB
C&I	EEB
Evaluation	Evaluation
RD&D	EEB
EDC Staff	Planning

Regarding the C&LM filing, the Department agrees with the EEB's recommendation to separately list and account for consultant costs. Late Filed Exhibit No. 3. Therefore, the Department rescinds its previous ruling regarding the consolidation of all consultant costs into a single line item and directs the EDCs to include the following line items on Tables A, A1, and other appropriate tables included in the Plan in the following order:

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[137] Conn. Gen. Stat. § 16-245m, as amended by section 16 of PA 13-298

[138] EDC staff does not function in the capacity of a consultant to the EEB but does provide support services to the EEB consultants, e.g., responding to data requests.

- Evaluation (Utility Staff, Outside Services related to the actual evaluations)
- Evaluation Consultants
- EEB Consultants

The following table, Table 23, summarizes the actual and projected EEB consultant costs from 2006 to 2015. Note that this table also includes the cost of the Evaluation consultant. During this timeframe a significant amount of program planning and development was and is occurring. Program development was based upon input from the consultant team and framed to replicate best practices across the country. Much of the program planning and development work has occurred in the areas where the individual costs have increased, i.e., areas associated with the Managing, Residential, C&I, and Evaluation Consultants with increases of 95%, 384%, 127%, and 216%, respectively. The overall budget increased by about 45% during this time. Late Filed Exhibit No. 2.

Table 23

Summary of Consultant Costs

Consultant	2006 Actual Cost	2007 Actual Cost	2008 Actual Cost	2009 Actual Cost	2010 Actual Cost	2011 Actual Cost	2012 Estimated Cost	2013 EEB Approved Work Plan	2014 EEB Approved Work Plan	2015 EEB Approved Work Plan	% Change '06-'12
Managing	$102,519	$132,072	$181,883	$130,223	$131,481	$169,717	$199,987	$175,600	$175,600	$175,600	95%
Marketing*	$0	$0	$0	$0	$0	$25,600	$99,150	$107,300	$50,700	$50,700	
Exec. Admin	$81,022	$84,586	$91,880	$76,938	$86,992	$133,020	$100,246	$116,175	$116,175	$116,175	24%
Residential	$39,484	$58,937	$99,476	$148,685	$147,889	$169,927	$191,086	$183,771	$183,771	$183,771	384%
C&I	$72,114	$120,631	$149,969	$130,886	$131,961	$148,892	$163,652	$171,670	$171,670	$171,670	127%
RD&D	$6,813	$5,754	$8,306	$7,353	$3,876	$5,354	$8,944	$12,000	$12,000	$12,000	31%
Evaluation	$75,175	$89,697	$111,678	$136,901	$169,237	$196,766	$237,260	$251,930	$251,930	$251,930	216%
Total	$377,127	$491,677	$643,192	$630,986	$671,436	$849,276	$1,000,325	$1,018,446	$961,846	$961,846	165%

Source of data: Late Filed Exhibit Nos. 2 and 3.
* Marketing Consultant costs for the 2013-2015 period includes a proposal to have this consultant assist in the review of the next IRP.

The following table, Table 24, reflects the EEB's proposed Consultant budget for calendar year 2013 based on work plans approved by the EEB on April 14, 2013. Note that this table also includes the cost of the Evaluation consultant. This budget was revised downward from the original budget and related work plans submitted to the EEB in March 2013 reflecting work associated with the cancelled potential study. Tr. 4/24/13, p. 111; Tr. 4/25/13, p. 440-443.

Table 24

2013 Proposed Consultant Budget				
Consultant	Hours	Cost	Travel*	Total Cost
Managing	1,010	$161,600	$14,000	$175,600
Marketing/EE Potential	1,033	$103,300	$4,000	$107,300
C&I	1,170	$159,920	$11,750	$171,670
RD&D	96	$12,000	$0	$12,000
Residential General	498	$73,920	$6,398	$80,318
Residential General	285	$38,775	$6,398	$45,173
Residential Financing	385	$56,885	$1,395	$58,280
Evaluation				$251,930
Executive Secretary	1,121	$109,589	$6,586	$116,175
	5,598	715,989	50,527	1,018,446

Source of data: Late Filed Exhibit No. 3, Consultant Workplans.
* Misc. travel cost $4,463 allocated ½ to each residential general consultant.

The EEB supports the proposed 2013 consultant budget, citing the need for consultant services to meet the additional responsibilities assigned to it through recent legislation, PURA directives and the naturally occurring evolution of C&LM programs. The EEB also notes that it is allowed to spend up to five percent of the total C&LM budget on consultants and that its historical and proposed costs are significantly below this threshold. Regarding the budget, to assure transparency the EEB suggests itemizing consultant and evaluation related costs into Planning, Evaluation (utility personnel and outside services), EEB Evaluation Consultant and EEB Consultants in budget tables A and A1. Tr. 4/24/13, pp. 99-102 Late Filed Exhibit Nos. 3 and 4.

OCC states that once the annual consultant work plan has been approved there is no system in place for Board members to supervise the day-to-day work of its consultants. Although the EEB has a consultant committee, that committee "has not elected a chair or vice chair, and there is no delegation of duties" among its members. OCC Brief, p. 29. Based on the record in the PURA C&LM Proceeding and the recent increase in consultant costs, OCC recommends the EEB be required to develop a process for supervising its consultants to ensure that work is assigned and performed in an efficient manner and that consultants are not engaging in work to which they have not been specifically assigned. OCC also suggests that the EEB bylaws be revised to provide a formal process for the submission, review and approval of consultant bills. Id.

The EEB Operations Committee has taken steps to put into practice such processes and replicate a best practice currently in place for methodically reviewing the work and budget of the Evaluation Consultant and Evaluation workplan. This practice is being followed in an effort to ensure transparency, and to develop a protocol for ensuring that available resources from DEEP and the Companies are pursued prior to initiating additional tasks for the EEB consultants. Since formation of DEEP and CEFIA, significant additional staff resources are now available and actively participate in the EEB process, program review, design and implementation, highlighting the opportunity to minimize duplication of effort between DEEP staff, EEB consultants, the Companies, and EEB members, and to ensure, where appropriate, that DEEP staff expertise, CEFIA staff expertise, and the Companies' expertise are made available to the

EEB. The EEB is a voluntary board and its members generously donate their time and interest to the work. Thus, it makes sense to employ consultants to assist the EEB in fulfilling its many duties, particularly given that such consultants bring expertise with a national perspective. The Department agrees that the EEB develop a process for supervising consultants to ensure that work is assigned and performed in an efficient manner, and that work plans are more detailed and are developed in a more rigorous, transparent way, adopting some of the improvements made to the evaluation work plan process in the past year. The revised process for the submission, review and approval of consultant bills should be formalized by revising the EEB's bylaws or through other protocols that the EEB Operations Committee and full board adopts.

Given that the consultants budget is below the statutory cap of five percent of the total cost of the Plan, and efforts are underway to ensure that fiscally responsible practices are in place to monitor the expenditures for expert services, **the Department approves the 2013 and first quarter 2014 consultant budget that the EEB proposed, and intends to revisit the Expanded Budget levels for the EEB consultants line items for subsequent periods and evaluate the appropriate level based on the outcome of the EEB process for reviewing and supervising consultants. Therefore, DEEP requires the Companies to submit to the Commissioner, no later than in the 2014 Annual Update, an updated proposal which revises, as appropriate, the budget for the balance of 2014 and for 2015.**

C. CAM LEVEL RECOMMENDATION

The implementation of a Conservation Adjustment Mechanism (CAM) is the best way to fund increased conservation spending.[139] The Department continues to support use of a CAM to recover the funds necessary to support expanded C&LM spending for the same reasons cited in the approval of the 2012 Expanded Determination. Additionally, Public Act 13-298 provides for the recovery of additional revenues to support C&LM activity. Specifically, with respect to the electric C&LM budget, Section 16 of Public Act 13-298 states that to the extent that the C&LM budget approved by DEEP exceeds the revenues collected pursuant to existing funding sources, PURA shall "ensure that the balance of revenues required to fund such budget is provided through a fully reconciling conservation adjustment mechanism of not more than three mills per kilowatt hour of electricity sold to each end use customer of an electric distribution company during the three years of any Conservation and Load Management Plan."[140]

With respect to the gas C&LM budget, Section 16 of Public Act 13-298 further requires PURA to ensure that the revenues required to fund the C&LM budget approved by DEEP "are provided through a fully reconciling conservation adjustment mechanism for each gas company of not more than the equivalent of four and six-tenth cents per hundred cubic feet during the three years of any Conservation and Load Management Plan."[141] Similar to the current three mill

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[139] *See* 2012 Expanded Determination, pp. 31-34.

[140] Connecticut Public Act 13-298, Section 16, amending Conn. Gen. Stat. § 16-245m.

[141] Connecticut Public Act 13-298, Section 16, amending Conn. Gen. Stat. § 16-245m.

charge assessed on retail electric end use, the Department interprets this to mean that the revenues from each of these new conservation adjustment mechanisms are dedicated to program spending, and approves the budgets based on that interpretation.

In its 2012 Expanded Determination, the Department also commented on the appropriateness of a sales adjustment mechanism within the CAM to account for lost revenues. The Department will not repeat its analysis here, but continues to support a sales adjustment within CL&P's CAM and, because UI has decoupling, no sales adjustment for UI. Adjusting for lost sales is appropriate because the additional efficiency that will occur under expanded funding was not anticipated at the time of each EDCs last general rate proceeding. As a result, the EDCs did not have an opportunity to include these additional lost sales within their respective sales forecasts. The Department notes that its 2012 Expanded Determination recommends that a sales adjustment mechanism include an earnings trigger to avoid counterintuitive results, which the Department continues to support.[142]

Repeat sales identified in the Lighting Evaluation call into question the actual savings being provided under the Retail Products program. Additionally, the data provided in response to Interrogatories EN-4 and EN-5 and Late Filed Exhibit No. 28 raises concern about claimed program savings, which savings drive the sales adjustment mechanism. Additionally, the EDCs testified that lost sales are calculated even as sales may be growing. For example, if a customer installs a new central air conditioning system, but receives an incentive because the system exceeds baseline efficiency standards, the EDCs claim savings that will be included in a sales adjustment mechanism. In this case, despite the increased sales from the installation of a new system, the sale adjustment mechanism requires ratepayers to reimburse the EDC for the sales that would have occurred had the customer installed a less efficient unit. Tr. 5/1/13, p. 712. Based on the foregoing, the evidence presented in this proceeding further supports the need for an earnings trigger within any sales adjustment mechanism.

CIEC and its members support the expansion of energy efficiency but remain very concerned with the potential adverse rate impacts associated with a substantial increase in the C&LM budget. In its brief in the PURA C&LM Proceeding, CIEC claims that by recovering the Expanded Budget from customers through a volumetric CAM (kWh charge) a disproportionate amount of such costs are recovered from large C&I customers. The top 10 largest customers represent .00013% of the total electric customers, but would be allocated 3.5% of the total Plan budget – over $10.4 million. CIEC believes that this is inconsistent with cost causation principles. CIEC also states that volumetric charges hurt companies struggling to remain competitive and penalizes large C&I customers who tend to be the most efficient consumers of energy.

The Department is also concerned with the impact of rates on all customers and has taken action in this Decision to improve the cost-effectiveness of the C&LM programs. The Department does not agree that a volumetric charge is counter to cost causation principles.

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[142] *See id*. at pp. 33 and 34.

The focus of the C&LM programs and the majority of the benefits that result are associated with conserving kWh's and DRIPE impacts. Large C&I customers often use the most kWh's due to their size and operations. They are billed the most due to the volumetric charges but they also have the greatest opportunity to conserve. In addition the new flexibility provided to C&I customers under the three year program will further expand these opportunities. **Therefore the Department recommends that C&LM costs associated with the Plan be collected, as they have been done in the past, through volumetric kWh charges.**

The LDCs' current conservation funding is through a CAM that includes a lost sales adjustment component and does not consider earnings in the calculation. This mechanism was developed and implemented several years ago prior to expansion of the gas system and growth in sales currently being experienced in Connecticut. The CAM also did not contemplate decoupling of gas sales and revenues, which is now required by recently enacted clarifying legislation,[143] nor did it consider a performance incentive available as approved in this Decision. **Based on these changed circumstances, DEEP recommends that PURA re-examine the CAM to assure the mechanism is operating to protect ratepayer interests, following the guidance provided by the CES, and maintaining the incentives necessary to ensure the LDCs aggressively pursue energy efficiency.**

Regarding a lost sales adjustment, the LDCs should not be allowed to claim lost sales for implementation of conservation measures at the time a customer converts to natural gas, for example, when a new gas customer installs an efficient gas heating system, efficient hot water heater, and increases the insulation value of their home at the time of conversion. In this example, since the customer will be increasing sales for the LDC, the LDC should not be allowed to recover revenues for sales that will not occur as the result of the installation of these efficiency measures (through a lost sales adjustment). **Therefore, DEEP recommends that PURA establish an earnings cap on the gas conservation CAM that would limit the revenues associated with lost sales to not exceed the allowed rate of return**.

D. INTERIM FILING REQUIREMENTS AND ANNUAL UPDATES

The Companies propose an annual filing in the fall of 2013 and 2014 to update budget, savings, and revenue tables as well as to provide an explanation of substantive programmatic changes and response to direction provided in the approval of the 2013-2015 C&LM Plan. These annual updates of the 2013-2015 C&LM Plan (the 2014 Annual Update and the 2015 Annual Update) would also present a general program budget for future years. The general program budget should not be subjected to a detailed review because it will be preliminary and would not represent a formal proposal. Instead this data should be viewed as informational by policy makers and stakeholders. The Companies also hope to avoid filing multiple budget scenarios as was done in 2011 and 2012. Tr. 5/1/13, pp. 661-668.

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[143] *See* Connecticut Public Act 13-298, Section 11, amending Conn. Gen. Stat. § 16-19tt.

The Department agrees with the Companies, although anticipates that an annual filing on March 1st would be a more practical timeframe for at least certain elements of the Annual Update. This Annual Update would include information similar to the February 25, 2013 revisions submitted as part of this Plan and would also provide an overview of programmatic and budget changes. Specifically, no later than March 1, 2014, the Companies should submit revised budget and savings tables for 2014 and 2015. If budget changes for the upcoming year are possible to be prepared before that date then the Department supports an earlier timeframe for such submittal. Regarding program descriptions, that information should explain how the Companies are complying with the conditions of this approval as well as other pertinent data. For example, the March 2014 filing must describe how the Retail Products Program has been modified in compliance with the directives in this Decision. The Department will provide opportunities for public comments and may provide for hearings or meetings on the proposed Annual Updates and on the Commissioner's tentative decisions to act on the Annual Updates.

By March 1, 2014, and annually thereafter, the Companies shall provide a summary of actual data for the previous program (calendar) year. This will allow the Department to compare planned costs, savings, and cost-effectiveness of the programs to actual performance for each program.

VII. COMPLIANCE SCHEDULE FOR CONDITIONS OF APPROVAL

TOPIC or PROGRAM	CONDITION OF APPROVAL (ACTION NEEDED)	DUE DATE
EDC/LDC Allocation	The Department requires the Companies to revise and resubmit budgets for certain programs in the 2014 Annual Update with proportionately adjusted budgets, or defaulting to an 80/20 basis between the EDC and the LDC budgets, for 2014 and 2015.	2014-March 1 (Annual Update)
EDC/LDC Allocation & Home Energy Solutions	The Companies should propose an update to the Plan that allocates 100% of the cost for gas heating measures to gas customers. Further, the Companies should more evenly distribute the funding for oil measures between gas and electric customers and submit specific recommendations for such reallocation.	2014-March 1 (Annual Update)
EDC/LDC Cost Allocation & Home Energy Solutions	The Companies must propose an update to the Plan that allocates 100% of the costs of HES core services to natural gas budgets for any HES participant who becomes a gas customer (or newly converts their home heating equipment to natural gas) in the same calendar year in which they received HES services.	2014-March 1 (Annual Update)
EDC/LDC Allocation & Home Energy Solutions	The Companies should allocate costs of HES core services to natural gas budgets for any HES participant who becomes a gas customer (or newly converts their home heating equipment to natural gas) in the same calendar year in which they received HES services. The Department welcomes comments and will consider alternative approaches that will ensure efficient compliance with this directive.	2014-March 1 (Annual Update)
Spending Forward and Carryover	DEEP requires the Companies to detail any proposals to spend forward in the Annual Updates submitted to DEEP in the interim years of any three-year C&LM plan period. The EEB may monitor and approve any forward spending of 15% or less of the subsequent year's budget. Any forward spending above the 15% threshold amount may not proceed without prior authorization by DEEP, which authorization could be requested at any time by the EDCs and LDCs.	2014-March 1 (Annual Update)

Cost-Effectiveness Tests	DEEP requires that all costs and benefits be included in the cost-effectiveness tests in all future submittals.	All future submittals.
Cost-Effectiveness Tests & Commercial & Industrial	The Companies should explain in their 2014 Annual Update whether gas Total Resource B/C measures below 1.0 point to any areas for gas C&I program improvements.	2014-March 1 (Annual Update)
Equitable Distribution	DEEP directs the Companies to track relevant data on a census tract basis or report to DEEP what steps they are taking to comply with the requirement to track data on this basis.	2014-June 1, and thereafter annually by March 1 (Annual Update)
Equitable Distribution	On or before June 1, 2014, and thereafter annually on March 1, each EDC shall submit to DEEP and the EEB a table containing data for the prior calendar year that include, on a census tract basis or, if not available by census tract, on a town-by-town basis, the amount of conservation program funds assessed and the amount of incentives expended, disaggregated as small or large customers according to the 100 kW peak demand threshold, and further disaggregated by customer class (i.e., residential and C&I). Additionally, on or before June 1, 2014, and thereafter annually on March 1, each EDC shall submit to DEEP and the EEB a table further disaggregating the residential data component for small customers as follows: Specifically, the residential data component for small customers shall be disaggregated by the HES and HES-IE programs, and identify the total number of projects participating in each program, and disaggregate those project numbers by housing stock (i.e., single family, multi-family (2-4 units), and multi-family (>4 units)). The EDCs shall work together to produce a table format that presents the data from each of the companies in a consistent manner.	2014-June 1, and thereafter annually by March 1 (Annual Update)
Performance Incentives	The Companies shall adjust the performance incentives tables in the Plan to reflect the revisions described in the Performance Incentives section of this Decision.	2014-March 1 (Annual Update)

Performance Incentives & Home Energy Solutions	The LDCs' ability to earn a performance incentive for HES will be based, among other things, on meeting the targets in Table 16. DEEP directs the Companies to work with the EEB to establish for 2014 and 2015 specific, readily measurable performance goals, including the goals in the above table.	2014-March 1 (Annual Update)
Performance Incentives	DEEP requires that performance incentives be calculated based upon the actual expenditures and the savings achieved, which are to be scaled proportionally from the projected budget and savings goals to the actual budget at year's end. These calculations shall be done when year-end actual data is available and submitted in an Annual Update to the Department no later than March 1st of interim years.	2014-March 1 (Annual Update)
Performance Incentives	DEEP directs the Companies to work with the EEB to establish for 2014 and 2015 specific, readily measurable performance goals for measures installation, such as for insulation, high efficiency equipment, and appliances, to incent the Companies to aggressively target investment in deeper savings measures needed to achieve the State's long-term energy savings goals.	2014-Jan-01
Performance Incentives & Residential Retail Products	For 2014 and 2015, the performance incentive for the lighting component of the Retail Products Program must be revised to move from the broad estimate of energy savings to another more targeted metric, such as overall saturation of efficient lighting, market share, etc. If the EDCs do not properly address this issue they will not earn a performance incentive for this program in 2014 and 2015.	2014-Jan-01
Residential Retail Products	For 2014 and 2015, the EDCs must demonstrate that the Retail Products Program has been modified to address changing market conditions. The Retail Products Program for 2014 and 2015 must be redesigned by the EDCs and EEB to address the findings and recommendations contained in the Lighting Evaluation as well as the directives in this Decision. Target the market segment that has not yet replaced incandescent bulbs throughout their home Discontinue providing incentives for dimmable CFLs and should instead use these funds, as well as funds available due to the reduction in CFL incentives, to support expansion of the LED market.	2014-March 1 (Annual Update)

Appliance Rebates	DEEP directs the Companies to explore the cost effectiveness of offering rebates for other appliances, electronics, and replacement of electric appliances in gas conversion applications, then present a revised Appliance Rebate Program for 2014, if cost-effective opportunities are identified.	2014-Jan-01
Residential New Construction & Cost Effectiveness	The LDCs and EEB must propose program design changes to improve the cost effectiveness of the Residential New Construction Program and submit recommendations to DEEP.	2014-March 1 (Annual Update)
Home Energy Solutions	DEEP requires that an evaluation of the HES program be completed, and/or program design changes developed through the HES Innovation proceeding being implemented, before funding beyond the Base Level is approved for 2014 and 2015.	2014 Jan- 1
Home Energy Solutions	DEEP therefore requests that the EEB reconsider whether the current co-pay for HES is appropriate, and whether such co-pay amounts should be increased in order to reduce the ratepayer subsidy for the program while not negatively impacting participation levels.	2014-March 1 (Annual Update)
Home Energy Solutions	The Companies and EEB must develop marketing analyses and marketing campaigns targeted to specific residential segments that are designed not only to drive participation in HES, but also to encourage uptake of deeper measures, use of financing, and understanding of the concept and value of home performance. Therefore, the Department directs the Companies to include, in the 2014 Annual Update, a plan for the implementation of a marketing campaign to increase awareness about the concept and value of home performance.	2014-March 1 (Annual Update)
Home Energy Solutions	The Companies and EEB should advance efforts to level the playing field by establishing standards for home energy performance professionals through licensing or registrations, requiring third-party certification, or an alternative standard-setting mechanism. The Companies must provide a progress report in the 2015 Annual Update.	2015- March 1 (2015 Annual Update)
Home Energy Solutions	The Companies must establish targets, as soon as practicable, for the number and type of deeper measures that they intend to achieve through the HES program in 2014 and 2015.	2014-March 1 (Annual Update)

Home Energy Solutions	The Department has allocated an increase of $5 million to the LDC budget for HES to encourage residents to select deeper efficiency measures, such as high efficiency furnaces, insulation, and appliances, as they elect to convert to gas. The Department directs that the per unit ccf goal increase by 8% in 2014 and by 10% in 2015.	2014-March 1 (Annual Update)
Home Energy Solutions	The Companies and EEB must provide a plan certifying HES service providers or vendors to provide home energy labels and that labels be provided as part of the program.	2014-March 1 (Annual Update)
Home Energy Solutions – Income Eligible (HES-IE)	The Department approves an Expanded Budget for the HES-IE program, in order to ensure that more income-eligible residents can access energy savings. The EDCs must work closely with the CAP Agencies to increase HES-IE market penetration, and to consider opportunities for integrating HES-IE program implementation with implementation of the federal DOE Weatherization Assistance Program.	2014-March 1 (Annual Update)
Customer Engagement/ Behavioral Change	The Department directs the EEB to review evaluations of such programs in other states, the RFI proposals, and if necessary, review additional program designs addressing the broader design options noted above. The Department directs the EEB Residential Committee to propose a customer engagement strategy which will include recommendations on program design and delivery, including the potential integration with the Companies existing and developing customer relationship systems.	2014-March 1 (Annual Update)
Residential Financing	For 2013 the Department finds that UI's revolving loan fund balance is inadequate to support this program and directs UI to allocate at least the minimum funds needed to fund the program at the level needed to support loan activity, through the end of the first quarter of 2014.	Upon finalization of this Decision.
Commercial & Industrial	The Companies, together with the EEB, must develop a self-directed program that will be in place at the time that Plan revenues are available. A progress report on this development must be included in the Annual Updates.	Annual Updates
Commercial & Industrial Financing	The Department directs that, as part of an expanded plan, a total of $5 million in ratepayer funds be allocated as finance capital for the SBEA loan program for each of the program years 2014 and 2015.	Annual Updates

Marketing	The Marketing Committee should ensure that the scope and terms of this marketing services contract furthers the objectives outlined in the 2013 CES and in this Decision, and is harmonized with marketing efforts undertaken by CEFIA. To maximize efficiency, the Companies should be responsible for the day-to-day administration of the contract, with regular oversight and direction on major milestones from the Marketing Committee.	2014-March 1 (Annual Update)
Educational	The Department recommends that the EDCs allocate sustained funding for Green LEAF and develop a plan to integrate the various school-based education programs to ensure that strengths from each program are maximized and any actual or perceived redundancies are minimized. The EDCs may determine an appropriate budget and report back to the Department within their 2014 Annual Update.	2014 March 1 (Annual Update)
Evaluation	In 2014, these evaluations should include a comprehensive evaluation of the HES program for the reasons articulated in the individual program review of the HES program.	2014-April 1
Evaluation	Evaluations should include the Building Code Compliance assessments as outlined in the October 2012 letter from the Connecticut Code Compliance Coalition to DEEP. DEEP directs the Companies to work with the EEB Evaluation Committee to propose a plan for implementation of this assessment.	2014-March 1 (Annual Update)
Evaluation Consultant	The Department provisionally approves an Evaluation Consultant budget of $250,000 for 2014 and for 2015. This budget level would annualize the 2013 approved budget, minus the amount allocated to transition activities. This approved budget is subject to a future review of 2013 and 2014 budget line items.	2014-March 1 (Annual Update)
Evaluation Studies	The Department approves the EEB recommended Expanded Budget for 2013. The Department will review the evaluation work plan to determine budget levels in 2014 and 2015.	2014-March 1 (Annual Update)
Energy Efficiency Board Consultants	DEEP requires the Companies to submit to the Commissioner, no later than in the 2014 Annual Update, an updated proposal which revises, as appropriate, the budget for the balance of 2014 and for 2015.	2014 March 1 (Annual Update)
Annual Updates	By March 1, 2014, and annually thereafter, the Companies shall provide a summary of actual data for the previous program (calendar) year.	2014 March 1 (Annual Update) and annually thereafter

APPENDIX A: SUMMARY OF COMMENTS ON THE 2013-2015 C&LM PLAN

APPENDIX B: PROPOSED BUDGET TABLES

APPENDIX C: DISPOSITION OF ORDERS

APPENDIX D: 2011-2012 EQUITABLE DISTRIBUTION REPORT