



C&I Committee Meeting
Tuesday, August 8, 2023 | 1:00PM – 3:30PM

[Meeting Materials](#)
[Meeting Recording](#)

Minutes

1. Roll Call

Board Members:

Neil Beup, Shubhada Kambli, Ben McMillan, Anthony Kosior, Larry Rush, Ron Araujo, Donald Mauritz

Board Consultants: George Lawrence, Leigh Michael, Stacy Sherwood, Phil Mosenthal, James Williamson

2. Public Comments

None.

3. DEI Metric Progress Update – DEI Consultants

Ms. Leigh Michael (Illume) presented a [progress update on DEI metric development](#) including the proposed definition of the equity PMI metric, specifying the EE programs to be included in the PMI metric, outlining the proposed non-participant study (study scope, budget, and timeline are being prepared now and will be presented to DEEP/EEB) and elaborating on the equity vision’s definition of “undeserved”. As of 8/8, Illume will move into Task 3 of the 2023 workplan – “defining underserved populations”.

4. 2024 Plan Update Revenue, Budget, and Savings Changes – Technical Consultants

Mr. George Lawrence (Caerbannog Consulting) presented on the [C&I 2024 Plan Update of Revenue, Budget, and Savings Changes](#). The discussion included a review of summary tables describing annual updates to revenue, budget, and savings. General trends indicated net decrease in overall program budgets, a resource shift from Energy Opportunities to Energy Conscious Blueprint, and increases to “educational & engagement” and “evaluation” budgets.

Mr. Ron Araujo (Eversource) clarified that funding was moved from Retrofit to Equipment Replacement for heat pump replacement projects. Ms. Jordan Schellens (Eversource) explained that budget changes in education programs were tied to the addition of after-school and summer-certification programs for high school students. Mr. George Lawrence indicated that evaluation budgets were adjusted to bring CT evaluation funding in-line with industry best practices of 2% - 2.5% of total EE portfolio budget.

Parity Analysis

For EE electric programs, proposed budgets were shown to be generally proportional with program revenue by customer class.

Savings

Data was presented for the “planned electric savings breakdown”, categorizing savings by end use. Lighting remains the program’s primary savings source, with process and cooling accounting for next-highest savings sources. “Optimization” electric savings indicate a negative value due to the inherent electric increase that occurs during fuel-to-electric transition counted during heat pump conversions.

Ms. Jordan Schellens suggested evaluating savings data based on MMBtu rather than kWh. Mr. George Lawrence was in general agreement and gave examples of MA’s MMBtu accounting structure. Mr. Anthony Kosior supported the request to evaluate data using MMBtu metrics.

Historic Budgets and Lifetime Costs

Program data was presented in the range of 2013 – 2025, comparing past performance to projected planning levels. Key events on the line-charts highlight the legislative raid that occurred in 2017-2018, where budgets underwent approximately 1/3 reduction, budget recovery from 2018-2020, and the 2020-2022 decline associated with the covid pandemic. On average, budgets are down from their peak in 2016.

Program costs/lifetime kwh saved were shown relatively stable from 2013-2019 at ~\$0.025/lifetime kwh, but have seen an increase since 2019 and have approached ~\$0.075/ lifetime kwh. Historic program changes relative to 2016-2017 peaks indicate 56% decline in annual kwh savings and 68% decline in annual lifetime kwh savings.

Mr. Larry Rush (Avangrid) clarified that UI counts cost at time that project agreement is signed and counts savings when the project is closed. Mr. Anthony Kosior asked for clarification on how the \$/lifetime kwh metric was calculated. Mr. George Lawrence clarified that “\$” correlates to incentive paid out on the project and “lifetime kwh” corresponds with annual savings multiplied by the measure life. A consensus was made indicating that less energy savings is being achieved per budget relative to prior program years.

Analysis of Program Changes

Program data was analyzed further by examining the effects due to changes in “Net to Gross” and “Measure Life” values. Over the 2020-2024 period, general trends indicated net-to-gross lighting declining by 22% and average lighting measure life declining by 42%. Ms. Jordan Schellens provided a reminder that heat pump installations would also negatively impact the cost per kwh metric.

Evaluations results (2014B) indicate declining lighting realization rates across 3-year projections. The 2024-2026 PSD realization rates were highlighted for Midstream – Lighting with Controls (85%, declining to 81%) and Midstream Lighting (16%, declining to 6%). Due to trend in realization rates, and since a majority of lighting savings come from midstream program (50% +), overall program savings can see significant impact by increasing percentage of lighting projects installed with controls.

A general recommendation was made to prioritize 1) lighting projects with controls and 2) non-lighting projects. Mr. Ron Araujo proposed changing the way programs are evaluated from cost effective standpoint by moving from a kwh to MMBtu based metric (to correctly capture heat pump impacts). Mr. Anthony Kosior provided additional support for the referenced changes to evaluation metrics and questioned how the program should direct its long-term plan as lighting percentages

diminish.

5. 2nd Quarter Metrics and Discussion of C&I Metrics going forward

Ms. Jordan Schellens (Eversource) and Mr. Larry Rush (Avangrid) [presented on Q2 C&I quarterly reporting metrics](#). The presentation began with an overview of metric reporting requirement history, citing origination to DEEP 2020 CL&M Conditions of Approval #18 & #20.

Data was presented for Q2 2023 secondary metrics showing a comparison between actualized values relative to corresponding program targets. For data presented, actual values were generally in line with targets – those programs with notable discrepancy with were discussed in further detail. Metrics were discussed for the following categories: SBEA Electric - Signed comprehensive projects, ECB Electric -Number of C&I new construction/major renovation projects that utilize Path 1 or Path 2, EO Electric- Signed comprehensive projects, SEM participants, Equity projects – agreements in DECD towns, SBEA Natural Gas – signed comprehensive projects, and ECB/EO Natural Gas – signed comprehensive projects. Retro-commissioning (RCx) program participation was also discussed. UI’s program has been more active with virtual RCx programs. Mr. George Lawrence asked if virtual RCx savings would be claimed in 2023. Mr. Larry Rush confirmed that 18 projects were expected to claim savings this year.

Savings metrics were discussed for: LCI Retrofit Advanced Lighting (Net Annual kWh), Midstream Lighting (net annual kwh), SBEA Advanced Lighting Comparison (Net Annual kwh), Retrofit Lighting Savings by Program (net annual kwh), net annual electric savings by segment (%), net annual gas savings by segment (%). General trends apparent from data were discussed. The percentage of lighting projects with advanced controls continues to grow. Mr. George Lawrence asked for clarification on definition for “Enhanced” including fixture level controls and “High Performance” including network level controls. Ms. Jordan Schellens clarified that network lighting control projects require a DLC listed system that control the overall lighting system.

On Midstream Lighting, Mr. Larry Rush explained that some “lighting with controls” project count differences between Q1 and Q2 are the result of upgrades to UI’s tracking system. Ms. Jordan Schellens explained that the data is shifted by a past promotion of “fixtures with on-board controls”.

On SBEA Advanced Lighting, Mr. Larry Rush described that the previously referenced reporting issue was resolved between Q1 and Q2 and that the percentage of savings from enhanced and high-performance lighting is expected to grow. Ms. Jordan Schellens noted an increase in the SBEA high performance lighting incentive during Q2.

On Retrofit Lighting Savings by Program, savings were discussed with a breakdown by retrofit, midstream, and small business. Mr. Larry Rush pointed out increases in the Q2 midstream percentage resulting from the ability to claim projects due to conversion of the legacy tracking system.

The Companies presented additional data based on “Net Annual Electric and Gas Savings by Segment”, quantifying the percentage of savings originating from various sectors (retail, FIRE, Government and Education, Healthcare, Manufacturing, Unassigned, and Aerospace). Data sets reveal that there is overall program diversity among industry segments. Jordan Schellens indicated that the Eversource master project agreement with state agencies was recently re-signed.

George Lawrence lead a presentation on the evolution of [C&I Metrics](#). The discussion began with a proposal of “What Metrics to Keep, Remove, or Add”. It was recommended to keep metrics connected to secondary PMIs and RCx programs. Mr. Ron Araujo questioned the value of the SBEA gas comprehensive metric. Mr. George Lawrence responded in agreement, noting that comprehensive projects will inherently include multiple projects end-uses at the same time, and that a deeper look at the metric was warranted. Ms. Jordan Schellens showed support for continuing presentation of RCx metrics with “classic” and “virtual” breakdowns and suggested expanding the metric to include projects in the pipeline (due to long implementation times with RCx projects). Mr. Paul Tangredi (Eversource) shared that there was a RCx planning session in September that would focus on evaluating a variety of RCx offerings that could be added to program.

As the program transitions away from lighting as primary savings source, it was proposed to consider dropping some of the lighting focused metrics. Ms. Jordan Schellens suggested that referenced lighting metrics could potentially be condensed to a single or reduced metric(s). Mr. Ron Araujo proposed that there may be value in maintaining metrics that can monitor the transition from standard lighting to advanced and high-performance lighting. Mr. Larry Rush agreed that lighting metrics could be condensed.

Ms. Jordan Schellens asked if the goal was to understand “what fixtures are controlled” or “for studies that have been done, what impact is there on savings”. Mr. George Lawrence clarified that a primary objective is to have more controls through the midstream pathway. Mr. Larry Rush seconded interest in beginning the transition away from granular lighting metrics and prioritizing focus on other measures.

Mr. George Lawrence summarized the “metrics to drop” discussion by expressing interest to condense lighting metrics, keep the midstream metric, and maintain a metric to assess “savings vs consumption” by segment. Ms. Jordan Schellens indicated data analysis limitations in quarterly reporting vs annual reporting. The group agreed to remove the “savings by segment” chart but to keep the “annual bubble charts”.

Recommendations were provided on metrics to add for future reporting. Proposed metrics included Heat Pump Installations, Path 1-4 ECB Projects, and Weatherization Projects.

Ms. Jordan Schellens clarified that midstream heat pump incentives are capped at \$250/ton and are not required to be used for heating. As a result, it was recommended that EO, SBEA, and Energy Optimization would be most useful installations to report on. A discussion followed on how to quantify heat pump installations. Mr. George Lawrence proposed quantity of heat pumps. Mr. Ron Araujo showed agreement that midstream data would not be useful for the referenced metric and questions whether the intention was to track quantity of customers or quantity of heat pumps. Mr. George Lawrence suggested counting heat pump condensers installed. Mr. Larry Rush noted that updates to new tracking system may require additional time to configure for the proposed heat pump metric. The group agreed that the topic required additional discussion.

Ms. Jordan Schellens agreed to include a breakout of ECB Projects Path 1-4 breakdown in future metric presentations.

Mr. George Lawrence posed the question of “what qualifies a weatherization project”. The group discussed including insulation, air-sealing, other envelope improvements, windows, and duct insulation for ducts in unconditioned space.

Mr. Anthony Kosior proposed adding a metric related to GHG emissions. Mr. George Lawrence showed agreement and questioned if it was beneficial to show breakdown by program. Mr. Ron Araujo commented that there is an existing evaluation that is examining the best method to transition to GHG reporting currently underway by the Dunsky Team. Mr. George Lawrence encouraged additional “suggestions for metrics” to be sent [by email](#) or to be brought up at the next C&I meeting.

Jeff Howard (DEEP) explained that DEEP has an existing methodology for determining GHG emissions associated with electricity consumption and proposed that the factor could be shared to align with this effort. Ron Araujo questioned if current evaluation by Dunsky had considered the existing DEEP factors.

6. Planning for September

Mr. George Lawrence provided an update on activities planned for the September C&I meeting. New lighting realization rates (C2014B) have not been applied to benefit cost models yet – the group will plan to take a closer look at claimed savings effects during next meeting. Illume will provide an update on the DEI metric. Mr. Peter Ludwig (CT Green Bank) will provide an update of CT Green Bank activities.

Mr. Larry Rush explained that there is an early retirement program being developed and training will be offered soon. Mr. George Lawrence asked if the program was still a bid-in structure. Ms. Jordan Schellens clarified that the program would be a standard offering component of the Energy Opportunity and Small Business programs.

7. Public Comments

Mr. Dave McIntosh (ESC) asked for contact information for the CT master agreement projects. Shubhada Kambli (DEEP) provided contact information: Shubhada.kambli@ct.gov and michele.melley@ct.gov.

Mr. Dan Robertson (Artis Energy) suggested providing extra consideration to how year-to-year program data is presented and to effectively communicate that program rules have changed. It was cautioned to compare years where conditions were not equivalent. Mr. George Lawrence showed agreement with the comment and seconded the importance of accurately presenting programmatic performance changes.

8. Adjourn

The meeting was adjourned at 2:49pm.