



**Energy Efficiency Board
Commercial & Industrial Committee Meeting**

Tuesday October 12, 2021

1:00 – 3:30 PM

Meeting Materials in Box.com:

<https://app.box.com/s/d3lg8skadcqv6675yt96g0l770yel1a8>

Minutes

1. Roll Call

Board and Committee Members: Amanda Fargo-Johnson, Ron Araujo, Joel Kopylec, Kate Donatelli, Neil Beup, Walt Szymanski

Other attendees: Alex Sopelak, Amy Findlay, Emily Rice, George Lawrence, Ghani Ramdani, Glen Eigo, Jordan Schellens, Kara Marshall, Lorenzo Macaluso, Peter Ludwig, Philip Mosenthal, Pratik Dahule, Brendan Thomas, Erin Engelkemeyer, Glenn Reed, James Klase, Jessica Abrera, Jesus Pernia, Jodi Sullivan, Joseph Roy, Mia Lombardi, Nate Chumley

2. Customer Engagement Portal Update – Companies

Ms. Amy Findley, Eversource, provided a presentation updating the Committee on the Community Engagement Initiative. Its focus has been tailoring the strategy for the customer. Customers were broken out into two large groups: largest customers and all other C&I. For the largest customers, the approach has been to manage accounts through dedicated Account Executives (AEs), empowering them with information so they can provide greater detail to customers as needed. These AEs are supported by the Business Intelligence Team. For other C&I Customers the approach has included digital enablement in the mass market; including more standard offerings and enabling access to information regarding EE opportunities through digital tools, like Oracle widgets and the EnergyX online assessment.

Ms. Kara Marshall, Eversource, explained how customers have been ranked by consumption via a database that sums all billing accounts per customer. This helps the Companies provide appropriate Program Offerings given the scope of each customer's operation(s). For example, the State of Connecticut has thousands of billable accounts that are tied to multiple customers (UConn, Dept of Transportation, etc.). There are 110 customers like this that account for 25% of Eversource's electric service and they are ranked in Q1. There are four rankings total, with increasing numbers of customers. The size of the customer is defined by their consumption and demand; larger customers (Q1/Q2) get more customized offerings and smaller customers receive more standardized offerings.

Ms. Marshall shared that the Companies are also able to use this database at the building level and are starting to put together building portfolios, including Energy Use Index (EUI – BTU per SQFT). This information can be anonymized and shared with customers; which is particularly useful in landlord/tenant buildings. Additionally, Companies are looking to help customers leverage interval data in order to identify demand and other savings opportunities. Customers can use tools to access this data directly, but Account Executives are trained to help interpret the data and determine best next steps. Reducing demand at peak AC hours via HVAC projects, demand response, behavioral demand, or a setback program are examples of solutions.

Ms. Findlay provided details on the Oracle widgets that are digitally focused. One of the changes is the placement of widgets on the website. Whereas before customers were driven to a portal, Eversource is trying to engage customers when they are already interested in learning about EE opportunities by placing widgets throughout the website and within the portal. For example, the Usage History Page is the 10th most visited page on Eversource.com and now the customer can see customized information, a bill comparison widget and a usage analysis widget. Customers can look at usage and cost over time, see trends, and weatherized usage information. Peppering widgets throughout Eversource.com enables the Companies to drive specific recommendations for CNI customers at times and in places where it's going to be the most impactful.

Mr. Pratik Dahule provided an update on the EnergyX Assessment Tool. Customers can complete an online assessment that will provide recommendations to reduce energy consumption and connect them to relevant program offerings. The assessment tool is adapted for mobile, tablet, and desktop devices. There are two portals, the first is where the customers answer questions and provide relevant information that, based on the answers, narrow the focus and guide them to building-specific information and recommendations. The other portal is administrative in nature and allows admins to see what kind of data has been submitted, how the customer has acted, and what areas they can help with. The tool can generate reports that can be used to analyze and determine next steps.

Mr. George Lawrence indicated the tools were incredibly useful, pointing to the EUI. Mr. Lawrence asked if there was training or a roadmap for account managers regarding the next step. Ms. Kara Marshall indicated the Companies are working to identify individual opportunities that are best for the building and working with the customer to understand their plans for managing that building going forward. Ms. Jordan Schellens added that these are managed accounts and there are Account Executives and ECs assigned to them who are involved.

3. Three-Year Plan Savings and Costs – Consultants

Mr. George Lawrence presented a comparison of the current Three-Year Plan as it compares to the August version. There were changes to realization rates, mostly fixing typos, and clarification on some upstream measures. There were a number of changes to measure lives, including fixing typos and reassessing assumptions of measure mixes.

Mr. Lawrence explained that realization rates are used to adjust Gross Savings. There are a number of variables that can impact realized savings versus estimated savings, from varying evaluator methodologies to occupant behavioral changes. Realization rates account for spillover, free ridership, and the observed discrepancies between estimated and realized savings for measures. Mr. Lawrence noted that there are still questions around evaluation realization rates for some mid-stream lighting fixtures, specifically exterior fixtures and retrofit kits. The Consultants have attempted to meet with Evaluators, but didn't have enough time. The Consultants believe there is an issue with how mid-stream lighting controls savings are being calculated and that looking to Massachusetts for guidance given their regional upstream program is recommended.

Mr. Lawrence acknowledged that the lighting controls savings factors have been updated for mid-stream SBEA but the tracking system for these measures doesn't necessarily tell the Companies what they need to know. The Consultants believe it's important to address this to enable accurate claimed savings.

The Companies stated in the 2020 Plan Update that refrigeration measures would move to mid-stream, but there are some perceived refrigeration measures that have not moved, like SEM fan motors, night curtains, and door heater controls, etc.

Mr. Lawrence appreciated Ghani Ramdani and Glen Eigo's help and the Companies' collaboration in making these changes.

Mr. Lawrence indicated that there were some savings increase on the Eversource side, by 3,000-4,000 MWH per year, depending on the year. Lifetime savings increased by approximately 40,000-50,000 MWH. Because there were different assumptions used in the BCR models, the UI Plan savings declined slightly from the August version by approximately 1,600-1,100 annual MWH and 49,000-40,000 lifetime savings.

Mr. Lawrence also reviewed changes by program. New construction costs increase over past costs due to COVID, deeper high-cost options like zero net energy and EUI pathway, and increased code baselines which are expected about a year from now. Mr. Lawrence posited that the programs are reaching the point of diminishing returns with respect to lighting. In Energy Conscious Blueprint, the UI actual costs are significantly higher than projected. Mr. Phil Mosenthal asked if these numbers include projects in the pipeline where the savings aren't booked but a lot of the money is spent. Mr. Lawrence indicated that UI has a different account system than Eversource, which may account for the divergence. Mr. Joel Kopylec noted that UI does adhere to accrual accounting, meaning that when projects are signed, UI accrues the spending but do not count the savings until the project is installed and closed out.

Both Companies' Electric Energy Opportunities will see retrofit costs increasing over past costs, though not as dramatically on the annual side. Lighting realization rates are driving increased annual costs, but reduced measure lives are driving lifetime increased costs. Business and Energy Sustainability costs stay flat over time and costs are fairly low in this

program. SBEA costs are also increasing. SBEA is largely lighting, and realization rates will drive annual increased costs while reduced lighting measure lives drive lifetime increased costs.

With the gas programs there were no concerns on costs relative to the August version.

Ms. Jordan Schellens noted that the Companies will get back to the Committee on the questions raised regarding mid-stream lighting.

4. CET/MA DOER/Berkshire Gas C&I Weatherization – UI

Mr. Lorenzo Macaluso with the Center for EcoTechnology (CET), which was awarded the state contract to conduct the weatherization pilot, presented on the C&I Weatherization Program in mostly Western Massachusetts. Specifically, what they learned during the pilot regarding increasing participation, streamlining processes, and what measures work best, lessons learned, etc. CET has been working with PA's for decades, including Columbia Gas, Berkshire Gas, Eversource, and recently Avangrid. CET has expertise in residential and commercial programming around weatherization.

The Massachusetts pilot had three goals: (1) increase participation among small businesses, (2) compress timelines, and (3) yield bigger, more comprehensive savings. The Pilot testing focused on areas across the program, from building construction to standardized pricing, financing options, vendor partnerships and lead sharing, design, and more. CET built a modeling tool borrowed and adapted from the residential program. Standardizing measure costs was critical both for calculating real-time savings and project costs and compressing the project timeline because this data is available.

Customers receive an "Energy Action Plan" with varying levels of difficulty. The report includes the next steps, financials, incentives. This helps get customer buy-in and assists in the decision-making process. Customer service is also important. Those working with customer through this process need to understand their priorities and motivations, which can vary by customer. Additionally, Mr. Macaluso noted that CET is in a trusted position with the customer because they don't have a vested stake in which projects the customer chooses. They don't install or sell materials.

Contractor partnerships are incredibly useful as they help to bring in customers. CET has a broad network of installers that have bought into the program. Traditional marketing strategies are used in addition to contractor partnerships, targeted by building type. CET's approach is a complementary stream of projects. This means bundling projects or tackling project in sequence to achieve comprehensiveness. Most of the businesses CET is working with do not have a dedicated energy manager and EE is not necessarily their priority.

Mr. Macaluso shared a few examples of participants. A church saved approximately 4,700 therms by installing air sealing and insulation. The pilot is serving various segments, which includes manufacturing, schools, hospitals, technology companies, etc. The Pilot has seen 70 projects, with lifetime savings of 840,312 therms, 5,462 MMBtu delivered fuel savings, and 692,560 kWh.

Most weatherization installers will handle the blown-in and air sealing work, but different contractors are needed for pipe insulation and other projects. Pairing installers is often necessary. When multiple air sealing and insulation materials are needed in one building it increases the cost, but also the savings. Bundling is helpful in these instances. The pilot applied creative solutions to address project cost, even a barrier, which includes on-bill financing and PACE financing.

CET does a lot of work in waste and recycling. Many materials need to be handled specifically and knowing these rules is not the customers' priority. Helping businesses navigate these details is a positive. Mr. Macaluso noted that the program has focused on heating savings, but is beginning to look at the cooling side which adds more savings.

Ms. Jordon Schellens asked if COVID has impacted this business and how CET does lead generation. Mr. Macaluso indicated that customers can still choose a virtual visit and CET does phone screening to prepare them for the site visit, if in person. While the numbers haven't been the same during COVID, Mr. Macaluso noted that the program is still getting leads and working with customers. Many of the adaptations during COVID will be useful going-forward. Like the webinars that attracted customers, flexibility with virtual visits, etc. Regarding lead generation, Mr. Macaluso shared many approaches: leveraging waste management calls to talk about energy (a few thousand businesses), vendor partnerships frequently bring in projects, direct sales outreach and engagement,

Mr. George Lawrence asked if CET has experienced customers motivated by occupant comfort, or whether that is a strategy for the CET team. Mr. Macaluso responded that comfort is definitely one of the things the CET team talks about. Mr. Lawrence asked if there were minimum loan amounts or thresholds that PACE has to see? Mr. Peter Ludwig, GreenBank said that the minimum loan amount is \$30K or larger.

Mr. Peter Ludwig asked how CET engages customers around financing. Mr. Macaluso shared that PACE hasn't been established in MA yet, so they haven't had a customer go that route. For the most part a singular weatherization project won't meet the threshold of \$30K, which is why bundling projects and getting at deeper savings is important. Regardless of a customer's motivation, Mr. Macaluso said, dollars and cents are always going to matter. The CET tool that can show bundled measures and different options is effective. When needed, direct install measures can be leveraged to the ROI to pencil out better. Some customers may need to do some capital planning, so CET will apply a longer-term strategy that can fit into their budget and timeline.

5. Boiler and Furnace Industry Standard Practice Evaluation – Consultants and Companies

To address many public comments received, Mr. George Lawrence wanted to share the draft findings of this evaluation, which likely won't see much change in the primary findings. Mr. Lawrence explained the mechanics of condensing gas-fired boilers as a primer, indicating that high-efficient units can be 95% efficiency. Mr. Lawrence explained that with condensing boilers, there is some programming that needs to happen, and the performance isn't necessarily a "slam dunk".

Industry Standard Practice (ISP) is an alternative to setting the baseline at code. Oftentimes code is treated as the baseline, the minimum acceptable standard of efficiency. But code doesn't always keep up with the market. ISP is defined as typical installation practices for lost opportunity measures, encompassing replace-on-failure and new construction or guy renovation. Retrofit or early replacement of working equipment is not included in ISP baseline. Ms. Jordan Schellens added that if you have a 60-year-old boiler, the existing efficiency will not be used as baseline because it's outside of its useful life.

For buildings with hot water distribution systems, ISP says that condensing hot water boilers are standard equipment and for steam distribution systems, slightly above-code steam boilers are standard practice. Mr. Lawrence shared an exception, that for buildings with hot water distribution systems for which the installation of a condensing boiler is not physically/financially possible, non-condensing cast-iron sectional boiler is the most appropriate. Condensing boilers have a high market share and would be standard practice even if the program went away. IECC 2021, which may be adopted next year in CT, recommends 82% AFUE for small boilers and 80%E for medium boilers, but ISP recommends 92% AFUE and 90%E, respectively. ISP recommendations should be considered the baseline.

This shift in baseline narrows the opportunity for calculated savings. Ms. Jordan Schellens noted that Mr. Lawrence's description is more reductive than the reality for customers. It's not "if you have this, then it's that" because customers don't have the skillset to know when to qualify things; how the equipment will be exhausted, etc. Mr. Lawrence noted that there is an exception for these instances, if you don't know how it's going to be exhausted or how it previously was exhausted, the ISP gives you a number you can use. Ms. Schellens shared that the report is not done, but the numbers are.

Mr. Lawrence shared that the Evaluators found both condensing equipment and code minimum equipment were both being specified out in the marketplace, depending on the client's need. While there is some variability with furnaces, the consensus is that if there's an existing condensing exhaust stack, the equipment was standard practice and the condensing equipment should probably be considered baseline. For large furnaces the IECC 2021 is 80% and the recommended new baseline is 85% for NC or unknown existing venting, 90% for existing condensing stack, and 80% for existing non-condensing stack. For smaller furnaces the IECC 2021 is 80% and the ISP recommendation is 85%.

Mr. Lawrence posited whether it was still cost-effective to incentivize hot water condensing boilers. Ms. Schellens said that this is still being worked out at the moment, but it will have an affect on the retrofit, new construction, and mainstream programs. Mr. Ron Araujo added that, from a planning perspective, the Companies didn't reduce the incentive for boilers based upon the findings in this draft.

Mr. Araujo added his concern about when you have common pieces of equipment operating in two different areas, commercial and residential, there are two baselines for what could be the same equipment. Ex: residential furnace in a commercial application. Mr. Lawrence noted

that his takeaways are (1) the Companies are limited in what they're able to do in terms of incentivizing efficiency boilers and (2) the end goal of efficiency programs is to transform markets. One of the public comments centered around the risk of backsliding if incentives for certain measures go away. Mr. Lawrence noted that the likelihood of backsliding into non-condensing boiler is low while with furnaces it's probably greater.

6. Planning for November meeting

- a. 3rd Quarter C&I Metrics Performance
- b. Update on Benchmarking Initiative
- c. Upstream Refrigeration Measures
- d. Meetings in person in 2022? – Ms. Emily Rice indicated that the Board hasn't made this decision yet. Ms. Amanda Fargo-Johnson added that the schedule is usually discussed during the December meeting. Ms. Fargo-Johnson stated that the Board will follow state protocols. Ms. Jordan Schellens noted that she could reserve a room for the committee as soon as she has the schedule. Ms. Fargo-Johnson guessed that in-person meetings will most likely resume midway through 2022.

7. Adjourn

The meeting was adjourned.