



Energy Efficiency Board
April 14, 2021 | 1:00 pm – 3:30 pm

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MINUTES

1. Process (10 Minutes)

A. Roll call of Board Members: Amanda Fargo-Johnson, Neil Beup, Donna Wells, Scott Whittier, Amy McLean, Jack Traver

Others in attendance: Amy McLean, Elizabeth Murphy, Emily Rice, George Lawrence, Ghani Ramdini, Glenn Reed, Jack Traver, Jeff Schlegel, John W Harrity, John Blair, Lawrence Rush, Neil Beup, Richard Faesy, Ron Araujo, Roshan Bhakta, Samantha Dynowski, Scott Whittier, Steve Bruno, Dan Ryan, Daniel Robertson, Devan Willemsen, Donna Wells, Erin Cosgrove, Giulia Bambara, Kate Donatelli, Mike Uhl, Mark Thomson, Matt Sheridan, Michelle Long, Mike Li, Nicholas Zuba, Paul Horowitz, Peter Millman, Russell King, Sheri Borrelli, Tamara Perry, Violette Radomski

B. Approve minutes from March 2021 Board Meeting

Mr. Jack Traver motioned to approve; Ms. Amanda Fargo-Johnson seconded. The motion passed unanimously with six votes.

C. Public Comments

Ms. Sam Dynowski, Sierra Club, commented on items Sierra Club would like to see in the next Three-Year Plan: (1) addressing health and safety barriers in residential sector with measurable goals so more residents can access the program, (2) ending rebates for fossil fuel equipment and appliances, (3) increased deployment of heat pumps to aide in achieving Deep's assessment that 11% of homes, or 100,000, in Connecticut will need heat pumps to meet 2030 Global Warming Solution Act.

2. Programs and Planning (120 Minutes)

A. Electrification Focus Area – Consultants/Companies

Mr. Glenn Reed presented on Building Electrification; what it is, what it accomplishes, its role relative to Connecticut EEB goals, the economics and opportunities of it, existing Connecticut electrification programs in place, and considerations for the 2022-2024 Plan. Electrification in buildings has focused on heating and water heating, though opportunities for cooking and industrial applications exist. Though electrification offers significant site savings opportunities and lower GHG emissions, economics are complicated and can vary from both a customer and utility cost-effectiveness perspective. For the next Three-Year Plan, economic assessments must be realistic in terms of characterization of performance and ongoing evaluations will inform assessment of Residential HP economics. Consultants will work with Companies and Evaluation Administrators to assess electrification economics and cost-effectiveness. While data can be reviewed in other jurisdictions, a Connecticut-specific review is recommended. It's estimated that 35% of Connecticut homes will show negative economics compared due to gas fuel. In terms of tracking impacts, stakeholders, led by DEEP, will need to determine how to account for increased electricity usage as an outcome of electrification efforts. Additionally, a determination on modeling customer economics that will inform

appropriate incentive levels and applications (partial vs. full displacement of existing) will need to be made. Further preparations in workforce development, customer education, HP sizing/installation specifications and both controls and demand-response integration are needed. A copy of the presentation, "2A_Electrification_04_14_2021F", can be found in the materials folder and the meeting recording includes the presentation in its entirety.

Mr. Neil Beup asked whether Consultants have recovered data that demonstrated homes that were already ducted and ready to receive HP system. Do you have a sense based on SQFT how much duct would be needed in a home? Mr. Glenn Reed: yes, though it does depend on factors like the layout, number of rooms, etc. Transfer fans can be installed for multi-room homes, named multi-head systems, though privacy preferences might exclude this approach. Mr. Ron Araujo, Eversource, added that nomenclature is significant and "ductless" is a term used at the Company. Mr. Richard Faesy added that there are 10s of thousands of examples, if not more, of homes in colder climates with single head systems. Many examples of single-head systems serving 2,000 SQFT homes.

Mr. Neil Beup thanked Glenn and Consultants for the insightful, helpful presentation. He also expressed a few concerns; namely (1) spending time and resources for a market that's less robust than anticipated, (2) that HP measures specifically won't be accessible to all and may not serve equitability goals, and (3) using electric ratepayer dollars to fund fuel-switching may not be as appropriate as using gas ratepayer dollars. Neil suggested the Board should determine what is the market and what is the opportunity before diving in. Mr. Ron Araujo agrees with Neil's concerns and acknowledged there's much to understand. We don't have great information on how many homes have ductwork, though the saturation survey suggested that 40% of homes have central air conditioning. This implies that only 40% of homes would be viable candidates. For HPs from a design standpoint, you want to capitalize on customers replacing or adding central HVAC systems in order for the measure to be economically attractive. While the market may not be large at first, there are opportunities that exist. Mr. Neil Beup added that of those 40% (that Mr. Araujo referenced) it's a fraction of those homes that would be willing and able to implement an HVAC measure.

Mr. Neil Beup asked Ms. Amy McLean what the next step might be or what the scale ought to be. Neil is cautious to propose an ambitious program without knowing more about the market potential. Ms. Amy McLean indicated the Residential Committee addressed this topic earlier in the day. Ms. McLean inferred that some market drivers aren't specific to HPs, but certainly demonstrating that the Board is pushing forward. Ms. Amanda Fargo-Johnson added that grid preparedness and customer costs are additional factors to consider. Mr. Ron Araujo: if we start down this path, consumer education will be paramount.

Mr. Glenn Reed noted that evaluation results are available and can inform this discussion. Consultants will bring a summary of those results to the Board. Mr. Neil Beup suggested for next steps that the Board receive more clarity on market potential and questions posed during this discussion. Mr. Jack Traver, in response to Mr. Neil Beup's concern for using electric ratepayer dollars to fund fuel-switching. Mr. Neil Beup responded that the bulk of funding comes from electric customers so the Board attempt to deliver programs that directly benefit the ratepayers that pay for it. Electrification could put more demand on the grid with ratepayer dollars. Mr. Jack Traver replied that everyone pays into the fund, and an unavoidable disparity of value exists depending on what individuals' access in the fund. This is something the Board and DEEP should consider. Mr. Steve Bruno brought up the funds for electricity, natural gas, etc. and while unsure whether these funds have been allocated specifically, it is something to consider. Ms. Amy McLean appreciated the discussion and questions asked.

Mike Uhl asked how individual customers enroll in BYOD HPWH program with EnergyHub? Mr. Larry Rush responded that it's the Heat Pump Water Heater Pilot for HES-IE.

B. Demand Response Focus Area – Companies/Consultants

Mr. Roshan Bhakta, Eversource, presented on demand resource strategies. Mr. Bhakta's presentation included background on passive and active demand response approaches, 2020 Eversource Active Demand Strategies and retroactive summary of performance, program enhancements and future considerations, and an address of Compliance #11. Mr. Bhakta discussed a potential integration of DR with PURA programs, like electric vehicles and battery storage, though much is to be determined. A copy of the presentation, "2B - EEB Presentation - Demand Response-4-14-21", and the recording can be found in the materials folder.

Mr. Glenn Reed: is Eversource planning gas-demand response in the near term? Mr. Bhakta: not immediately, would like to see how the cost-benefit works on two concurrent pilots. Want to learn before anything at scale is proposed.

C. Summary of Recently filed Conditions of Approval Responses – Companies

Mr. Ron Araujo, Eversource, and Mr. Lawrence Rush, United Illuminating, presented on the Companies' responses to 2021 Plan Update Compliance items. The presentation included responses to eighteen compliance items: Equity Metrics, HES Vendor Scorecard, Pay-for-Performance Pilot, Home Energy Score Working Group, HES & HES-IE Renter Data Collection, Crumbling Foundation Customer Outreach, Heat Pump Pilot Increased Participation, Electric Resistance Customer Conversion to Heat Pump Reporting, Evaluation Metric, Demand Response Program Reporting, Residential EE Concierge Service Offering, and HES & HES-IE Arrearage Marketing. A copy of the presentation, "2C - Companies 2021 Compliance Items - 4-14-21-REV", and a recording of it can be found in the materials folder.

D. Company Updates

Community Engagement Initiative – Mr. Ron Araujo shared Companies continue to hold stakeholder meetings and have conducted a survey of stakeholders to gather input. Companies plan to make modifications to the application and its process prior to launch with a goal to introduce the application in late spring.

Energize CT Center Alternative – Mr. Lawrence Rush announced a vendor has been selected, Cray Cray LLC, and are expected to have this unit completed in the fall. Until then, they will be holding events to continue education throughout the state. Ms. Amanda Fargo-Johnson asked whether the Board would get any updates in the meantime on the alternative. Mr. Rush said they could provide updates as construction is going on and keep Board in the loop on classes. Ms. Elizabeth Murphy suggested adding this item to the May Agenda so details and a construction schedule can be shared.

Energize CT website update – Mr. Ron Araujo noted that the Web Committee is still finalizing the RFP award and no other updates at this time.

E. Weatherization Barriers Update – DEEP

Ms. Amy McLean provided an update on behalf of DEEP. Many stakeholders have been working on a proposal for Department of Human Services and the LIHEAP Board. The proposal would seek to allocate \$2 million from the annual federal allocation the state receives for weatherization for 2022-2024 in order to build additional resources for health and safety barriers. The proposal was approved unanimously and will now go to the state legislature for approval. While a process and many details have yet to be decided, Ms. McLean credited many people for this victory; including advocates, DEEP, Companies, etc. and acknowledged how groundbreaking it is for Connecticut.

F. Avoided Energy Supply Cost Update – Consultants/Companies

Mr. Jeff Schlegel and Mr. Ghani Ramdani presented on the AESC which assesses the avoided cost potential for program development. Stakeholders include EDCs, State Agencies, and NGOs representing all six New England states. Results inform design for the next Three-Year Plan. Mr. Schlegel outlined factors considered in cost-benefit calculations and main findings from the current study and most recent study (2018). Mr. Ghani Ramdani discussed a proposal from Consultants and

Companies on how to incorporate the 2021 AESC for the 2022-2024 Plan. A copy of the presentation, "2F CT-2021 Avoided Energy Supply Cost_04_14_2021 w UIL", and the recording can be found in the materials folder. Compared to the 2018 AESC, the 2021 proposed AESC shows a 10% decrease in terms of electric benefits and 4% decrease in gas benefits for Eversource and 10-15% for United Illuminating; 5-6% decrease in gas benefits for Connecticut Natural Gas, and 3-4% decrease in gas benefits for Southern Connecticut Gas.

Mr. Schlegal added that regarding the avoided cost of carbon, this was addressed in a previous study. DEEP was a direct participant in the study group, but some of the values in this proposal comes from the Companies/Consultants. DEEP can and may rule on these items in parallel or could act on the application of some of these values as part of the plan review. Regarding the discount rate, the study indicates a rate lower than 3% but this can be adjusted using current data.

Mr. Jeff Schlegal noted an implication of the lower avoided costs, - that while they are concerning, they are not hugely impactful on the entire portfolio. Lower avoided costs will make a difference for programs and measures closer to the margin or a benefit-to-cost ratio of one. The reduction in benefits from lower avoided costs could impact cost-effectiveness and Companies will be looking at this during the planning process. Mr. Steve Bruno, to Mr. Schlegal's point, asked if Mr. Ramdani had seen any measures so far impacted in this way. Mr. Ramdani said so far most of the programs screened, but that in cases where the benefit reduces, the incentive can be adjusted to maintain cost-effectiveness, allowable via the utility cost test. Mr. Ramdani added that the flipside of reduced avoided costs is an indicator that supply costs are decreasing, which benefits consumers. Mr. Glenn Reed added that oil costs are projected to increase and that will move the needle on electrification.

2. Closing Public Comments

Samantha Dynowski, Sierra Club, in response to electrification and new construction. Legislature passed and Gov. Baker signed a net zero all-electric stretch code. Advocacy around that from builders was that net zero construction was already cost-competitive. Ms. Dynowski shared a Rocky Mountain Institute study <https://rmi.org/insight/economics-of-zero-energy-homes/>. Emissions from fossil-fuel appliances inside homes occur and have health implications. Ms. Dynowski believes it's important to consider the avoided cost of compliance with the state's Global Warming Solutions Act, as well as other social costs. Ms. Dynowski shared a study demonstrating the health and safety impacts of displacing fossil-fuel appliances. Ms. Dynowski concurs about equity being critical for all aspects, including electrification. Ms. Dynowski noted further support and consideration for heat pump deployment: (1) pairing solar with heat pumps mitigates potential increase for electricity and (2) because HPs are so efficient, they lower overall energy reduction. Ms. Dynowski stated that reduction of fossil fuels is not only a benefit but a drastic need.

Mr. Eric Brown, Board member, explained his role on the Board statutorily is to represent a statewide business organization, CBIA. Mr. Brown is no longer employed by CBIA as of last week, and will no longer be serving on the Board under this role. Mr. Brown thanked Board members and others and appreciated his time of service. Mr. Brown will forward his contact information. Mr. Neil Beup thanked Mr. Brown for his service on the Board and his advocacy for the business community. Ms. Amy McLean wished Mr. Brown the best and thanked him for his work on the Board.

3. Adjourn

Mr. Brown motioned to adjourn; Ms. Amy McLean seconded the motion. The motion passed unanimously with six votes.