



MINUTES

Joint Committee of the CT Energy Efficiency Board and the Connecticut Green Bank Board of Directors

Wednesday, March 20, 2024

1:30 p.m. - 3:00 p.m.

In Attendance

Voting Members: John Harrity, Melissa Kops, Hank Webster (DEEP)

Non-Voting Members: Stephen Bruno, Bryan Garcia

Members Absent: John Viglione, Brenda Watson

Others: Ron Araujo, Mackey Dykes, Richard Faesy, Brian Farnen, George Lawrence, Cheryl Lumpkin, Madeline Priest, Ariel Schneider, Heather Deese from Dandelion Energy, Lori Baca from BW Research, Stacy Sherwood on behalf of the EEB, Kathy Fay, Anthony Kosior, Seema Alim, Hammad Chaudhry, Marc Lemenager, Brent Milardo, Lawrence Rush, James Williams, George Yeghyayan, "Anne-Marie", and 3 unidentified phone numbers.

Unnamed Callers:

1. Call to Order

- Melissa Kops called the meeting to order at 1:33 pm.

2. Public Comments

- Heather Deese from Dandelion Energy spoke about geothermal ground source heat pumps and their impact in Connecticut. She covered the different types of systems that Dandelion Energy installs, the type of savings and amount of savings they provide, overall grid benefits throughout Connecticut, EnergizeCT rebates in relation to ground heat pumps, financing options for customers, and more.

- Melissa Kops asked if there is data around what the energy savings has been compared to the loan payment, how much is the savings, and if it can be quantified. Heather Deese responded there are detailed proposals for customers that lay out their expected energy bill savings. Their fuel bills for heating go away but their electric bills in the Winter will increase; their electric bills in the Summer would come down if they already had traditional air conditioning. In general, Dandelion Energy is trying to align loan payments with what the cost of carrying the loan will be. She doesn't know how much data is available in terms of having gone back and asked customers for their energy bills after a system installation.

- John Harrity asked about the breakdown of the cost and why the heat pumps are so expensive. Heather Deese responded that the interior equipment is similar to an air source heat pump but the difference in cost is due to the exterior equipment, such as

drilling, installation, maintenance, and labor costs. John Harrity asked for more information about the equipment installation and Heather Deese explained how the tubing and pipes are installed.

- John Harrity asked if multi-home loops are able to be installed and Heather Deese responded yes, that thermal energy networks or district geothermal systems are a topic of a lot of interest. She explained that if two buildings with opposite heating and cooling needs aren't too far apart, then they can be connected with a loop that will possibly move that heat between the buildings and then have some of the vertical loops or larger horizontal loops for that exchange with the ground and those systems. She then explained the efficiency of the systems they can install, though their primary focus to date has been the single-family home residential where they install one ground loop for each building. If there are multiple buildings that have the same load, it doesn't make sense to connect them because then more piping is required and more power is being used for pumping without getting any benefit in the offset load. So in the case of developments where there are multiple townhomes in a row, they install a ground loop for each townhome.

- Anthony Kosier asked for more information about the falcon curve and how geothermal systems will help the load shape in utilizing technology that has a higher COP as it relates to other electrification technologies. Heather Deese responded with information about what the falcon curve is and how it reflects the energy demand is over a season across various COP ratios.

- Anthony Kosier commented that in addition to vertical and horizontal wells, the industry is pursuing diagonal well drilling, coming from the oil and gas industries, and mentioned that Yale University has plans to utilize that technology.

- Stephen Bruno asked about what the actual Federal Tax Credits are and Heather Deese responded that individual income tax credits, if you install geothermal at your home, is the same as if you install solar or a wind turbine on your property which is a 30% federal individual income tax credit and is uncapped. But it is not refundable, so you have to owe at least \$10,000 in federal taxes to be able to take advantage of that and many people do not owe that much in federal taxes. She added that you can roll it over for up to 5 years. The commercial tax credit is now available not just for for-profit entities that owe taxes, but also nonprofits, municipalities, and a non-tax paying entity can get a refundable federal tax credit. Commercial building tax credits are 30% as a base and as long as you're either under a size limit or using prevailing wage and apprentice labor. It is up to 40% if you meet domestic content, so made in the United States. It is up to 50% if you're located in an energy community and its made in the United States. That percentage can be paid back to you as a check from the Federal government if you are a non-taxpaying entity like a school district.

- John Harrity asked if any customers install any of the systems themselves. Heather Deese responded that they've had customers who do have acreage who may either have their own equipment or want to work with someone local to put in a horizontal loop, like with the backhoe, and asked Dandelion Energy to just do the heat pump. They don't do that as a company, she does know that there are ground source heat pump installers who will do that. She discussed options for customers to do the drilling and installation themselves.

3. Review and approval of Meeting Minutes from the June 21, 2023 and December 20, 2023 meetings.

- With clarification from Brian Farnen, quorum was not met in the December 2023 meeting and so there would not be formal meeting minutes needed to vote on. Bryan Garcia suggested posting the minutes that were taken as a Draft publicly for transparency, and Brian Farnen agreed that was possible.

Resolution #1

Motion to approve the meeting minutes of the Joint Committee for June 21, 2023 and December 20, 2023.

Upon a motion made by Melissa Kops and seconded by John Harrity, the Joint Committee voted to approve Resolution 1. None opposed and Hank Webster abstained. Motion approved.

4. Clean Energy Jobs Report

- Lori Baca from BW Research summarized the Clean Energy Jobs Report and its findings. The report found that Connecticut maintained its commitment to leading the nation in its efforts to support clean energy in 2022, via regulatory initiatives and significant investments in offshore wind. Clean energy employment has recovered from pandemic-induced losses. However, the high levels of hiring difficulties for clean energy workers may limit future growth potential absent additional investments in workforce development. Policymakers' efforts to foster innovation, manufacturing, and services are paying off, but additional investment in incentives should be considered to help bolster deployment.
 - John Harrity suggested designing recruitment in the auto technician sector for the energy sector.
 - Ron Arujo asked about the difficulty in hiring and if that is unique to the energy sector or if it is indicative of other sectors as a whole. Lori Baca responded it's difficult for her to speak to the other sectors, but this is definitely a pattern that they've seen in states all over the region. BW Research has been preparing these clean energy industry reports for Connecticut, Massachusetts, Maine, and others and across the board there are clean energy hiring difficulties for technicians, mechanical support, and even electricians, so it seems like a nationwide shortage due to increased competition between states for the available workforce. Bryan Garcia added that in terms of the United States Energy Employment Report which this report is based on, the Green Bank examined the different industries that the USEER Report looks at and then examined the Connecticut policy on clean energy and focused this report on the clean energy areas that they wanted to focus on in Connecticut so that there was policy alignment. However, that analysis is now 5 years old so it may be reexamined in the future to see if recalibration is needed. As well, he noted the report is reflective and does not look forward. Melissa Kops added workforce funding issues struggles have been encountered before and stated that both need to be examined and considered when trying to solve those issues.
 - Melissa Kops asked if BW Research is looking at the ACEEE information at all and if similar databases are being used. Lori Baca responded that they have not incorporated that data and has primarily been using data from the BLS or survey data that they've collected. However, they do reference it as secondary research when describing the policy environment.

5. Plan Coordination

a. Input to FY 2025 Connecticut Green Bank Comprehensive Plan (Revisions)

- Bryan Garcia summarized the Green Bank's Comprehensive Plan progress and revisions including the focused implementation of programs, further investigation and application for tax credits in relation to the Inflation Reduction Act and Greenhouse Gas Reduction Fund.

- Melissa Kops asked in terms of the residential sector and trying to deploy more battery storage, how lucrative is it for customers to spend money on installing a battery storage system in order to get energy bill credits and/or incentives. She also asked if there is any opportunity to align the demand response incentive with the investment in a way to guarantee that those who have less resources for batteries to get more of a demand response incentive. Bryan Garcia responded that there is another section where more information about those different types of incentives will be explained further in the Healthy Housing section of the meeting.

- Melissa Kops asked in relation to Public Act 21-48, if Connecticut received that funding for the Energy Efficiency Funds. Bryan Garcia responded that there was a section that had to deal with the RRES program and giving PURA the discretion to work with the DOH, CT Housing Finance Authority, DEEP, and the Green Bank to determine what affordable housing is, and that definition is now out in the market and the associated incentives. However, it is outside any of the Green Bank's system benefit funds.

- Kathy Fay asked with the announcement to be made, if its for several applications or one application. Bryan Garcia responded that the items listed under the Inflation Reduction Act section of the presentation are included in both applications and that the anticipation is for two different winners. Bryan Garcia explained how the awards will work further.

b. 2025-2027 Conservation and Load Management Plan

- Stacy Sherwood summarized the 2024 Plan progress to date, update savings and benefits, progress to develop the 2025 – 2027 Plan, and 2025 – 2027 potential priorities and timeline.

6. Update on the 2024 Legislative Session

- Brian Farnen summarized the major bills addressed in the recent legislative session including HB 5004, HB 5439, and HB 5438.

- Ron Arujo asked if there was an update on HB 5052. Brian Farnen responded that he isn't sure at the moment but could look into it and get back to him. Mackey Dykes responded that it is addressed in Section 1 of the Governor's Bill.

- Richard Faesy asked if the two bills related to heat pumps, that neither plan has a funding source, if there is any sense of where that money may come from, such as if it is expected to come from the Energy Efficiency Board funding. Brian Farnen responded that he does not believe so and that there is some analogy being made to a successful heat pump deployment policy in Maine so he believes that is part of what is being discussed. Melissa Kops added that at least in the Climate Bill she believes they need to develop a plan first, and Brian Farnen agreed. Hank Webster added that Connecticut is the lead state of a multi-state application that is going to go for the Climate Pollution Reduction grants through the EPA to get funding to accelerate heat pump deployment throughout the region. Although it is a competitive program, he hopes all the right things fall into place at the right time. The group discussed funding options further.

- Melissa Kops asked what changed in HB 5004 in terms of the substitution. Brian Farnen responded that he does not, but James Desantos should have that information.

7. Opportunities and Challenges – Healthy Housing

- Bryan Garcia summarized the discussions that have taken place until now including the statistics around the economics of Solar PV, heat pumps, and battery storage. He reviewed some questions for consideration in relation to these topics.
 - John Harrity commented that Connecticut hasn't seemed to much with shared solar or community solar, and asked why that is. Bryan Garcia responded that he isn't sure and provided context about the program framework for shared solar projects. Ron Arujo added that it is not an area he investigates too often either. Mackey Dykes commented that Connecticut is a bit unique in terms of the SCEF program in that the system and process for developing it is pretty disconnected from customer participation in the program.
 - Richard Faesy asked how the members of the Joint Committee would work together to implement the suggestions made for the different programs available. The group discussed the ideas around next steps, implementation, and inter-agency efforts further.

8. Other Business

- a. Brief Update: C&I – Government
- b. Brief Update: C&I – Small and Medium/Large Business
- c. Brief Update: Residential – Single Family and Multi-Family

- Ron Arujo briefly summarized requested if anyone has any questions about slides to reach out to him directly, as the slides are relatively self-explanatory. He stated the idea was to summarize changes that happen for 2024 to keep in mind what may come in the future as well as what is happening currently.

9. Public Comments

- None.

10. Adjourn

Upon a motion made by Hank Webster and seconded by Melissa Kops, the Joint Committee adjourned at 3:32 pm.

Respectfully submitted,

Brenda Watson, Chairperson