Meeting Agenda

Energy Efficiency Portfolio Standard (EEPS) Technical Working Group (TWG) Meeting

Tuesday, June 10, 2025
10:00 a.m. to 12:00 p.m. (HST)
Hawaiʻi Energy offices at 45 N. King Street, Suite 500, Honolulu
Virtual option via Teams

10:00 am: Commissioners Welcome

- Attendees (14 in person and 14 virtual) were welcomed.
- All attendees welcomed on behalf of the Commission, thanked for their continued participation.
    - New phase of TWG
        - World has changed since last October leaving us with much less predictable and more challenging world to operate in. Those of us trying to continue our work to improve the world have to become even more effective in work we do. Think creatively and be willing to be a little more aggressive in the assertion of what we think is right. Like for you to consider different ways to focus our attention.
        - Promote energy efficiency and keep in mind how are we improving the lives of individuals in our community. Let's look more at metrics for the burden on the consumers we represent. Twenty five percent of families in the state have trouble paying utility bills. Important we help to drive that cost down.
        - If we are reducing the energy burden for our constituents, those measures will help us with GHG and energy efficiency targets as well. Help us understand real world impact and communicate back to decision makers. We can show we are making a difference and how and to real world families. Drive down family energy burdens through specific measures and look at all things that are influencing what is happening in households. If we see the burden reduced, then we are making a difference.
    - Congratulations everything you did to push energy efficiency standards forward for the next several years.

10:05 – Agenda and Introductions

- The Energy Efficiency Manager (EEM) provided an overview of the meeting agenda and objectives. Each attendee introduced themselves by name and organization.

10:10 – EEPS Legislation

- Update on status/outcome of EEPS extension legislation
  - EEPS Extension Bill: HB 1051 passed final reading in both Senate & House on April 30
    - Bill signing in June
    - Modifies HRS 269-96
- Reviewed Next Steps:
  - Initiate annual statewide energy savings tracking
  - Launch Market Potential Study
  - Affirm 2045 goal to establish interim targets

10:20 Federally-funded Programs Update

- HSEO update on the status of federally funded programs
- Hawai'i Home Rebates Program
  - Fully awarded the Home Electrification and Appliance Rebate (HEAR) program
    - Projected to launch in September 2025
    - Entirely income qualified
  - Home Efficiency Rebate Program (HOMES) is conditionally awarded – awaiting update from DOE
  - Training for Residential Energy Contractors
    - Developing training programs to provide more heat pump and other rebate-eligible technologies training
      - Contractors will work on HEAR program
    - Not ready to launch yet, expected to launch in Fall 2025
- Update on Hawai'i BPS and CODES Programs
  - Building Performance Standards Program
    - Awarded $18.1 million - conditional award
    - On hold – waiting on USDOE
    - Conditional award is valid through end of this year

      - *Question: Did that advancement come with funding?*
        - *Response: It did not. We are familiar with what has been happening in Baltimore for the same award. Their project objectives were moved a lot. Baltimore had also targeted commercial buildings and now it is all commercial buildings. Could do smaller buildings now. DOE gave the city of Baltimore five business days to work through the revisions and get back to them. If you are given these and you don't respond, then they consider it a forfeit of the award. This is a priority in our office.*

  - Update: Awards for Building Energy Codes
    - Secured $7.3 M - conditional – on hold by USDOE
    - State Building codes updates remain paused

        - Currently counties have indicated they are interested in moving codes forward.
        - Looking to create unofficial TAG of our own to come up with modifications to energy codes per the request of each county
        - Hope to kick off this TAG in the Fall

            - *Question: On TAG group, do you anticipate the work the TAG would do would be analyzing the cost implementation too?*
                - *Response: We had allocated large amount to do a cost/benefit analysis but don't have that funding. Will lessen the scope but still want to get cost benefit back. Want to work with contractor here to get that analysis. Will use TAG to give us advice on how to propose this. Still part of the plan.*

    - Won $2.8M Award from New Buildings Institute to develop Grid-Interactive Codes for Climate Zone 1A
        - Pilot projects being planned for Honolulu County – focused on residential buildings
        - Prospective Team includes: NBI, UH, Hawai'i Energy, HSEO, CCSR, Shifted Energy

            - *Question: What buildings have you identified?*
                - *Response: Residential buildings – aiming for new construction multi-family, one mixed use, would also like an older multi-family and looking at single family and military housing. Trying to be as broad as we can for single and multi-family. Challenge is getting enough recruits in the timeline we have.*
                - *Suggestion: One suggestion for residential single family – still programs with the current pilot programs - to extent there can be connections made there we might learn some extra things from that effort. Or things that don't work with the TOU structure.*
                - *Response: We are looking at more event-based outcomes. This was a three-year award. Kicked off in April, get started on pilot studies in October and hope to have 12 months of data. Will stager events. Don't have to deal with hot water loss or thermostat. Last part of this is data analysis and code measures we recommend.*

10:45 Avoided Cost / GHG

- EEM-Proposed Option for Avoided Cost and GHG Valuation
    - History of Avoided Cost
    - Current State of avoid cost estimates
    - Current state of GHG accounting

- Why change from the current method
    - Single annual GHG emissions factor fails to capture true EE measure effectiveness
    - More accurate GHG accounting will incentivize optimum EE measures
- Data for GHG emissions
    - Summary of state of data
        - *Question: Have you touched base with NREL? Is there an appetite for developing rates for Hawai'i? Maybe not until 2027? Have we talked with EPA about AVERT? Or Watt -time?*
            - *Response: We have not touched base with them. For ENGAGE model, similar to what ITT does, would need to be updated for any new inception over time. Lots of work that goes into that. Not marginal emissions.*
- Overview of GHG emissions reporting options
- Preliminary analysis – Hourly GHG emissions, Oahu
    - Preliminary finding: the variance in GHG emissions on the Oahu grid suggests the need for time-varying factors
        - *Question: for EPA eGRID – what data did you use?*
            - *Response: By power plant to its emissions rate.*
- GHG Example – Heat pump water heater on Oahu
    - Created estimated of GHG emissions from HPUC docket data and EPA filings
- Recommendations for GHG – Intermediate
    - Could go forward with this option now
    - Develop a simple near-term solution that incorporates time of day and seasonality of GHG emissions
    - One set of factors per island
        - *Question: How often would you need to update?*
            - *Response: Could be annual or tri-annual depending on work done on EEPS to coordinate.*
        - *Question: What does this mean in terms of implications for the Hawaii energy program in terms of complexity? More of a tracking for the interim?*
            - *Response: First develop these new factors and then review those and present to the TWG. Also work with advisory committee to answer questions like whether to adopt in 2026 or track in parallel and wait to report for two or three years. It will be interesting to see how new factors impact the TRB and we should review that to inform the decision about when to cut over.*

        - *Comment: Developing the process would need time to integrate other variables. Goal is ultimately, if there are time varying values that would influence how we are timing program adoptions, we want to consider that. An effort to better align how the efficiency portfolio supports the RPFs. For next generation of programs, are we having the discussion early on about where and when the programs can go on. What makes sense and gives us more granularity.*

- Recommendation for GHG – Future
    - After 2028, is the earliest we are thinking about in the future
    - Longer term, try to get to higher granularity and higher integration of resource planning
- Why add time component to avoided costs?
    - Large peak and non-peak
    - Simple on-peak and off-peak may not capture the entire period. Hourly time components to avoided costs that can exist on the grid.
- California avoided cost example – Window AC
    - Use California avoided cost calculator to demonstrate benefit of high granularity.
- Data currently available for avoided costs
    - The current annual value is from HECO Reporting Data
    - Hourly future projection data for 10 years provided by HECO from the IGP process
    - AEG analysis noted some data that need further investigation
- Methods exist to fill in missing 2023-2032 avoided cost data
- Methods to project avoided cost data (2033-2045)
- Analyzing current PBFA EE avoided cost data
- Recommendations for avoided costs – Intermediate
    - Create new avoided cost factors using PLEXOS hourly data
    - Add the avoided cost of GHG emissions
    - Create projections of avoided cost beyond HECO data (2032)
- Recommendations for avoided costs – Future
    - Two options for long-term avoided cost framework
        - Use data directly from HECO IGP modeling
        - HSEO has worked with NREL to develop a Hawai'i specific tool
- Pros and cons of the proposed solutions
    - Reviewed intermediate solution and future solution
- Discussion Questions:
    - Does TWG believe that the EEPS and/or the PBFA portfolio should support the RPS through time and locational specific avoided costs and GHG emissions factors?
    - Does the TWG support developing new time + locational specific avoided costs and GHG emissions factors?

- *Comment: We do not have IGP team on this call. Appreciate you are looking at this long-standing question. Once we get to 100%, what does that mean? Not just energy efficiency, how do we look at valuing the grid when everything is renewable energy? I think GHG emissions would be a good thing to look at in IGP. Just starting to go through IGP myself. From our DER standpoint, trying to figure out programs for DERs. IGP has an update from prior modeling cycle and at end of year will re-run new cycle of IGP and would be an opportunity to update assumptions. I will work on better understanding the IGP modeling and how energy efficiency roles up in this. Before Plexos, there was Resolve. Energy efficiency is entered at first stage before it goes to Plexos. Our team looks at projected energy sales and looks at DERS and how that will impact load shape and then EV bumps it up. Plexos is a sensitivity model. The values we have for Plexos here, assumes generation mix in there and energy efficiency is just an input to Resolve. In Plexos, GHG also has goals for the company and then additional GHG goals out there. Good to understand the contributions to GHG. Lots of opportunity with next IGP cycle but will not start until closer to the end of the year.*
- *Question: In next IGP will the structure change?*
  - *Response: I do not know if it can. Plexos is pretty limiting, it can't do a lot of granular program tweaking. Limitation with that too. But if you wanted to model energy efficiency as a resource, you have all these appliances. If you want a dollar value hourly, the inputs will have to get granular too.*
- *Question: One tie in, the NPS we are starting to launch also uses the avoided cost input. We have 1 to 1.5 years before we need avoided cost. Do we want to move something more robust, continue to put more refined data together?*
  - *Response: Great points – make it clear, even when we get to 100% there are likely emissions that need to be considered, how we consider them is a larger question. Even with limitations with how we do the capacity expansion that subtracts the underlying benefit. Even with those sort of limitations and analysis, still a huge benefit to do this when calculating efficacy of a program.*
- *Question: If we go with this program, will the EEM be responsible for update this annual or tri-annual?*
  - *Response: Next step is TWG gives us the go-ahead and then EEM would develop a proposal to the PUC. Advisory committee would advise on how often we update. Identify resources we need for initial development and ongoing. We would have an advisory committee, support from HECO, and time from the EEM team. After adoption, Hawai'i Energy, would likely help to collaborate and execute.*

        - *Comment: Concern from me is the load shapes. We can use other forms of analysis for anything under 250k, in the weeds discussion.*

- Reviewed Oversight Roles
    - HPUC
    - TWG
    - Advisory Committee
- Presented Development Process & Timeline
- Returned to Discussion Questions
    - Question: Are there any issues with the federal funding?

        - *Comment: Concerned we would be able to get done. Many EPA staff took the early retirement, could likely derive elsewhere but would be a miss. (EGRET Concern)*
            - *Response: EGRID is one option, could work to remove from the work flow, remove any federally required data as needed. EGRID is updated every three years.*
        - *Comment: I like the intermediate solution*
        - *Comment: What you are suggesting is that in '28 aligns with what NREL is telling us.*

- Asked for Objections
    - None noted

11:44 Wrap Up and Adjourn

- Thank you all for attending and our presenters

        - *Question: Do you want us to reach out directly if we are interested in being on the Advisory Committee?*
            - *Response – I know there are three members we need and I reached out to and looked to Jenn Baker for guidance as well. If you are interested, please reach out to me. Want folks with data analysis skills.*
        - *Question: Could HECO be regulated to share their marginal cost in real time?*
            - *Response: Would it help with all this effort? Part of the data is back data they have to share annually. Would having it in real time help inform all of this?*
            - *Response: Because our updating frequency is annual or tri annual, I don't think there would be a large benefit of that. Annual would be helpful. Really time would be beyond we need. NREL releases their data sets every year.*