Northwest Power & Conservation Council Conservation Resources Advisory Committee November 6, 2024

Kevin Smit, NWPCC, greeted the room at 9:00am, asking member to review minutes from the past CRAC meeting. Christian Douglass, NWPCC, called for introductions. Smit then reviewed the day's agenda.

Smit also summarized some of the decisions to date, including changing the admin cost approach from percentage of first year costs, to a \$/kWh by sector. Nicholas Garcia, WPUDA, asked if commercial/residential admin costs could be further bifurcated with rural/urban [Slide 3], noting that rural areas must spread costs across fewer assets. Smit offered to look at available data, saying that he did see a lot more data around line losses.

Jeff Harris, NEEA, said the challenge with the outlined approach is utilities have year-toyear continuity when funding EE. Because of this, he thought that using a fixed, invariable cost would be an issue. Harris wasn't comfortable with tying administrative costs to kW delivery, saying it doesn't accurately reflect the fixed, invariable cost. Harris suggested modeling at the resource block level instead of the measure level as a possible solution and encouraged thought around other modeling approaches to reflect this concern.

EE Supply Curve Development Methodology Kevin Smit, NWPCC, Christian Douglass, NWPCC

Bonnie Watson, BPA, indicated that she believes the Power Act doesn't direct the Council to consider cost effectiveness at the granular, measure level [Slide 9]. Smit said an EE resource has to be cost effective, but a lot depends on how the resource is defined.

Watson strongly encouraged the Council to consider leveling up the way they look at cost effectiveness for the Plan. She suggested looking at EE cost effectiveness at the block resource level instead of at the measure level, noting that this better aligns with portfolios in the real world.

Rich Arneson, Tacoma Power, asked: Could you give an example of how this administrative \$/kWh would work. My first guess is Residential works out to \$180/MWh.... which seems rather high, in the question pane. Douglass wrote back: We can come back with examples. It's not quite that straightforward, because the costs end up being levelized and combined with many other costs and benefits. Arneson approved of that answer.

Harris wrote: One last thought about admin. What I was trying to get to by talking about fixed vs variable admin costs is that at the margin, i.e., last measure to be considered cost effective, the marginal EE measure does not incur the full admin costs because the fixed costs of the EE program have already had to be paid whether there is one measure or a

hundred. The real question is what the incremental admin cost is to add the last measure into the portfolio, in the question pane. Douglass wrote: Thanks, Jeff. What you say makes a lot of sense. The trick is we'd have to figure out how to model this, i.e., where do those fixed costs go? It seems like you'd end up having to peanut butter them back to the measures. But I like the idea, and we can think about this more, in response.

Harris noted that in the first Plan, Seattle Master Builders sued the Council arguing that cost effectiveness was applied inappropriately. He said the courts found the Council was using the right approach and cost effectiveness could be applied at the portfolio level. Smit offered to check with the Council's legal experts.

Angus Duncan, independent, wrote: My recollection confirms Harris's description of the extent of the Council's authority to define EE measures individually or en banc, in the question pane.

Jennifer Light, NWPCC, suggested deferring this conversation for now and following up later.

Arneson wrote: Related to Watson's comment, If it rolls up to a program... One challenge is that there would be winners (cost effective) and losers (not cost effective) in a program but there is no guarantee that that programs folks are actually delivering the correct proportions. Customers pick what is of interest to them, not the Power Council. Just my two cents, in the question pane.

Jennifer Finnigan, Seattle City Light, shared Watson's concern and was curious about what the Council could legally accomplish, particularly as programs move to whole building approaches. Smit said this is a topic for an upcoming meeting. He added that cost effectiveness will be addressed again in the process and this is the time to discuss model inputs.

Garcia said as a working economist he knows this is an issue and wishes them luck with the conundrum. He said there are clear differences in cost effectiveness depending on the amount of customers a utility serves. Garcia said if there was to be disaggregation, he encouraged staff to think about costs across various sizes of utilities. Smit said this will be addressed as they have more locational insights than before.

Kasey Curtis, PSE, addressed cost effectiveness differences for rural utilities, saying he thought cost effectiveness to be a relative benchmark that also uses avoided costs. He thought both metrics were spread across the same small rate base. Smit agreed, calling that a good point.

Harris dropped a <u>link</u> into the question panel, adding This is the lawsuit I mentioned and the resulting 9th Circuit court ruling. The discussion of cost-effectiveness starts at about 1/3 of the way down. He added, The purpose of the conservation standards is to require the

Council to examine cost effectiveness of standards which, when adopted in their entirety, result in cost effective energy savings. All that is required is that the model conservation standards be cost effective, when viewed as a whole. See Sec. 839b(f) (1).

Duncan wrote, You may have responded to this question to exhaustion, but can you reprise how these EE measures relate to, are integrated with, reinforce or compete with, the distributed generating and storage resources that are increasingly prominent in utility VPP agendas? In the question pane [Slide 19]. Smit answered, We include all of the resources you mentioned as inputs to our optimization modeling. We include DR and DERs.

Arneson wrote, Just to mention to you, Tacoma with the help of AEG is doing a special project to develop a characterization profile and potential for indoor grow operations. Happy to provide those results to Power Council if you are interested, in the question pane. Smit answered, Yes, that would be great. Let's chat. AEG is working on our AG sector right now.

Amber Gschwend, GDS Associates, wrote, Building on what Harris brings up re: fixed vs. variable. As you think about the modeling here, I wonder if excluding the fixed admin costs could make sense. Especially where utilities are mandated to offer EE programs, those fixed program costs should not be considered when evaluating measure cost-effectiveness. just food for thought. I can see the argument both ways. Smit wrote Interesting. Yes, we will consider this also.

Finnigan pointed to the non-energy impacts shown on [Slide 19] saying many IOUs have their own list of non-energy impacts and feared duplicating efforts. She wondered if there was a role for the RTF to collect these impacts. Laura Thomas, NWPCC and RTF Manager, said this will be an RTF topic in the December meeting.

Harris wrote The 9th circuit language starts with a general examination of the Council's discretion and practices around defining and assessing cost-effectiveness. The MCS is the focus of the lawsuit, but the Ninth Circuit first establishes the ability of the Council to use a variety of possible methodologies. The MCS language that I copied above is then the direct application of these broad authorities granted to the Council under the Act and affirmed by the 9th Circuit. By extension, these broad authorities could be applied to the EE resource writ large which would allow the Council to choose to bundle individual measures into a portfolio that in average cost is less than the avoided resource cost. Smit wrote, We will get John Shurts (legal counsel) to weigh in on this as we discuss this next time. Thanks, in response.

Duncan wrote, Q: Added in after the EE calculation(s)? If so, how are resource displacement — EE for DER; DER for EE — calculated? If this is a separate/off-line discussion, please advise in the question pane. Smit answered I think this is more of a discussion about how our models handle the interactions of all of the resources. Yes, we should probably defer this discussion but can have our modeling folks come and talk about

how this works. Some of this is still being discussed, like the interactions of EE and DR. We had a method for this in the last plan.

Garcia stated that [Slide 22] shows average capacity values. He asked about efforts around extreme events or if staff would continue to take a more typical winter approach. Douglass said staff wants the hourly shapes of EE for extreme events for this Plan. He thought this approach would show more value for some measures and less value for others but thought showing it would be an overall benefit for EE. Garcia agreed.

Arneson wrote, [Slide 29] suggests nearly 100% ... which leads me to think that the 85% achievable is recalculated based on remaining left to do. Is that correct? Douglass answered, The 85% gets multiplied by the ramp rate. So, it does not reach 100% overall. I know that's a little confusing. Arneson wrote, Got it thanks. Yes so... 100% of 85% for example for weatherization. Douglass answered Yes.

Garcia noted the many stages of lighting transformation and wondered about the approach for evolving technology. Smit asked for a particular measure to would apply that to. Garcia wondered about shell measures like moving from double to triple pane windows.

Finnigan wrote, Re: armadillo curve, "utility conservation" is CVR? In the question pane. Smit answered yes.

Finnigan asked about BA modeling, wondering how it compares to her work and if it can be leveraged [Slide 35]. She asked when the files will be available and what the review process will look like. Douglass did not have a specific time but thought Q1 was likely, adding he welcomes comparison to individual IRPs. He was hoping to use it for better roll ups and visual representation.

Finnigan was also curious about potential kinks and seeing something that doesn't align with reality. She worried about a fast turnaround time and ensuring utilities have advanced notice, a framework for exploration, and expectations for when and how deeply they should examine results. Smit clarified that staff will not be producing IRPs or potential assessments for BAs or utilities and staff is still trying to figure out a lot of parts. He said a firmer timeline is coming and first results are due in May/June.

Garcia approved and supported the effort but suggested that this means that there will be some expectation of apportionment of a target by region and not just by kW consumed. He then asked if the last column of the table on [Slide 35] is aMW or MW hour. Douglass said it's the amount of aMW every hour, agreeing that it's a weird metric. Garcia suggested spelling out the meaning more clearly.

Ted Light, Lighthouse Energy, stated that past Plans the calculations from individual measure savings to potential happened in the individual measure files. He wondered if that

would be true in the new framework or if the calculations would shift locations. Douglass said they would shift up to a sector level for simplicity.

Spencer Moersfelder, Energy Trust of Oregon, asked how the level resolution of the data inputs relates to the outcomes for the regions and if that data will be available. Douglass called the data availability a mixed bag with some sets being really robust and others less so. Smit added that staff have the load forecast by the BA, and everything will be calibrated to that. Smit said that means that even if they get a unit wrong it will show up somewhere else. Light reiterated that this is not an effort to create an IRP for every utility, meaning some zones will lump things together but there will be a better sense of locational value. She encouraged the CRAC to not get too hung up in the details.

Harris asked about the implications for the Action Plan. He said this work will create a total amount EE recommendation for the region and wondered what the implications of that are for the Action Plan. Smit said staff are considering this but there is too much uncertainty to comment now. He said the initial goal is not to have separate targets for each area, but they could point out different values due to things like transmission constraints.

Harris said, as a representative of an entity that implements regional market transformation programs, the markets do not segregate around BA boundaries. He called for deep thought about the implications. Smit agreed.

BREAK

Line Loss Assumptions for the Ninth Power Plan (Round 2) Christian Douglass, NWPCC, Tomás Morrissey, NWPCC

Quentin Nesbitt, Idaho Power, commented that Idaho Power's new numbers are a bit lower than the ones showed on [Slide 10]. He pointed to other work that did not include transformer core losses. Douglass thought that change was accounted for but offered to check and follow up.

Harris praised the effort, calling it solid data and analytic work. Douglass said it's a great example of committee work.

Garcia agreed, hoping that five years from now the transmission could be broken out into 17 areas too. Douglass agreed that there is less granularity on the transmission side.

Garcia referenced the west side estimates [Slide 13] asking if staff looked at the difference between the heavily populated central Puget sound and other areas west of the Cascades like Grays Harbor. He thought they might show a distinction. Tomás Morrissey, NWPCC, agreed but said they are working with the data they have available. He said this data is from Puget Sound Energy, PGE, Snohomish PUD, BPA, and PacifiCorp. Garcia offered to get him more data. Morrissey said that sounded like fun.

T&D Losses and Calculations for Energy Efficiency Ryan Firestone, RTF Contract Analyst

Garcia pointed to the temperature factor calling it not inconsequential [Slide 8]. He said this effects summer versus winter peak load. Firestone agreed.

Nesbitt stated that Idaho Power's resource planning group pushed back against Lazar's paper saying their system is not operating on the margin [Slide 18]. He said Firestone's presentation helps make sense of the issue but had a hard time with the 2X assumption on the margin piece. Smit suggested sharing this presentation with his group and asking Firestone to assist with follow up questions.

Moersfelder asked if this was a change from the 2021 Plan. Firestone said this is the 2021 Plan. Smit said this method has been used since the Fourth or Fifth Plan and improved over time. Moersfelder thanked him.

Arneson focused on the school weatherization bar, asking if the 21% of annual site level savings is due to line losses. Firestone said no, explaining that the bar represents what percentage of annual savings are happening in each of these buckets of system load.

Garcia thought that the math looked right but said that math and reality sometimes diverge. Because of this, Garcia asked if there was any effort to confirm the numbers with any testing, calling this important.

Garcia then commented that [Slide 17] showed coincidence with really cold temperatures. He said there is a physical reduction of resistance in cold weather, and this might be overstating the benefits. Garcia called for a math test to see if it matters. Firestone thought this was a good question for a utility. Smit agreed, saying they can't do testing but welcomed utility input. Garcia conceded that it might not make a difference or be worth the time.

Arneson wrote, Just to confirm on the losses, these average losses are load and no-load losses? in the question pane. Smit answered yes both.

Smit ended the meeting at 11:45.

Attendees via Zoom Webinar

Kevin Smit	NWPCC
Christian Douglass	NWPCC
Jennifer Light	NWPCC
Ryan Firestone	RTF CAT
Tomás Morrissey	NWPCC
Landon Snyder	Snohomish PUD
Frank Brown	BPA

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Orcas Power & Light
Nauvoo Solutions
NEEA
GDS Assoc
PPC
independent
Snohomish PUD
PNGC
ODOE
Lighthouse Energy
NWPCC
BPA
Benton PUD
WPUDA
NWPCC
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Tacoma Power
PSE
Cadmus Group
Clark PUD
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BPA
Seattle City Light
ODOE
Avista Corp
NWPCC
Idaho Power