Northwest Power & Conservation Council Conservation Resources Advisory Committee August 15, 2024

Kevin Smit (Chair), NWPCC, began the meeting at 2:00pm. He reviewed the agenda and introduced NWPCC senior analysts Christian Douglass (Vice Chair) and Tomás Morrissey.

Chad Madron, NWPCC, explained how to best interact with the Zoom webinar platform. Douglass called for introductions.

The Ninth Plan Timeline and New EE Measures

Angus Duncan, NRDC, asked Should we characterize conservation as "inherently nondispatchable" when space heating (or cooling) savings increase as temperatures drop (or rise)? In the question pane [Slide 8].

Smit answered yes for the most part the Council's traditional look at conservation is as a non-dispatchable resource. He added that the Council is now considering Demand Response, noting that DR's ability to shift loads and adapt to daily changes makes the resource more dispatchable.

Duncan clarified that he agreed the conservation is not dispatchable in the sense of someone amping it up or down on a screen. However, he recalled that conservation acts similarly to a dispatchable resource in that when the temperature goes down space heating demands more energy, so the integrated EE attenuates the demand. Duncan called this a de facto dispatching of savings per MW.

Smit agreed, pointing to ongoing Council work to define the shape and timing of EE.

Jeff Harris, NEEA, wrote to Duncan Efficient technologies with load flexibility components can change the traditional fixed view of EE as a resource in the question pane.

Tom Eckhart, independent, noted the dramatic reductions in the overall EE target and significant new measures on [Slide 8] saying he was reminded of his work at the CALTF. He asked how staff is factoring in useful life. Eckhart thought the useful life of measures from the Fifth Plan may have passed and wondered if there has been market transformation.

Smit answered that staff assume an installed efficiency measure stays in place, and everything increases in efficiency as time goes on, especially when factoring in federal standards for residential and commercial sectors.

Eckhart agreed but noted that this is rarely true in the hard-to-reach, lower income residential sector. Smit agreed and asked for studies or data.

Dave Clement, NEEA, asked Does the new resource adequacy assessment figure into the 9th Plan in terms of scenarios, resource needs, and energy efficiency, in the question pane [Slide 10]. Smit answered yes and no, as this work is done every year so the next few adequacy assessments will have pieces integrated into Plan work.

Duncan wrote I don't need an answer here, but I hope/trust you will enlarge on your "flat" load forecast given the dramatic increased load growth projections around the region (and the country). Would welcome a deeper dive into load growth projections. In the question pane.

Bonnie Watson, BPA, asked Christian, just to you: First bullet [Slide 11] is all 3500 MW available today, or is it that the 3500 MW is going to be available over a certain time period? in the question pane. Douglass answered Hey Bonnie - I'm not 100% sure, since I wasn't steeped in the last Plan as much, but I believe that 3500 MW was to be built over the action plan period, and as Kevin noted, the region is pretty much on target for that. Hopefully that helps in the question pane.

Jennifer Finnigan, Seattle City Light, wrote Kevin, you spoke to loads rising due to data centers. To what extent does the Council's load forecast reflect rising loads due to transportation electrification and building electrification? SCL's 20-year load forecast rose by 25% since 2020 when we incorporated transportation and building electrification in the question pane [Slide 11].

Smit said this is a good question, pointing to the 2021 Plan's high electrification scenario. He noted that some amount of electrification is included in the load forecast. He called electrification a relatively consistent increase in load, as compared to data centers. He added that staff build in state and city policies.

Morrissey agreed, noting that this year's adequacy assessment refreshed the load forecast to 2029 using the Council's high EV forecast. He thought the long-term forecast would see even more EVs and building electrification but thought it would be steady. Morrissey projected that the first five years will see more EVs and data centers with building electrification coming in the 2030s.

Eckhart asked about the Demand Response Advisory Committee. Smit said the DRAC will start having meetings in a month or two. Eckhart wandered if the overlap/underlap of EE and DR would be explored. Smit said yes.

Watson asked about the timeline on [Slide 12] wondering when Council members will be talking about actual targets. Smit thought that would be in mid-2026, saying results will start to roll out earlier. Watson confirmed that the goal for the final is end of 2026 early 2027. Smit said yes.

Watson wondered about the complexity of breaking the analysis out by 17 zones [Slide 13] asking what this complexity means compared to the last Plan. She also wondered about transparency and BPA's need to dive deeply into the materials. Smit admitted that this approach will be much more complex than before but said many of the conservation measures will be the same no matter the zone. He did note that weather-dependent measures will be parsed out by climate zones, like before.

Smit acknowledged that there *may* be different avoided T&D values in different zones, which would affect levelized costs and cost effectiveness. He stressed that the core data will be the same for all zones but there will be 17 different supply curves.

Douglass added that this makes things more complex but would potentially streamline workbooks by cutting down on the measure application line items.

Harris wrote Which Committee is dealing with the environmental cost methodology? in the question pane [Slide 14]. Smit answered that all the advisory committees touch on this topic. Annika Roberts, NWPCC, said she is in charge of this and suspected there will be either joint committee meetings or someone will bring the information to individual committee meetings.

Finnigan wrote Scenarios: Do you have a sense of how many scenarios will be in the next Plan, and what they will be about? The Pathways to Decarbonization scenario last time round was particularly interesting, in the question pane. Smit referenced an <u>issue paper</u> <u>released in March</u> that described scenarios and was presented to the Council in June. Madron provided a link, explaining how to access more information.

Duncan wrote Are we treating battery/other storage as dispatchable generation? Will this be so for distributed storage (e.g., V2G EV storage/dispatch? Super-heated water heating that frees up system capacity during peak demand periods?) in the question pane. Smit thought so but said staff is just starting to explore distributed battery storage.

Morrissey added that they create some weird modeling issues on the supply side and so they may be treated as a dispatchable resource on the demand side.

Nicholas Garcia, WPUDA, stressed that administrative and overhead costs are challenging for the small utilities as they have fewer customers to absorb the costs [Slide 15]. He wondered how to reflect the challenges these small utilities face. Smit agreed this is an issue that staff is considering. Douglass said there has been work on this and staff plan to present a deep dive into this issue, probably at the next CRAC meeting.

Discount Rates and the Next Plan Tomás Morrissey, NWPCC Duncan was bothered by the information on [Slide 4], saying not incorporating the social cost of carbon and other environmental costs/benefits automatically depreciates the values of capital-intensive renewable or conservation resources. He said this also increases the value of resources that can push fuel purchases off into the future.

Duncan found a strictly financial discount rate that depreciates the value of conservation difficult to swallow and would like to file a minority report on the matter.

Morrissey said this is discussed further on the next slide [Slide 5]. He said the 2021 Plan included a carbon damages rate that ties into the social cost of carbon. Morrissey called the discount rate of the social cost of carbon important but better handled as a different discussion. The SCC will have its own discount rate.

Duncan asked where environmental costs and their effective discount rates are represented on the table on [Slide 5]. Morrissey said they are not incorporated in this work as this is just resource economics. Duncan asked where the social cost of carbon is introduced. Morrissey said they are in the modeling.

Duncan said there is a compelling argument to assign negative discount rates to carbon damages referencing <u>The Economics of Climate Change by Sir Nicholas Stern</u>. Morrissey said this discussion will be occurring at a different meeting.

Ted Light, Lighthouse Energy, asked if calculating one blended discount rate was the only method available [Slide 8]. He noted the practice of using multiple discount rates based on the perceived riskiness of the investment, pointing to very different utility-perspective investments versus the broader consumer discount rate.

Morrissey called this idea interesting, saying IRPs tend to show one blended discount rate but wasn't sure if it differed from the discount rate used in the conservation potential. He mentioned the differences in the cost of borrowing makes the issue more complex but said he would think on this a bit.

Garcia did not dispute the approach used to calculate the discount but wondered why it relies so heavily on IRPs and pre-pandemic data. Morrissey countered that most of the data is from 2022/2023. Garcia said the discount rate is a measure of risk, and he is seeing higher risk concerns today than in 2021/2022. Because of this he didn't think the approach accurately reflects utility risk, admitting that he didn't have an alternative.

Morrissey said getting data is challenging. He explained that staff use utility planning data that is typically between one to two years behind. Morrissey was open to incorporating future facing risk if he could get the data.

Garcia thought a discussion with a few utilities about their present discount rate versus the one they used two years ago would be useful. He speculated that the forward-facing numbers would be higher.

Lauren McCloy, NW Energy Coalition, agreed with Garcia saying the landscape has changed enough that even a 2022 risk forecast is not accurate enough for mid-2024. She thought discussions with utilities about these numbers would illuminate what they are anticipating for their next planning period. Morrissey said IRPs never stop so they could look at 2025 versions to see if rates have changed.

Frank Brown, BPA, stated Since Power Plan results impact BPA most directly, perhaps the BPA/public utility discount rates should have more weight in the question pane [Slide 9].

Clement asked: Does this envision using different discount rates by resource type? in the question pane. Morrissey answered no, but acknowledged that T. Light did bring up a point to think about.

Mark Lenssen, PSE, wrote: As more transportation electrification and building electrification occurs, should we assume that the investment for T&D will occur "earlier" than when regular load growth was assumed? So, the region will need to make the investment sooner, although the timeframe would be arrested with conservation/efficiency...hopefully. in the question pane [Slide 18].

Lenssen clarified that at some point there will be a need to build a larger infrastructure to support the incoming EVs, heat pumps, and more. He noted that in the past the region could defer this but it changes the dynamic to upgrading quickly to handle the new load.

Morrissey moved back to [Slide 13] to illustrated Lenssen's point. Morrissey agreed that this probably occurs but a lot of new EVs might also mean a bigger upgrade sooner. He thought this might bring the value of EE up. He did not think staff had the granularity to capture this as they rely on utility data.

Harris noted that this discussion is about equipment deferral based on need to upgrade because of load. He asked about equipment lifetime being degraded and damaged by hitting peak loads. Harris said electrical gear has a robust lifetime, but it is shortened when hit with a lot of high peaks.

Harris stated that EE, and DR, can reduce those peak loads and wondered if staff could explore that value. Morrissey was not sure if they are capturing equipment damage, saying they are targeting peak reduction value and are not energy value. Harris said NEEA is exploring this with their load flex pilot project.

Garcia pointed to a range of conservation programs that had different impacts on peak load depending on if a utility was winter or summer peaking. He wondered if staff was

considering multiple T&D benefits or one for a BA irrespective of the time when the EE would be most effective.

Morrissey said this is a great question that extends to behind-the-meter resources as well. He thought ideally, they would have some bonus or reduction in the value depending on the program. However, he wasn't sure if there was a methodology to assess this yet.

Smit thanked the group for staying late and said he will build in more room for discussion next time. He regretted not having enough time to talk about supply curves but pointed to a <u>link to the presentation</u> and asked for feedback.

Smit ended the meeting at 4:10.

Attendees via Zoom

Kevin Smit	NWPCC
Christian Douglass	NWPCC
loe Walder	NWPCC
Tomás Morrissev	NWPCC
Emily Gilrov	WAUTC
Landon Snyder	Snohomish PUD
Sophia Spencer	Nauvoo Solutions
Brian Dombeck	RPA
Rich Arneson	Tacoma Power
Andrew Grassell	Chelan PUD
Nicolas Garcia	WPUDA
Jennifer Snyder	WAUTC
Frank Brown	BPA
Craig Patterson	independent
Karen Liu	Seattle City Light
Jeanne Currie	Clean Energy Trans
John Stalnaker	BPA
Evan Hatteberg	NEEA
Mark Lenssen	PSE
Tom Eckhart	independent
Jonathan Belais	NEEA
Jeff Harris	NEEA
Dan Adams	Avista Corp
David Clement	NEEA
Danie Williams	Northwestern
Angus Duncan	NRDC
Jeffrey Kee	NW Resource Consulting
Paul Barrager	WA UTC
Mike Hamilton	Seattle City Light
Jennifer Finnigan	Seattle City Light
Ted Light	Lighthouse Energy
Bonnie Watson	BPA
Aquila Velonis	Cadmus Group

Annika Roberts	NPWCC
Quentin Nesbittl	Idaho Power
Michael Coe	Snohomish PUD
Chris Johnson	Benton PUD
Liz Reichart	WA Dept of Com
Andy Cameron	ODOE
Christina Steinhoff	NEEA
Lauren McCloy	NW Energy Coalition
Elizabeth Osborne	NWPCC
Bill Hibbs	Clark PUD
Spencer Moersfelder	Energy Trust of Oregon
Joe Walderman	NWPCC
Kerry Meade	Building Potential
Quinn Weber	WAUTC