



Minutes for Conservation Resources Advisory Committee September 23, 2026

Kevin Smit, NWPCC, began the webinar meeting at 9:30. Christian Douglass, NPWCC, called for attendance. Chad Madron, NWPCC, explained how to best interact with the Zoom Webinar platform.

The Draft 9th Power Plan: Conservation Targets and Cost Effectiveness Methodology

Jim Lazar, independent, brought up demand side resources, saying they reduce energy, transmission, and most importantly distribution requirements [Slide 15]. He asked how the modeling accounts for T&D impacts and reduced reserve requirements as customer load has been reduced at the point of delivery.

Smit explained that cost effectiveness includes values for deferred T&D in the levelized costs.

Tomás Morrissey, NWPCC, discussed reserves, saying the model has a planning reserve margin that is based on a percentage of load. He said reducing the load reduces the margin because it's smaller.

Lazar asked how this translates into the cost effectiveness metric wondering if the eastside is worth "15 mills" in avoided reserves. Smit offered to come back to that when they talk about cost effectiveness.

Rachel Gardner-Clark, Tacoma Power, suggested that this shows up in the RMC. Douglass agreed. Gardner-Clark then asked how much of the regional target is in emerging tech on the conservation side, wondering about consistency between supply and demand. Smit answered that emerging technology is not included in the curves. He clarified that they are given to the models but are not in the target. Douglass added that they don't show up until year seven.

Jon Lange, Sun Energy Systems, praised staff's work on utility-scale solar and storage before asking about consumer solar plus storage. Smit said staff analyzed rooftop solar but not solar plus battery, saying it added to the cost. He noted that there are some DR measures that include residential battery storage.

Lange said the industry is seeing a major increase in residential solar plus battery. Smit answered that it is in the load forecast but not the potential. He predicted that it will be in the potential in the next Plan.

Emily Gilroy, WA UTC, was surprised to see how little Ag was represented pointing to cold storage and efficiency for doors. Smit said that is represented in industrial. Douglass thought this will be expanded on in the future, pointing to indoor Ag as a growing industry.

Lazar wrote, “Rooftop solar at the residential scale has very different costs than rooftop solar at the Walmart Costco scale. Numerous studies have shown that 500 kW systems on big box are the lowest-cost solar, because they avoid transmission costs. How was that addressed in the solar analysis?” in the chat.

Morgan Zehrung, Forecast Energy, noted a major increase in rooftop solar plus storage in the last two years, pointing to Puget Sound Energy’s virtual power plant strategy. He then spoke about a California Energy Commission report that said residential storage accounts for 13% of the state’s battery capacity providing all peak demand power at some points.

Smit said the potential is captured in Demand Response and Demand Flexibility.

Lazar wrote, “Indoor agriculture has been going on at least since I was in college, more than a half-century ago ;-))” and “Yes, it was a more distributed industry then; and less efficient, with incandescent lighting.” In the chat.

Gardner-Clark touched on separating voltage regulation, asking if that showed up in the last Plan [Slide 19]. Smit answered yes, adding that sometimes the model wanted DR, but it mostly chose conservation.

Lange asked about the impact of \$3.50 per watt on rooftop solar [Slide 17] saying the installers in his group are around \$2.60 per watt. Smit said he would get back to him, pointing to some included declining cost assumptions.

Lange wrote, changing rooftop solar from \$3.50w/dc to \$2.60w/dc reduces the approx levelized cost from ~217.5mill/kwhr to ~172.8mills/kwhr (21.8c/kwh to 17.3c/kwh levelized cost) so definitely more competitive considered as a conservation method, in the chat. Jennifer Light, NWPCC, wrote, “Thanks, Also Jon, we’d be happy to follow up more offline on rooftop solar. This committee is focused on the conservation (energy efficiency) specifically. But if you have more questions or want time to dig into the rooftop solar, we can set up a separate call with the right Council folks. Thanks.”

Gardner-Clark asked about the rationale around assigning a target based on load versus net requirement [Slide 24]. She said half the load for her utility is not served by their own resources. Douglass answered that it’s because BPA reports against all the savings. Light added that all savings count. Douglass concluded by saying this has always been the protocol.

Lazar said Seattle residential number looked “goofy” [Slide 29]. Smit agreed.

Aliza Seelig, PNUCC, wondered about the approach of using the optimization model to create the single target [Slide 35]. She asked if staff would force in the single target strategy and run an optimization again to see what the model picks or if all the adequacy work happens after the run.

Light explained that the additional analysis shown was performed on request after releasing the draft Plan. She said the Council wanted to provide a bit more information, so staff performed a light touch resource analysis with OptGen. Light said this helped staff get to the ballpark, adding that OptGen does not test adequacy like GENESYS. Light added that if the Council chooses to change strategies your suggestion might be a piece of that change.

Seelig thanked Light for that answer, adding that the model might build for economic reasons beyond what's needed. Light agreed that it is not just building toward adequacy.

Seelig confirmed that the model still deals with granularity even though staff added the strategy of location. Light said the model sees all the pieces and the model wanted more EE on the west side. Light said this is why there is a strong approximate in front of the numbers as staff were not trying to peanut butter results for a single target.

Lazar asked if the CRAC should recommend a single conservation cost effectiveness threshold.

Lazar addressed the avoided cost slide [Slide 29], saying the term "avoided cost" is a PERPA term for non-utility generation and does not include distribution, losses, or reserves because it is on the supply side. He said here staff are using it at a cost effectiveness threshold which looks like the PERPA use of the term. Lazar wondered how the utilities defined the term. Smit said the intent is to represent the cost effectiveness threshold for conservation and cautioned the room not to put too much weight behind the slides as this is a quick look.

Nolan Kelly, BPA, asked about load following customers and their avoided costs, saying eastern Washington and Oregon customers have avoided costs that deviate from the pattern. Smit said he focused on the IOUs and agreed that Kelly is probably right.

Lazar wrote, "Avista ID/WA differential is definitely more than carbon: \$60/ton (current price, likely to decline with the merger into CA/PQ) in a combined-cycle (0.4 tons/MWh) is \$24/MWh," in the chat.

Danielle Walker, NRU-NW, wrote, "I have a couple questions on the Risk Mitigation Credit - should I wait until after the break to ask those?" in the chat. Staff answered, "yes, we will get to the RMC later."

Ted Light, Lighthouse Energy, said that BPA peanut butters their costs across the region and don't have any zonal specific costs for energy or capacity. Smit agreed.

BREAK

Jeff Harris, NEEA, noted seeing the formula on [Slide 40] many times. He then posed that market price is the assumed valuation of the energy conserved by the EE measure. Harris then said that market price, as a resource, is one way to value the marginal decision around what to build or buy.

Harris then asked if the region should use market price or an actual physical resource price. He noted that the system must build physical resources to ensure resource adequacy, wondering why the Council relies on market price and not the actual, physical resource at the margin.

Smit said staff use the market price forecast that comes out of the OptGen model which builds the price based on the resources being built throughout time. Smit admitted he had the same question of, “what resource, each with different characteristics, do you pick?” He said the optimization model picks the best combination of resources for the needs, and the market price comes out of that.

Harris thought that this should be explored further, wondering about the model picking gas-fired resources that don’t run for very long and are expensive on a levelized-cost basis. He also wondered how this works with negative pricing from renewables. Smit said the capacity, and other values, are called out as well.

Lazar thought model costs driven by rarely used peaking resources put a premium value on certain, peak oriented kinds of conservation. He said peak oriented used to mean the coldest day of the year but today it could mean the five-day period with the least amount of wind or solar.

Lazar wondered if there was analysis that identifies conservation measures that best complement need. He recalled doing this in the early days of the Regional Technical Forum (RTF) and finding that residential weatherization had a lot of value.

Gardner-Clark thought that some of the system-level alternative resources should be picked up by the RMC. She was concerned about this for future work because a large portion of the values comes from the RMC which she called a black box that is hard to disentangle. Gardner-Clark suggested future work should get more value directly into the valuation work and pare down what is put into the RMC.

Douglass understood the issue, saying there is some nuance around the RMC that might change her mind. He said there is more to come on this later in the presentation.

Jeremy Smithson, Puget Sound Solar, wrote Back of the envelope calculation: 1kW of installed residential PV costs \$2,500, lasts 25 years (actually more), so \$100/year. In Seattle it will produce 1 MWh/year, so doesn't that place it within both targets for western Washington?” in the chat [Slide 41]. Douglass answered, Thanks Jeremy. We use the Northwest Power Act definition for conservation, which doesn't include rooftop solar. But we do account for that elsewhere in our Power Plan. in the chat.

Smithson replied, OK, thanks. I was just going with Washington's legal definition of solar heating and electricity generation as conservation in RCW 43.19.670, and There were 8,000 new residential units built in Seattle in 2025. Given that we don't have open land (1,600 of those units are in the downtown area) I'm assuming that less efficient buildings were replaced with code-compliant ones. Is that part of the conservation picture and how is that cost calculated since the improvement was part of the real estate development? in the chat.

Douglass responded, Thanks, Jeremy. Today's call is focused on conservation, so we are not planning to talk about rooftop solar, but happy to discuss more offline. And Yes, all new homes and buildings are assumed to be built to the latest energy codes. in the chat.

Lazar thought the deferred turbine on [Slide 42] seemed like an old number, asking where it came from. Douglass said there is more detail coming up, adding that the full generator cost is more.

Harris admitted to struggling with the idea of deferral over displacement [Slide 44]. He said if the efficiency is in place and providing capacity it serves as an alternative to building capacity, which makes the idea of using partial value odd. Harris agreed that there is still a need to build if loads go beyond what conservation reduces but the conservation is displacing the needed kW's. Harris said this feels like a bit of a false evaluation.

Lazar wrote, "The energy efficiency measure has about the same lifetime as a combustion turbine." in the chat. Lazar then said he does not agree with Harris here as there is a different value for combustion turbines beyond capacity value, particularly in dry years. He said there are two sets of values that come from a combustion turbine and only one of them is peaking capacity.

Douglass said this was discussed among staff too and thought it deserved more attention in the future.

Harris countered that the flip side is assigning the right generation capacity credit to energy efficiency resources like weatherization. He said these resources provide effective energy during critical periods of resource adequacy during low hydro. Harris said these are multi day events in the winter and low hydro may be an issue.

Lazar asked if these resources produce more energy when the system is under stress than the rest of the time. Lazar said that is really valuable.

Harris said there has to be firm pipeline in place to make these kinds of assumptions around a combustion turbine. Lazar agreed.

J. Light said pipeline and storage are captured in the broader modeling as is low water. She offered to dig deeper offline.

T. Light asked if a simple cycle turbine was the right resource for deferred capacity, particularly on the west side. He said Energy Trust of Oregon is moving to a four-hour battery as a resource. T.

Light asked if the 2021 Plan used a battery as a capacity resource and was curious why the Council is moving back to a turbine.

Lazar wrote, “Good point Ted: “peaking” service is now battery-provided, not generator-provided.” in the chat.

Douglass agreed saying it was a battery in the 2021. He said gas is on the margin in some states, so the model sees that as the marginal resource. Douglass agreed that batteries are stepping up more and more.

Lazar wrote, “Gas is “on the margin” only because it has a higher variable operating cost. Pragmatically, if battery capacity were available, and the model knew how to dispatch it, then battery would be on the margin for peaking.” in the chat [Slide 47].

Lazar thought that the T&D deferral should be as valuable as the energy component. He wanted to spend more time finding out what happened to the T&D value of peak-oriented conservation like residential attic weatherization. Douglass said staff was also surprised and checked and double checked the numbers. Douglass offered to talk more offline.

Walker posed three question. Her first question addressed [Slide 46 and 47] calling them counterintuitive to each other.

Walker’s second question was around the differences between the east and west risk mitigation credit. She wondered if the avoided costs are different because of the way values were captured. Walker then wondered what drives the difference between the numbers.

Walker then asked her final question: what does all this mean, and what is the RMC value, under the single target. Douglass addressed this first, saying staff don’t have a single value.

Douglass tackled why the west and east have different RMC, saying cost effectiveness inputs are not that different on the east and west side, so they are not soaking up all of the differences. He said that means they have to turn up the RMC to get any conservation and meet the target on the west side. Douglass said it’s different on the east side as that \$70 gets tons of conservation so they don’t need to turn the RMC as high.

Douglass then addressed her first question, saying the RMC is always added in, and the best measures always have a big RMC.

T. Light added that the market price forecast is just one of many possible prices staff see and the RMC reflects that. Douglass called that a good point, saying risk is several things.

Aquila Velonis, Cadmus, wrote, “I might have missed it. For slide 47, what are the drivers on the capital costs differences in between east and west for a given measure?” in the chat. Douglass said you could read the values more as percentages versus absolute costs.

Velonis called that really helpful. He asked if there was any way to think about this when compared to levelized costs. Douglass agreed there is a strong correlation between input levelized costs and whether a measure is cost effective or not, but it's not one-to-one.

Smit ended the meeting at 12:00pm.

Attendees via Zoom Webinar

Kevin Smit, NWPCC
Christian Douglass, NWPCC
Jennifer Light, NWPCC
Laura Thomas, NWPCC
Phaedra Beckert, WASEIA
Leann Bleakney, NWPCC
Ryan Bottem, Pub Gen Pool
Frank Brown, BPA
Nathaniel Clayville, NWPCC
Debbie DePetrus, Clark PUD
Jimena Diaz-Duran, Seattle City Light
Angus Duncan, independent
Sean Ford, Public Power Council
Wesley Franks, WA UTC
Rachel Gardner-Clark, Tacoma Power
Nick Gemperle, Puget Sound Energy
Emily Gilroy, WA UTC
Jeff Harris, NEEA
Justin Jaffe, Avista Corp
Tessa Jilot, Avista Corp
Chris Johnson, Benton PUD
Nolan Kelly, BPA
Leah Kim, Tacoma Power
Rebecca Klein, Seattle City Light
Mary Kulas, Public Power Council
Jon Lange, Sun Energy Systems
Jim Lazar, independent
Ted Light, Lighthouse Energy
Henry Lorenzen, Corey Byler
Nick Manning, WA Dept of Com
Nathan Martinez, NEEA
Kerry Meade, Building Potential
Kyle Morrill, Energy Trust of Oregon
Tomás Morrissey, NWPCC
Heather Nicholson, Orcas Power & Light
Gemma O'Connor, Tacoma Power
Elizabeth Osborne, NWPCC
Craig Patterson, Independent
Annika Roberts, NWPCC
Bryan Russo, Puget Sound Energy
Aliza Seelig, PNUCC
Jeremy Smithson, Puget Sound Solar
Jennifer Snyder, WA UTC

Sophia Spencer, Nauvoo Solutions
Poppy Storm, 2050 Institute
Aquila Velonis, Cadmus Group
Joe Walderman, NWPCC
Danielle Walker, NRU-NW
Bonnie Watson, BPA
Amanda Welch, ODOE
Sarah Widder, NEEA
Morgan Zehrung, Forecast Energy
Yuqi Zhu, NRDC