

Northwest Power & Conservation Council
Demand Response Advisory Council
June 3, 2021

Tina Jayaweera, NWPCC, began the meeting at 1:00pm by calling for introductions. She asked the members review minutes from past meetings and send comments and corrections to her.

Plan Status and Recap of Plan Findings around DR

John Ollis, NWPCC

Ollis reviewed the new Plan timeline, and the different sensitivities test runs undertaken for demand response. Ollis walked through high-level takeaways and pointed out increased value of low fixed cost DR programs that can be used frequently with little dispatch cost and minimal change in customer experience. He explained that these products can help meet adequacy needs and reduce energy costs and emissions associated with meeting peak loads.

Jennifer Finnigan, SCL, asked for a definition of DVR [Slide 6.] Jayaweera explained that Demand Voltage Regulation or Reduction allows utilities to push down the voltage to near minimum levels to reduce line losses and power consumption. She noted that CVR, Conservation Voltage Regulation, is a similar product that runs all the time while DVR can be targeted to certain times.

Craig Patterson, independent, stated that he believed that the baseline for EE programs is 500 aMW but BPA's fact sheet from 2019 states the total EE from all sources was 62 aMW. He asked how this vast difference is reconciled. Jayaweera noted that his question was already answered at an earlier CRAC meeting but reviewed that 500aMW are a region-wide, six-year goal while the 62aMW is Bonneville's single year accomplishments.

Fred Heutte, NW Energy Coalition, said these results point to a difference between DVR that requires active customer interaction and more automated products like DVR, TOU, or CTA 2045 devices. He thought this might be a way to align the assessment going forward. Ollis thought that might be the case but stressed that these particular resources had the right fixed cost investment to justify their usage. He agreed that it was okay to broadly say that these DR programs might reduce variable systems costs and greenhouse gas emissions, but the fixed cost must justify it. Ollis added that it was the persistent savings that made the difference.

Heutte thanked him for the clarification, adding that the RPM can't assess this in a fine-grained way. He asked if it is fair to say that the model may have trouble choosing measures where calls are limited. Ollis agreed that this is an issue with all energy-limited products and attributes really matter. He added that adequacy results are showing that the flexibility of DVR adds significant value.

Heutte agreed that DVR is in a category all its own due to its magnitude and inexpensive price. He then mused on the time-shift value of DR and customer acceptance. Jayaweera agreed that having a flexible resource like a CTA 2045 device is an enabler but added that cost is an issue as well. Heutte noted that some people say automated DR is different than other types. He wanted to be careful around the terminology as there are different kinds of automated DR. Heutte felt that big, called-on DR is a different niche than dispersed, complex choices. He thought new perspectives were needed to evaluate the full value of the DR spectrum.

Patterson voiced confusion over the Council's role outside of Bonneville's territories [Slide 7.] He asked if the Plan has any clout or meaning beyond BPA's purview and if not, why this regional information is included. Ollis explained that when the Power Act was written, BPA and the region were broadly synonymous. He recalled that BPA could assume regional loads so looking at both was an important part of characterizing overall risk. Jayaweera added that the Act gives the Council purview over the Columbia River Basin, but their statutory authority is strongest over Bonneville.

Patterson insisted that this is a deviation. Tapping his experience with the first Plan, he said that California and the SW was never included in the planning process. He agreed that there are more influences now and that they are important to understand but thought the main focus of the Council should be acting as the rudder steering BPA. Jayaweera explained that the region is the Northwest, but the WECC is examined because they are interrelated. She assured him that when they talk about the region they are talking about the Northwest. Ollis added that it is not possible in an interconnected system to do an adequacy assessment without looking at the market. He said the Act directs staff to assess the market and this Plan is showing outside influences affecting the region.

Patterson suggested using more specific data and trends within BPA's territory. He felt this would be a more appropriate use of staff's time as opposed to analyzing conservation in CA and AZ. Patterson called this work largely irrelevant to the Pacific Northwest. He thought it skewed the reality of conservation, particularly when 97% of our conservation savings are projected or deemed and not verified. Patterson thought that adding the complexity of other areas undermines staff's abilities to understand what is going on here.

Quentin Nesbitt, Idaho Power, asked if there are any studies or information that looks at the effectiveness of TOU programs under extreme weather events. Ollis said the 7th Plan found the big driver to be adequacy but changes, like the addition of climate change data and finer operational details have revealed that this DR is outside of extreme conditions. Ollis agreed that individual utilities might have different exposure, but the climate change record is showing most issues around operational challenges.

Ollis summed up by saying DVR is showing value when the region is exporting, and adequacy is less of a driver.

Nesbitt noted that DVR is most effective on resistive loads and if the move towards non-resistive loads would make it less effective in the future. He said he was thinking about winter. Jayaweera said she was thinking about this too, admitting that it needs more study. She said the assessment excludes the vast majority of industrial loads as they are more sensitive to this issue.

Heutte asked if air conditioning is different than water heating when it comes to resistant loads. Jayaweera said a compressor is different than a heat pump or electric resistive heat. Heutte said this raises questions on new loads coming on to the system like more electric vehicles or HVAC.

Nesbitt thought the HVAC loads and battery chargers would not be affected by DVR. Jayaweera thought this might be a good item to include in the R&D chapter.

Blake Scherer, Benton PUD, noted that CVR continuously lowers load and would offer a greater benefit. He noted that BPA has been advocating for CVR projects and Benton is close to turning on their first project. Scherer asked if the benefits of this will be explored beyond a mention. Jayaweera said CVR benefits are captured in the EE supply curves. She said the 2021 Plan is showing that negative prices during the day means that EE has less value than it would overnight or during peak. Jayaweera said from that perspective, DVR has more value as it can work around volatile market prices.

Zeecha Van Hoose, Clark PUD, said, her utility will continue to pursue CVR, not DVR. She did not know how the rest of public power views those two options. Scherer agreed. Ollis said Plans usually contain language that says utilities should do what is best for them but on a regional basis DVR seems advantageous because of low, mid-day prices. Scherer called that helpful. He added that Bonneville has resources that can help with understanding resistive loads versus other types.

BREAK

Proposed Action Items

Staff walked through each of their suggested recommendations for demand response for the power plan, providing the objective supporting each staff recommendation and seeking feedback from the AC before presentation to the Council.

Patterson asked if there will be any emphasis given to identifying and addressing excessive consumption [Slide 4.] He told an anecdote of one residence using 22,000kWH a month, adding that declining block rates encourage consumption. He called this the opposite of EE and asked how it will be addressed. Jayaweera said this is off topic.

Patterson insisted that it is not when one realizes that 60 years ago Plans were based on meeting future, unmet needs. He said with coal going away the future is very unknown and excessive consumption relative to energy efficiency needs to be put on the table.

Ollis explained how staff has considered increasing load regionwide, pointing to electrification in past decarbonization work. Ollis admitted staff has not thought about individual residences in individual utilities but said having more load at certain times of day might be advantageous if there is a generation surplus. He said there are cases where increased load could be a benefit if you are trying to reduce emissions but that may be better understood in the next Plan.

Van Hoose noted that BPA is looking at end-use load forecasting [Slide 5] adding that not many utilities do because of complexities. She thought there may be a role for the Council to encourage more granular load forecasting efforts. Jayaweera said the Council uses end-use load forecasts and are striving to improve it. She thought the 7th Plan had language encouraging more utilities to adopt end-use load forecasts in their efforts and did not see any reason not to repeat that. Ollis agreed that it should be flagged again.

Scherer noted that [Slide 8] did not include the BPA logo. Jayaweera called that a typo and said she will correct it.

Leona Haley, Avista Corp, praised the evolving work [Slide 9] calling it equivalent to herding cats.

Scherer asked for a good, executive-level review around DR, wondering if it is still strongly recommended. Ollis said that DVR and TOU have the attributes for strategic use for particular times of day. He said, in general he sees a strong signal for DR, but it depends on a utility's future. Ollis said if a utility is expecting massive amounts of electrification, then DR will be huge, if not then DR is still part of the picture but more limited.

Scherer said this sounds like traditional DR will not have the same regional push.

Ollis added that electrification will be a big caveat, saying there is a massive amount of opportunity there and the models are showing value. Jayaweera added that there are different priorities in the deep decarb world. Ollis said this world would be deeply different than the one we know today.

Jayaweera thanked the DRAC for their help saying the next meeting will be after the Plan. She said that people should send in any questions or comments and ended the meeting at 2:30.

Attendees via Go-to-Webinar

Tina Jayaweera	NWPCC
John Ollis	NWPCC
Chad Madron	NWPCC
Malcolm Ainspan	NRG
Leann Bleakney	NWPCC
Frank Brown	BPA
Wade Carey	CenCoast

Jennifer Finnigan
Suzanne Frew
Leona Hasley
Lee Hall
Dylan Harmon
Fred Heutte
Ross Holter
Mark Jerome
Richard Keller
Hanna Lee
Ted Light
Corinne Milnovich
Quentin Nesbitt
Heather Nicholson
Elizabeth Osborne
Craig Patterson
Will Price
Blake Scherer
Taylor Thomas
Zeecha Van Hoose
Sarah Vorpahl
Kitty Wang
Brian Dekiep
Ahlmahz Negash
Kacia Brockman
Nicolas Garcia
Lakin Garth
Josh Keeling

SCL
Snohomish PUD
Avista Corp
BPA
Cadmus Group
NW Energy Coalition
Flathead Electricity
CLEAResult
Idaho PUD
BPA
Lighthouse Energy
DVC Law
Idaho Power
independent
NWPPC
independent
EWEB
Benton PUD
Idaho PUC
Clark PUD
WA Dept of Commerce
Energy Solutions
NWPPC
Tacoma Power
Oregon PUC
WPUDA
Cadmus Group
Cadeo Group