

**Northwest Power & Conservation Council
Demand Response Advisory Committee
November 2, 2022**

Tina Jayaweera, NWPCC, welcomed members to the first DRAC meeting of 2022 at 9:30 am. Chad Madron, NWPCC, explained how to best interact with the Go-to-Webinar platform. Jayaweera called for introductions. New staff analyst, Dylan D'Souza, NWPCC, introduced himself to the group. Jayaweera expressed hope that the next DRAC meeting be held in person.

Highlights from the NWPCC's 2021 Power Plan

Tina Jayaweera, NWPCC

Peter Schaffer, PacifiCorp, confirmed that the modeling never showed market prices great than \$150/MWh [Slide 18]. Jayaweera stated that if it did it was only for a brief amount of time. Schaffer then asked if this was true in all scenarios or just the base case. Jayaweera replied that it was for all, but not the deep decarb scenario which will be discussed soon

Richard Keller, Idaho PUC, asked for an example of when DR was utilized or reserved. Jayaweera said she would go into more detail later in the presentation but previewed that frequently deployable DR products like Time of Use or DVR have a lot of value during ramp periods, especially around sunset and sunrise.

Keller asked if utilities would find value in having DR programs in place for operating reserves. Jayaweera said yes and John Ollis, NWPCC, could answer any follow up questions about reserves.

Josh Keeling, Generac Power, wrote, "I mean... probably goes without saying but the market was hitting the CAISO cap for \$2000 frequently just this last summer..." Jayaweera agreed that there could be periods of significant prices during extreme heat or cold.

BREAK (Leona Haley, Avista Corp, expressed approval of the 15-minute Cat Timer)

Regional DR Programs Share Outs

Jayaweera presented the [DR Data Template](#) and asked for input.

Quentin Nesbitt, Idaho Power, noted that while not impossible, it is difficult to break programs out by state. He wondered how valuable that information is to her. Jayaweera agreed that Idaho Power and PacifiCorp probably have the same issue. She offered to add in a "multi-state" option or suggested writing a brief explanation in the "Notes" tab.

Schaffer stated that some of PacifiCorp's most effective programs have multiple notification periods within them. He suggested adding a "multiple" option, adding that he will use the 'Notes' tab for explanation. Jayaweera thanked him and added the "multiple" option.

Jayaweera asked for template comments by November 11, 2022 so she can send the form out as a data request in the following weeks.

Share Outs

Avista Corp

Leona Haley

(Time stamp: 1:26:29)

Avista implemented a 10-year, 30 MW, bi-lateral DR contract with a large industrial customer in 2022. The program gives a day in advance notice, is limited to 25 events per year, and runs year-round. Events are divided into four-hour chunks and are mostly triggered by price but sometimes triggered for operational or high load reasons.

The program runs in WA and is initiated by a call from the real time desk. She said the customer is compensated with 80% of market price for future energy. Haley said this will change a bit next year.

Haley said there are other pilots in the works including:

- 2024 launch of Pricing Pilot for 3000 residential and small commercial customers. Program design includes Time of Use and Peak Time Rebates. Avista is meeting with 14 stakeholders for draft design feedback.
- A Water Heater DR Program using CTA 2045 technology and 80-gallon electric water heaters has been implemented by WA Dept of Commerce and is set to go into effect in January 2023. Avista is developing pilots that look at this kind of direct load control.

Nicholas Garcia, WPUDA, reported that at one PUD GM meeting he observed a GM pointing out that DR fell off with agricultural customers during a heat spike as the customers were more concerned with saving crops than saving money on energy. He wondered if savings numbers would hold during these extreme heat spikes.

Garcia then reported that another GM received pushback from solar industry advocates when attempting to change rates by adding a demand charge/TOU rate for residential customers. Garcia said the GM reported that the solar advocates felt the rate change undermines the value of their residential projects.

Garcia continued, noting that another GM in a rural area introduced AMR to save money on meter reading. The GM found that older systems are not compatible with AMR, leading Garcia to caution that just because a utility has AMR it doesn't mean their customers' systems will have the capability to support the technology.

Finally, Garcia pointed to supply chain challenges that are delaying delivery on AMR/AMI equipment. He said this may make time frames laid out in the Plan unfeasible.

Todd Myers, WA Policy Center, questioned Garcia's comments about solar companies pushing back against TOU programs. Garcia explained that the low midday TOU rate would chip away at the value of midday solar. He then offered the caveat that he was only listening into the meeting, and this was a comment from one GM.

BPA

Frank Brown

(Time Stamp: 1:30:01)

Brown noted that BPA just completed their own resource program, treating DR like EE, market, or renewable resources. He noted that a fair amount of DR was picked as a least-cost resource, saying that the numbers, timing, and ramp rates were almost identical to 2021 Power Plan BPA-Scenario predictions.

Brown pointed to differences between the methods, stating that the Council modeled load-shifting, energy-types of load management while BPA used standard, peak-reduction DR products. He said BPA wants to run scenarios that use energy-related, frequently deployed, low-cost, load shifting products, calling them quasi-DR/quasi-EE products. Brown thought that many more of these products would have been picked as there are no capacity needs in their resource program.

Brown said next steps include briefings with executives to gauge appetite. He said their input will guide further actions.

Chelan PUD

Josh Mitchell

(Time Stamp: 1:30:40)

Mitchell described Chelan PUD's efforts that include commissioning a five-year road map. He said in the next one to two years they would like to develop a voluntary, 11MW load curtailment program with their C&I customers. Mitchell stated that they are also working towards a residential water heater program, starting with a pilot.

Clark Public Utilities

Zeecha Van Hoose

(Time Stamp: 1:39:56)

Van Hoose stated they are looking at a possible EV charger program. She said there is no AMI program yet, but they may implement on in the next three to five years. (Van Hoose also offered the caveat that she has been saying that for a while now).

Van Hoose said Clark is on a path to solving their capacity needs especially during higher summer peaks. She concluded by saying they are looking at low and no-cost solutions and overall DR activity for Clark is minimal.

EWEB

John Crider

(Time Stamp: 1:41:17)

Crider said EWEB's DR efforts are in the preliminary stage, kicking off an IRP after a 10-year hiatus. Crider said the draft IRP will include some low-hanging DR in the form of a residential and commercial water heater/space heating, critical peak pricing, and TOU products.

Crider said he and others at EWEB have done some work, with help from Council models, to figure out how to put fixed costs in the AURORA model in a way that makes sense. He reports that this work is almost complete. Crider said he suspects the modeling and reference case IRP will show small amounts of DR and the Board will decide next steps. Crider said he would like to do an EE and DR potential assessment as they haven't had one in a while, and it would be helpful to know the balance of resources.

Crider concluded that he hopes the Board will direct the start of future pilot programs.

Idaho Power

Quentin Nesbitt

(Time Stamp: 1:43:58)

Nesbitt stated that Idaho Power had lots of activity in the past year and there is more to come. He said this is driven by their 2021 Integrated Resource Planning process and they are now working on their 2023 IRP.

Nesbitt noted that the 2021 IRP found that DR could help their growing need for capacity and lack of surplus, especially in the later evening hours. He said additional analysis that applied Effective Load Carrying Capacity to all resources and compared it a perfect generator helped determine what Idaho Power should pay for DR. Nesbitt said this will be done in future IRPs.

He said the 2021 work allowed them to modify and expand programs, adding that they did "take a haircut" for customer participation due to those changes. Nesbitt said the main problem is lack of desire to participate in later evening hours programs, even with higher incentives. He said this was true across all participant classes.

Nesbitt said they just finished up a DR potential study using Council work trued up to Idaho Power customers and some new program assumptions. He said this will be presented to their Integrated Resource Advisory Council with the plan to input them in IRP modeling to determine future DR picks.

Nesbitt concluded by saying he expects DR programs to continue and expand in the future.

Nesbitt then addressed Garcia's comment about agricultural DR uptake during heat spikes, saying he's seen some variability. He said one event in a hot period is not impacted but multiple events during a hot period are seeing more opt outs. Nesbitt then said large customers with

hundreds of service locations managing thousands of acres may have issues other than weather, like labor problems, that keep them from participating. He said this can dramatically effect opt outs.

PacifiCorp

Alex Osteen, Peter Schaffer

(Time Stamp: 1:50:06)

Schaffer explained that their story started with their Winter/Spring 2021 DR RFP that solicited third-party vendor DR program proposals. He said this process was focused on western states as they already operate DR programs in UT and ID. Schaffer reports receiving over 12 bids and PacifiCorp's 2021 IRP selected substantially more DR resources than before.

Schaffer said this initiated the process to procure and expand more DR to meet these targets. He said many selections are competitively priced capacity resources that give value when called on in times of market volatility. Schaffer said DR value comes from reducing risks in a constrained, volatile market.

Schaffer said Idaho efforts include:

- Pilot for their Wattsmart Battery Program that incentives customers with batteries to dispatch to the grid. This program is successfully running in UT.
- Irrigation Program
- Special, interruptible contract with a phosphorus plant
- Filed for Commercial/Industrial curtailment program (short, garbled explanation)

Osteen commented that personally, he thought this was an exciting time to work in the DR space. He said in OR and WA they are working on three varieties of DR:

- Irrigation
- C&I
- Residential

He said next year they plan to expand battery offerings along with a managed EV charging program. He offered to follow up with more if needed.

Snohomish PUD

Landon Snyder

(Time Stamp: 1:56:00)

Snyder said that since their 2021 IRP they have launched pilot Time of Use and Critical Peak Pricing programs. He reports they have been very successful, and a second pilot is proposed for this winter before going live for the whole region.

Snyder said they are also looking at an AMI rollout which has been delayed due to supply chain kinks. He said it should be completed by 2025-26 and will allow the utility to try different things using technology.

Tacoma Power

Ryan Fulleman

(Time Stamp: 1:57:20)

Fulleman reported that over the last year Tacoma ran a small water heater DR pilot that is still running and will continue. He said they are also developing an industrial DR contract and rate, adding that this product has been fluid and has changed to dropping load to a specified level. He said they can now offer more for capacity than before as their IRP found that they will need 10MW of DR in the next four years.

Jayaweera asked Fulleman and Mitchell what percentage of their utility's peak load is 10MW.

- Fulleman answered that for Tacoma the DR has more benefit for shoring up small adequacy risks than filling a pure capacity need.
- Mitchell said 10MW is about 2% of Chelan's peak, but like Snohomish they are looking at adequacy and wholesale market sales when costs are high.

Fred Heutte, NW Energy Coalition, said he has been following DR efforts across the region and called Idaho Power a leader adding that Arizona Public Service is also doing a fair bit. He said that PGE is working on a major investment in the SmartGrid test bed and a broader flexible load plan and looked forward to hearing a deeper dive into those efforts. Heutte said these complicated approaches may be the standard as the grid evolves.

Heutte approved of the interest in DR from Snohomish, Avista, and PacifiCorp. He said his organization is trying to support those efforts.

He said that it takes time and effort to start these projects and they offer a lot of potential. He said the first approach of calling big customers to get large, but limited chunks of resource while the second, more automated approach of grid controls offers more potential but is more complicated.

Heutte said that peak coincident load for AC, heating, and water heating are amenable to automated controls, but pointed to potential impacts on customer comfort. He said this is a good time to coalesce learnings and hoped that the DRAC would help move that forward as DR has a lot of value and is undeveloped in the region.

PGE

Scott Reeves, Cadeo Group,

(Time Stamp: 2:06:43)

Reeves reported that prior to Cadeo he spent six years at Cadmus evaluating residential DR programs, saying they are great resources from evaluations to learn from and make quick decisions. Reeves said PGE developed flex timing and found no load impact based on level of incentive. He said the SmartGrid test bed evaluations revealed information around messaging, customer value propositions, beneficial community impacts, and retention rates.

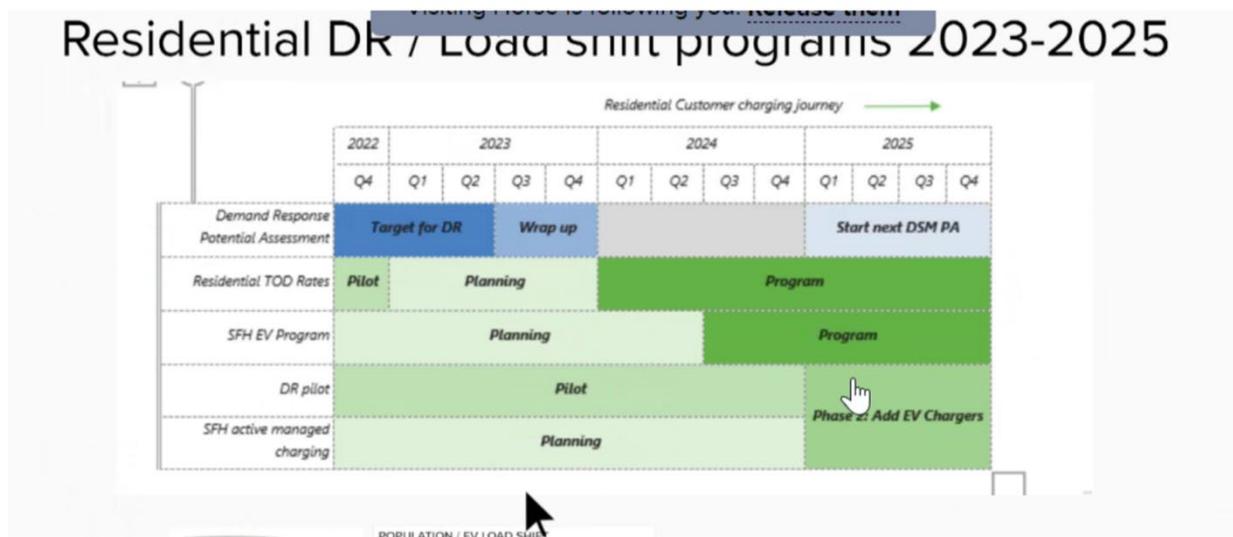
Reeves then pointed to work he's doing for the Council/RTF around flexibly evaluation study. Jayaweera stated that the RTF is looking at the relationship between EE and DR and if they can complement each other. She used the example of weatherization paired with a direct control thermostat program. Jayaweera said this information will be presented to the Conservation Resources Advisory Committee and she will invite DRAC members to attend.

Reeves said this work will be done by the end of the year with a Q1 2023 presentation.

Seattle City Light

Jennifer Finnigan

(Screenshot sent via email)



In her email Finnigan wrote: “We are deliberating on single family homes managed charging; the last line is not set in stone.”

Next Steps

Jayaweera asked the DRAC to reach out with more comments as soon as possible and to fill out and return the [DR Data Template](#) before November 23, 2022. She noted there will be future meetings in 2023 including a DRAC/GRAC session for distributed energy resources in six months. Jayaweera also mentioned a PGE presentation to the Council on November 16 that will be open to all. Madron said that meeting will start at 9:30 with in-person and virtual options.

Mark Jerome, CLEAResult, asked when the minutes will be available. Amy Milshtein, note taker, messaged Jerome saying she is typing as fast as she can.

Jayaweera said the next meeting will be in about six months, encouraged DRAC members to listen into the November 16 Council meeting and ended the session at 12:00.

Attendees via Go-to-Webinar

Tina Jayaweera	NWPCC	Chad Madron	NWPCC
Annika Roberts	NWPCC	Kevin Smit	NWPCC
Malcolm Ainspan	NRG	Frank Brown	BPA
Wade Carey	Central Coast	John Crider	EWEB
Tom Eckhart	UCONS	Ryan Fulleman	Tacoma Power
Nicholas Garcia	WPUDA	Amber Gschwend	GDS Assoc
Leona Haley	Avista Corp	Lee Hall	BPA
Fred Heutte	NW Energy Coalition	Mark Jerome	CLEAResult
Josh Keeling	Generac Power	Richard Keller	Idaho PUC
Ted Light	Lighthouse Energy	Kyla Maki	Montana
Josh Mitchell	Chelan PUD	Eli Morris	Applied Energy Group
Todd Myers	WA Policy Center	Quentin Nesbitt	Idaho Power
Heather Nicholson	OPALCO	Joel Nightingale	WA UTC
Alex Osteen	PacifiCorp	Scott Reeves	Cadeo Group
Liz Reichart	WA Commerce	Nick Sayen	OR PUC
Peter Schaffer	PacifiCorp	Blake Scherer	Benton PUD
Aliza Seelig	PNUCC	Landon Snyder	SnoPUD
Zeecha Van Hoose	Clark	Kitty Wang	Energy Solution
Craig Patterson	independent	R S Arnedo Mendoza	independent
Nick Bengtson	Energyhub	Dylan D'Souza	NWPCC