

**Demand Response Advisory Committee
Northwest Power and Conservation Council
April 22, 2020**

Tina Jayaweera, NWPCC, began the meeting at 10:00am with announcements and a round of introductions.

**Demand Response Capacity Contribution Towards Adequacy
John Ollis, NWPCC**

Fred Heutte, NW Energy Coalition, noted that batteries both take energy from and inject energy into the grid [Spreadsheet.] He then said DR mostly reduces energy from the grid, but some DR, like a water heater, can be pre-charged. He wondered if modeling could reflect the differences between INC and DEC resources and those that can only be one.

Ollis answered that the RPM is not hourly so can't see this with good fidelity, but the ASCC shows their peak contribution as broadly the same. Ollis added that these differences can be portrayed in the energy contribution. Heutte agreed with this approach.

Lee Hall, BPA, asked why there is only Summer, Fall and Winter DR as the resource can be used all year long, adding that BPA is finding capacity issues coming up in April [Slide 15.] Ollis said this modeling choice reflects limited Spring adequacy events for the region, adding that this approach can be adjusted.

BREAK

DR Supply Curves

Gurvinder Singh, PSE, asked if using the high load forecast lines up with the resource adequacy analysis used to calculate a particular resource's ASCC [Slide 3.] Ollis answered yes, adding that they are watching for issues but so far adequacy events are being caused by high loads and bad hydro and not medium loads and bad hydro.

Quentin Nesbitt, Idaho Power, said the cost for the residential switch seems low and asked if the price included installation. Jayaweera answered that the number represents equipment cost per participant and the \$20, which includes some staff time, is his estimate. Nesbitt said that he thought it was more like \$120. Jayaweera apologized saying it's actually O&M costs and will change the slide.

Hall thanked Jayaweera for the ability to work with Council staff, pointing to a good collaboration regarding DVR [Slide 6.] However, Hall remained concerned about the regional achievable DR potential and the DRAC supply curves for Industrial DR, Large Commercial and Public Buildings DR, Irrigated Farms and Residential Space Heating and Air Conditioning.

Hall called the 40 MW/season for Industrial pretty small, noting that a demonstration project got 40MW from just one plant and BPA's reference case is 800-1500MW a season. Hall continued, saying Large Commercial and Public Buildings and Irrigation could be much bigger as well. He asked for more time to collaborate on these assumptions, as the region will experience capacity issues in 10 years and beyond.

Hall then noted that the DRAC is, by charter, not a decision-making body, yet these assumptions are described as "DRAC decisions." He stated that it can be hard to find the documentation for these "decisions."

Hall pointed to the copious amounts of the time, money and effort that went into developing the supply curves and everyone's desire to put the best work forward. He acknowledged the 2021 Plan's timeline but asked for a few more days to work on the final numbers for the supply curves.

Jayaweera pointed to the posted minutes, adding that recordings of the meetings are always available if the minutes are not descriptive enough. She agreed that the word "decision" may not be the best choice, but is merely an attempt to describe the back and forth from a multitude of regional stakeholders.

Jayaweera then informed Hall that staff is out of time for incorporating new feedback, but offered to talk to Ben Kujala, NWPC and others to see if there is any flexibility. She added that there is still time to make changes between the Draft and Final Plan and there can be sensitivity studies as well. Ollis added that Council members would have to agree to make changes to the Draft Plan at this point and said he will pass BPA's concerns about underestimated potential along.

Hall pointed again to BPA's investment in collaboration and analysis and agreed that others on the DRAC may not be as involved. He then asked for another two or three days to collaborate on the supply curves. Ollis thanked everyone who worked on the Plan and confirmed that Hall felt strongly enough over the issue to push back completion of the work. Hall said he's asking for a couple of days for more discussion on the cost curves but understood that it might not be possible.

Jayaweera said she will discuss this with Kujala, explaining that two more days of discussion may cascade into weeks of incorporating analysis.

Heutte agreed that it's important to get good inputs into the Draft Plan, even though there's opportunity to change things before the Final Plan. He agreed that BPA's concern over 1000 MW of DR deserves another look. Heutte asked if there's a lockdown date for inputs. Ollis stated they can't do any of the real, substantive modeling until the inputs are locked down. Heutte pointed to BPA's substantive analysis and asked that staff put what they can into the Draft Plan. He then asked that BPA's concern be posted on the DRAC webpage for everyone to read, adding that it's important to get the numbers right.

Jayaweera thanked everyone for their input, saying she will come back with information soon, possibly after lunch.

Nesbitt asked why Summer and Winter are totaled on [Slide 6.] Jayaweera said it's just for display and the RPM includes seasonality but they bin by cost. Heutte called this possibly confusing and suggested breaking it out.

Heutte liked the phrasing of "Controllable" vs "Pricing" on [Slide 7.] Ken Nichols, EQL Energy, asked where the MW estimates came from, particularly the "Pricing" estimates. Jayaweera stated that they came from prior meetings and benchmarking, particularly with residential TOU programs. Heutte pointed to the California Energy Commission's load docket work with companies on the "Pricing" side and are finding some interesting, new things. Nichols added there's dynamic price work going on that's important to watch.

Jayaweera recognized that there's a lot of uncertainty in these assumptions based on what the program looks like and these assumptions are based on discussions. She added that a DR sensitivity study would explore uncertainties.

Heutte asked what would happen if the consumer incentive for both the grid-controlled and switch water heater was lowered slightly [Slide 10.] He agreed with the binning, noting that the model doesn't pick everything in a bin but picks what it needs and was okay with shifting the bins a bit.

Nesbitt confirmed that incentives were already removed from the costs. Jayaweera answered that a portion of the incentive is included. Nesbitt asked how the irrigation percentage was calculated. Jayaweera said the 75% is mostly based on the CA protocol. Nesbitt commented that the number seems low and his number is substantially higher. Jayaweera offered to take another look.

LUNCH

Jayaweera addressed key issues brought up in the morning session. She stated that the levelized cost for irrigation does not include the variable incentive but these variable O&M costs will be included in the RPM modeling.

She then addressed Bonneville's request for more time to work on the supply curve numbers, saying she's glad to collaborate further but can't guarantee that the results will be incorporated into the Draft Plan because of timeline constraints. Jayaweera asked for formal comments from BPA, or other members, so Council staff can respond. She said these could be presented to the Council and other DRAC members for discussion and possible inclusion between Draft and Final. She cautioned that making changes to the load forecast is not feasible at this point.

EE/DR Interactions

Tom Eckhart, UCONs, called [Slide 9] elegant and asked if it's used anywhere outside the region adding that he thinks he's seen it used in California. Jayaweera stated that some utilities are trying to incorporate dynamism in their modeling. Heutte mentioned how Arizona Public Service is co-optimizing EE and DR to meet system needs, calling it an important issue. He said this approach makes conceptual sense that will need some fine tuning but approved of laying out the approach step-by-step.

Jeff Harris, NEEA, approved of the methodology on [Slide 10] and asked about participation rate, pointing to PGE's success with their "opt out" participation model for their test bed project. Jayaweera acknowledged that DR is dependent on the parameters of delivery and is proposing a sensitivity study to better inform the Council as they move to Resource Strategy recommendations. Harris approved of the approach.

Joan Wang, Cadmus, confirmed that the factors on [Slide 10] get combined in each bin before asking how the top-down versus the bottom-up approach is reconciled. Jayaweera said she is calculating the numerator separately for each cell in the matrix of EE and DR cost bins, then weighting up for a given EE cost bin based on available DR potential in the given DR bin. Wang approved of the approach.

DR Action Plan Ideas (First Call)

Heutte asked to formally review the Seventh Plan's action items in a future DRAC meeting to check on progress and spur further thought [Slide 2.] He then discussed an approach for his proposed sensitivity study on DR availability in the Plan, both more or less than currently assumed. He suggested reviewing participation rates, ramp rates, and incentives and develop high/low estimates for each product. He recognizes that this sensitivity could not necessarily be run in every scenario. We would then review how the differing DR availability changes portfolio cost, risk, and emissions. Ollis called his approach well-thought out but said it would be a large undertaking but he hoped to go down some of the outlined paths. Heutte agreed that it would be burdensome to do the "magnificent, full review" he just outlined but hoped Ollis would be able to do some to better inform the Action Plan. Heutte stressed the key period to get DR up and running is approaching fast and this would give good direction.

Nichols asked about the distinctions between PND RP and DRAC, wondering if PND RP has a broader, more regulatory focus [Slide 6.] Jayaweera said anything goes with PND RP. Nichols thought it would be worthwhile to have more discussion on pricing programs and implementation. Jayaweera noted that Grid Forward has a Fall conference and she didn't want to be redundant. She said she would send out a call for topics to gauge interest.

Heutte asked if holding a small subcommittee to more closely examine inputs might be worthwhile. Jayaweera said she was okay with having a full DRAC before August for this kind of discussion. Heutte proposed that this meeting would have a different shape, more like a working session than a presentation with questions and answers. Jayaweera recalled that the Sixth Plan had something similar for energy efficiency and said it could happen during a formal DRAC meeting. Heutte approved of the idea.

Jayaweera adjourned at 2:30pm.

Attendees via Webinar

Aaron Bush	PPC
Adam Schultz	ODOE
Ahlmahz Negash	Tacoma Power
Bill Saporito	Umatilla Electric
Bill Westre	Sierra Club
Chad Madron	NWPCC
Charlie Grist	NWPCC
Clint Gerkenmeyer	Energy Northwest
Dave Hostetler	BOLAND
David Siddiqui	Oracle
Eli Morris	Applied Energy Group
Elizabeth Osborne	NWPCC
Ellyn Murphy	PNNL
Frank Brown	BPA
Fred Heutte	NW Energy Coalition
Jeff Harris	NEEA
Jennifer Snyder	WA UTC
Joan Wang	Cadmus
John Ollis	NWPCC
Kate Maracas	Western Grid Group
Ken Nichols	EQL Energy
Kevin Smit	NWPCC
Lee Hall	BPA
Malcolm Ainspan	NRG Curtailment Solutions
Quentin Nesbitt	Idaho Power
Pat Oshie	NWPCC
Sarah Vorpahl	WA Dept of Commerce
Shirley Lindstrom	NWPCC
Gurvinder Singh	PSE
Suzanne Frew	Snohomish PUD
Ted Light	Lighthouse Energy LLC
Tina Jayaweera	NWPCC
Tom Eckhart	UCONS
Zeecha Van Hoose	Clark PUD
Brian Dekiep	NWPCC