

**Northwest Power and Conservation Council
Resource Adequacy Advisory (Technical) Committee
October 6, 2020**

John Fazio, NWPCC, began the meeting at 1:30. Chad Madron, NWPCC, reviewed the best way to use Go-to-Webinar. Fazio asked that RAAC Technical members look at the minutes from July 22, 2020. He reviewed the day's agenda.

Preliminary Resource Adequacy Assessment for 2025 and 2027

John Fazio, NWPCC

Fazio presented preliminary results for 2025 and 2027 adequacy assessment. Fazio explained we are looking at 2027 in addition to 2025 due to the planned coal retirements. Fazio walked through changes in resource assumptions from 2024 to 2025, and market assumptions-both in region (IPP resources) and out of region. Fazio then walked through each reference case study and preliminary results, including a climate change-based loads and flows study (C-Ref Case). John Ollis, NWPCC, explained what is needed to create a BPA scenario and Pat Byrne, BPA updated the group on Bonneville's work to date. Fazio stressed all results shared are preliminary.

Sashwat Roy, Renewable NW, commented that Idaho Power's recently amended IPP states that Valmy 2 is projected to retire by the end of 2022 [Slide 5.] Fazio answered that staff is tracking this and Gillian Charles, NWPCC, found that there are still further studies to be done by ICP. Fazio offered to look at this in a scenario if desired.

Scot Levy, Bluefish, asked why imports are limited to 3400MW when the lines can physically handle more. Fazio stated that, as previously discussed, there is about 8000MW of space but firm contracts take some of that space. Fazio noted that the RAAC decided years ago that they wanted to go with a fairly high (P95) likelihood of an event. He noted that BPA's analysis came up with being able to transfer about 3600MW.

Fazio also referenced market availability discussions after the 2001 energy crisis that drove this policy. He added that the redeveloped GENESYS may re-open the discussion.

Spencer Gray, NIPPC, asked about the maintenance of the limited summer availability of in-region summer IPPs. He thought IPPs might question the maintenance of that 1,100MW assumption. Fazio said the decision to limit them to 1/3 of their capacity came out of the assumption that NW IPPs are a market resource and the region might have to compete with California.

Gray said that NIPPC members think that number should change as they are and plan to continue marketing within the region. Fazio said he received Gray's email about this and reminded him that this slide outlines past assumptions and he will present results from a study of year-round IPP availability for comment.

Levy voiced concern that high solar during the day would allow for very large imports and the models should reflect this. Fazio agreed and pointed to enhancements of the redeveloped GENESYS adding that he can create a custom supply shape for the available market.

Fazio added that one of the questions he is posing today is: Should we look at different amounts and/or shapes of potential market supplies for California.

Tomás Morrissey, PNUCC, asked if the loads on [Slide 8] are with or without EE. Fazio said they are presented with frozen efficiency, explain how targets from the Power Plan will be added back into the RA assessment.

Fred Heutte, NW Energy Coalition, asked to what degree one could consider the three climate change cases as an envelope for system variation [Slide 8.] As example he said there is some potential for high late winter peaks in Case C while Case A shows later summer issues. He said we should pay attention to both for a system that now has more climate-driven variations.

Fazio called the March peak a little bit of an anomaly. Heutte agreed that it is occurring in an unusual time of year. Ronda Strauch, Seattle City Light, asked if the rate winter cold snaps are real projections or artifacts/bias of the GCMs. Dan

Hua, NWPCC, thought it was real as the groups preparing the data removed as much bias as possible.

Mohit Chhabra, NRDC, suggested looking at the data as a representation of uncertainty in climate forecasts that must be accounted for in RA requirements. Fazio agreed, adding that the three were chosen to capture the full range of climate possibilities.

Chhabra asked if Staff should be taking an average of the three climate change scenarios or using their forecasts to develop RA bookends [Slide 13.] Fazio explained the process using the re-developed GENESYS as opposed to the classic GENESYS.

Chhabra clarified his question, asking how they are applied saying you can take an average of the scenarios or the implications of the scenarios. Fazio understood Chhabra's statement, moving back to [Slide 10] to explain how the numbers are generated.

Chhabra suggested weighting events which call for more capacity more when doing the aggregation. Fazio disagreed, saying he doesn't want to eliminate all of the issues but get to a 5% LOLP.

2025 Resource Adequacy Assessments – Sensitivity Studies

John Fazio, NWPCC

Fazio walked through and sought feedback on potential sensitivity studies for the 2025 RA assessment.

Levy wrote, via Chat, that 2001 was not due to market but gamesmanship for profit to the few, pointing to many follow-up reports that agree. He added that he thinks the high-end assumption of "Market Supplies" should be the physical constrain of the lines in all cases (with 0 capacity during ramping periods, hours 17-22) and suggested letting the policy decision makers work from full information.

Heutte addressed California's impacts on imports, asking how committed new resources like 3000MW of battery, solar + battery and advanced EE will be treated as they will affect winter imports. Fazio said they will be looked at in

AURORA and the updated GENESYS. Ollis agreed, adding that the redeveloped GENESYS has a lot of market supply bins.

Levy suggested a scenario without Lower Snake River dams as it wouldn't be difficult to set up. He added that Must Run Hydro is causing renewable curtailments, and thereby increasing the amount of necessary renewable build.

Fazio thought that study should be more than a scenario and would be difficult to do, because of this he didn't think it would be appropriate for an RA scenario but a valuable study at a later date.

Levy also wrote, via chat, that the CRSO NEPA narrative states that Lower Snake River dam removal will make REQUIRED renewable integration "more difficult to achieve" and a study of this will inform that narrative as being true, false, or "it depends". Fazio didn't disagree, calling a major change to the system but didn't think the RA assessment was the place for the study.

Fazio ended the meeting at 3:30.

Attendees via Go-to-Webinar

John Fazio	NWPCC
John Ollis	NWPCC
Dan Hua	NWPCC
Tanya Barham	Community Energy Labs
Dhruv Bhatnagar	PNNL
Frank Brown	BPA
Morgan Brummund	Idaho Office of Energy Resources
Aaron Bush	PPC
Pat Byrne	BPA
Mohit Chhabra	NRDC
Alan Comnes	Energy GPS
Robert Diffely	BPA
Ryan Egerdahl	BPA
Villamor Gamponia	Seattle City Light
Andrea Goodwin	NWPCC
Spencer Gray	NIPPC
Tom Haymaker	Clark PUD

Fred Heutte	NW Energy Coalition
Steve Johnson	WA UTC
Massoud Jourabchi	NWPCC
Scott Levy	Bluefish
Shirley Lindstrom	NWPCC
Douglas Logan	
George Lynch	Idaho OER
Ian Mcgetrick	Idaho Power
Tomás Morrissey	PNUCC
Elizabeth Osborne	NWPCC
Kristine Raper	Idaho PUC
Selisa Rollins	BPA
Sashwat Roy	Renewable NW
Bill Saporito	Umatilla Electric
Kathi Scanlan	WA UTC
Keli Schermerhorn	Northwestern
Jaime Stamatson	Montana
Ronda Strauch	Seattle City Light
Tyler Tobin	Puget Sound Energy
Cindy Wright	Seattle City Light
Brian Dekiep	NWPCC
Ahlmahz Negash	Tacoma Power
Malcolm Ainspan	NRG
John Chatburn	Idaho OER
Ben Fitch-Fleischmann	Northwestern
Max Greene	Renewable NW
Carl Mannheim	HDR Inc
Shauna McReynolds	PNUCC
Marissa Warren	Idaho OER
Zhi Chen	Puget Sound Energy