Northwest Power & Conservation Council Systems Analysis Advisory Committee November 6, 2024

John Ollis, NWPCC, began the meeting at 1:00pm by reviewing the agenda and urging committee members to read and comment on the last meeting's minutes. He then called for introductions.

Modeling Changes Between RPM and OptGen Part 1: Topology John Ollis, NWPCC

Nicolas Garcia, WPUDA, strongly supported the new topology but wondered what the new methodology would reveal about loads and resources in different areas [Slide 3]. He wondered if capital expansion would be identified for a specific region or local.

Ollis said a lot depends on what the Council wants to do with the analysis and recommendations. He noted this new method will reveal a lot about the locational value of certain resources and might allow the ability to see new information that could allow for sub-regional recommendations. Ollis stressed that a zonal representation is not perfect, and model interpretation requires some art.

Garcia opined that, at a minimum, the Plan should indicate where needed resources will not be helpful. He expressed concerns about "NIMBY" thinking that may site resources in a transmission-constrained location. Garcia encouraged staff and the Council to think very hard about results. He understood that models are imperfect, but stressed that location matters and a resource in the wrong spot does not deliver desired value.

T&D Deferral and the 9th Power Plan

Garcia noted that the utilities represented on [Slide 11] are IOUs with regulations and spending constraints or public utilities. He said this is important because historically the publics have been more willing to invest more robustly in infrastructure. Because of this he voiced concern around using PGE or PSE numbers to estimate for everything west of the Cascades as other utilities would have very different numbers. Tomás Morrissey, NWPCC, said they see more IOU data because that is what is available. He then said their calculations include load weighting which should help minimize impact. Morrissey said this will be addressed again in a few slides.

Garcia understood, but said the numbers are still not representative and called for caution as they may result in skewed results. He pointed specifically to \$100 kW-yr, saying that number is very different from what the utilities he represents face.

Ollis stressed that staff wants to get the values right and acknowledged locational differences. He said more data would be useful but cautioned that they are not trying to get overly granular. Garcia offered to quickly find and send over some data.

David Clement, NEEA, asked if the values on [Slide 14] stay static, wondering of rapid growth from data centers or EVs would change the deferral value. Morrissey answered that this is a static snapshot that is trying to capture the T&D deferral value inside the model nodes. He explained that this is different than the value of increasing the transfer between nodes, which would be more dynamic.

Clement said this makes sense as there was a mechanism to capture the impact of demand on transmission. Morrissey agreed that it would be ideal to be more dynamic. Ollis added that might require more thought around the model's new capabilities.

Scott Levy, Bluefish, called for studying BPA's reconductoring work [Slide 16]. Morrissey called that interesting but outside the scope of T&D deferral value discussions. Ollis said reconductoring or upgrades will be a topic for upcoming discussion. He previewed that any projects that are part of the existing system at the start of the Plan will be reflected with greater transfer capabilities between the zones, while any proposed infrastructure upgrades will be somewhat represented in scenario work. Ollis cautioned that some zones are so large that there could be some gaps.

Levy was pleased. He asked about batteries at substations but was confident that staff had it covered.

Zonal Representation of Transmission John Ollis, NWPCC

Levy referenced a study about a powerline from Idaho Power to Avista [Slide 6] and wondered if staff included it in their work. Ollis said they do have a transfer between Avista and Idaho Power and they will want to capture it if it raises the transport capability. He said right now there is a 200 MW transport capability and asked for comment. Levy offered to investigate.

Garcia said BPA highlighted the impact of a possible additional line from the desert southwest to the Pacific northwest. He thought it might be interesting to run this through the Council's model. Ollis pointed to a scenario that will investigate how new transmission might affect the resource strategy but wasn't sure if that particular line was included as there is a lot to track.

BREAK

Ollis put out a questionnaire about how entities are representing transmission in modeling and what data is being used.

2024 Wholesale Power Market Forecast Wrap Up and Next Steps John Ollis, NWPCC

Garcia asked about the 2024 High Demand, Storage Limited scenario on [Slide 23]. He asked why results indicate that builds go down significantly by reducing storage. Ollis said these slides don't show all the details, but this scenario resulted in high emissions as it relies on the existing system, including existing gas.

Garcia said this points out that some environmental requirements are adding a non-trivial \$14 Billion to the cost. Ollis added that AURORA models some emission pricing schemes but is not perfect. Garcia said that made sense.

Modeling Changes Between RPM and OptGen Part 2: Out of Region Market John Ollis, NWPCC

Ollis thanked the room for participating in the questionnaire, reflecting that responses showed two out of three participants used zonal modeling and one participant does integrated, transmission and generation planning. Ollis appreciated the data and links provided.

John Mertlich, Grant County PUD, said he shares struggle of creating a unit commitment for gas plants [Slide 5]. He discussed his past strategies, including stratifying unit commitment decisions versus must run basis. Mertlich mentioned that many combined cycle operators will keep their operations in one-by-one mode for up to eight months out of the year. He had no further advice but understood the struggle. Mertlich suggested looking at history and generally how the super-efficient gas plants run to make sure staff are capturing the base-always operations. He added that the rest should react to price to give you the right overall mix.

Ollis appreciated the comment, saying staff is willing to expand this out, but said he found others that used this strategy with some success. He said he will report results back, adding that modeling renewable plants outside the region requires modeling reserves and OptGen theoretically has a dynamic probabilistic reserve requirement that grows as renewables grow which could be helpful.

Ollis asked for feedback and comments on anything discussed during the day. He pointed to probable upcoming meetings as staff stand up model data bases. Ollis said he will send out emails with more information and ended the meeting at 3:30.

Attendees via Zoom Webinar

John OllisNWPCCDor Hirsh Bar GaiNWPCCJennifer LightNWPCC

Tomás Morrissey	NWPCC
Daniel Hua	NWPCC
Steve Andersen	Clark PUD
Blake Scherer	Benton PUD
Katie Chamberlain	Renewable NW
Josh Haver	Idaho PUC
Mary Kulas	Public Power Council
lan McGetrick	Idaho Power
Frank Brown	BPA
Ted Drennan	Oregon PUC
Nicolas Garcia	WPUDA
Heather Nicholson	Orcas Light & Power
David Clement	NEEA
Aaron James	NEEA
Sophia Spencer	Navoo Solutions
Kaitryn Olson	PSE
Annika Roberts	NWPCC
Tyler Tobin	PSE
Mike Swirsky	Critfc
Robert Diffely	BPA
John Mertlich	Grant County PUD
Alexandra Karpoff	PSE
Jason Sierman	ODOE
Eric Graessley	BPA
Brian Dekiep	NWPCC
Scott Levy	Blue Fish
Devin Mounts	PGE
Sibyl Geiselman	Public Generating Pool