

**Northwest Power and Conservation Council  
Generating Resources Advisory Committee  
May 21, 2020**

Gillian Charles, NWPCC, began the meeting at 9:30 with a review of the agenda and introductions. She then announced that the 2021 Draft Plan release has been delayed until February 2021 while the final Plan is expected to be released in May or June 2021.

**Emerging Tech: Purpose**

Tanya Barham, Oregon Solar Energy Industries Assoc, asked via chat if the concepts of Virtual Power Plants/Distribution Utility VPPs using DERMS (distributed energy resources management system) has been explored as a system-level generation resource [Slide 14.] Charles said distributed generation is covered on the load side and offered to talk more on the background of that off-line. Barham noted that Europe has a mega virtual power plant and listed specifics. Charles said staff hasn't specifically talked about VPP and noted that the presentation will include other ways to pull in emerging tech concepts.

Fred Heutte, NW Energy Coalition, disputed calling offshore wind "unproven," pointing to an at-scale offshore project off the coast of Scotland. Charles replied that she will re-write the language on the slide. Heutte pointed to a large amount of activity and interest in offshore wind on the west coast. Charles thanked him, saying it's a good reminder of how important the Action Plan is in tracking these emerging tech resources to be ready for the next power planning cycle.

**Emerging Tech Reference Plant: SMR**

Jim Woodward, WA UTC, wondered if the Council plans to caveat the environmental risks around waste disposal for SMRs [Slide 21.] Charles noted that the Seventh Plan included a section that discussed the waste and environmental risk of every resource and suspected the same would be true of the 2021 Plan.

Charles then said that waste disposal and decommissioning costs have been pulled into capital costs and O&M estimates for all resources. Woodward noted that "nuclear" conveys different things to different stakeholders and suggested mentioning that in the Plan along with possible siting issues. Barham agreed with this via chat. Charles countered that everyone has their favorite and least favorite resource and the Council takes an independent stance. She reminded the room that this is a proxy plant and said all risks will be captured in the narrative and modeling. Woodward thanked her for her answer.

Greg Cullen, Energy NW, added that the Federal government is poised to fund two other nuclear demonstration projects, provided that they are up and running by 2027. He said this points to a lot of movement in these technologies in the upcoming decade. Cullen then said long-standing impressions about nuclear resources might be changing because of the region's focus on carbon-free resources.

Barham did not feel as optimistic about the public's embrace of nuclear technology and thought this would be a good time to look at the interaction of regional hydro resources and renewable resources. Charles said the same hydro interaction studies will be run on SMRs adding that this SMR proxy plant will also be competing against renewables and non-renewable resources. John Ollis, NWPCC, guessed that SMR characteristics will look similar to conventional thermal resources and its interaction with hydro will be taken into account.

Barham pointed to work by utilities like Xcel and PGE to aggregate virtual power plants and coordinate them into a generating asset. She didn't think that this effort has been adequately represented in the modeling to date and wondered why SMRs were getting so much "airtime." Ollis answered that preliminary studies were done on classic GENESYS which didn't have the capability to model this kind of resource. He stated that the redeveloped GENESYS will have that capability and much more nuance.

Charles stated that it is not the intent to give "airtime" to SMRs, adding that the GRAC process has been going on for 18 months and is extensive and inclusive. Charles again stressed that this is a proxy and discussion about the importance of distributed, virtual resources can be folded into the Plan narrative.

Heutte questioned how fixed and variable O&M costs for emerging tech will be assigned, as this is a proxy for all emerging tech and not just SMRs [Slide 26.] Charles acknowledged that even though this is a proxy they are modeling the attributes of SMRs. She stated that even though fixed and variable costs are confidential, there may be a way to put a number forward in the future.

Heutte called that fair, but cautioned that not disclosing a number used in modeling would be a first for the Council. Charles agreed that the Council is a public resource and that transparency is important. She maintained that she hoped be able to put some number forward in the near future.

Jeff Kugel, PNGC, asked if the overnight capital costs were based on net or gross. Charles answered that they are based on the net.

Woodward asked where he could find information about past GRAC work for the 2021 Plan. Charles directed him to the [GRAC page](#) of the NWPCC website for PowerPoint presentation, workbooks, as well as the Plan's technical support document webpage. Barham also wanted to access the information. Charles pointed to the GRAC page, adding that meeting recordings and meeting minutes are also available.

Charles ended the meeting at 11:00am.

#### **Attendees via Webinar**

Aaron Bush

PPC

Alyssa Tavares	
Bill Henry	dJoule LLC
Bo Downen	NWPCC
Bryan Neff	CEC
Bryce Campbell	Canadian Conciliate
Chad Madron	NWPCC
Chase Morgan	Idaho Falls Power
Christopher Allen	Cowlitz PUD
Dominick Claudio	NuScale
Clint Gerkenmeyer	Energy NW
Dhruv Bhatnagar	PNNL
Elizabeth Hossner	Puget Sound Energy
Elizabeth Osborne	NWPCC
Fred Heutte	NW Energy Coalition
Gillian Charles	NWPCC
Greg Cullen	Energy NW
Greg Nothstein	WA Dept of Commerce
Henry Tilghman	Tilghman Associates
Hazel Aragon	CEC
Ian Bledsoe	Clatskanie PUD
James VandenBos	BPA
Jeff Kugel	PNGC
Jim Woodward	WA UTC
John Goroski	Flathead Electric
John Lyons	Avista Corp
John Ollis	NWPCC
Tom Kaiserski	Montana
Leanne Bleakney	NWPCC
Lenore Marentette	independent
Jennifer Magat	PSE
Mark Gendron	UAMPS
Max Greene	Renewable NW
Ian McGetrick	Idaho Power
Nate Sandvig	National Grid
Rebecca Smith	Oregon Dept of Energy
Richard Jensen	CEC
Shamus Gamache	Central Lincoln PUD
Peter Stiffler	BPA
Tanya Barham	Oregon Solar Energy Industries Assoc
Terry Toland	Clark PUD
Tom Haymaker	Clark PUD
Brian Dekiep	NWPCC