



Northwest Power and Conservation Council

Meeting Notes

October 11-12, 2016

Portland, Oregon

October found the Council settled at its home base, entertaining technical briefings on utility-scale battery storage, the potential of converting Boardman to biomass, and BPA’s integrated demand-side management plans. But the topic that raised an eyebrow or two was the Council briefing on BPA’s reassessment of their energy-efficiency goal and increase to utility self-funding of conservation. Although the conversation is in the very early stages, it produced some strong reactions.

The next Council meeting will be in Coeur d’Alene, Idaho, on November 15-16, 2016.

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The Agenda

Buzz surrounds possible changes to Bonneville energy efficiency program

Self-funding level and energy efficiency goals grabbed the most attention

Charlie Grist, staff manager of conservation resources, reported on the buzz surrounding possible changes to energy efficiency programs being discussed by Administrator, Elliott Mainzer, following Bonneville’s Focus 2028 process. Two that grabbed the most attention was the reassessment of how BPA’s energy-efficiency goal is set and the level of utility self-funding.

Ben Kujala, the Council’s power division director, reported that while BPA has not committed to a direction, it is floating this change in response to considerable discussion with their customers and stakeholders. He said staff’s concern is a possible reduction in conservation if they make these changes. Currently though, the numbers appear to be on-track to meet the target. And, BPA has agreed to use the 42 percent for its upcoming IPR.

Council Member Tom Karier said it's good to remember why the Council has a target. "Energy efficiency is the lowest-cost, lowest-risk resource," he said. "We don't know what the future will be. Without it, we'd consume a lot more thermal energy and create more carbon. That's why I'm always nervous when BPA cuts its budget."

He added that he is concerned about a discrepancy in energy savings depending on where one lives. There are better incentives in Seattle for bulbs, showerheads and appliances and the equity issue is one that needs consideration.

Charlie Grist said the core discomfort seems to be centered around the amount of energy-efficiency and whether it is cost effective given BPA's risk profile. He said there is an uncomfortable lag in when we find the shortfall due to how savings are reported. Kujala reported that staff is working with Bonneville, sharing information and trying to collect as much data as possible as BPA looks to reassess their share of conservation for the region.

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*Tom Karier
Council Member*

Council Member Lorenzen said that under the *Act*, the region was required to acquire "cost effective" energy efficiency, he asked, "what determines cost effective, is it cost effective for the consumers or BPA?"

Wendy Gerlitz, policy director for the NW Energy Coalition, raised concerns during the public comment period, observing that the Council's Seventh Power Plan has action items for BPA to capture cost-effective conservation across the region.

Council approves Regional Technical Forum 2017 budget and work plan **Work plan reflects slight shift with more attention on technical analysis**

According to Jennifer Light, Regional Technical Forum (RTF) manager, the budget for the Regional Technical Forum, primarily funded by contributions from Bonneville and the region's utilities, will show a slight increase, up from \$1.66 million in 2016 to \$1.79 million in 2017.

Light discussed the breakdown of the budget and work plan, noting it is a shift away from just looking at unit energy-savings measures. The primary focus is on technical analysis, using data to come up with cost estimates and measure development to determine actual energy savings.



Council Member Bill Booth asked how the RTF trues up its modeling with the estimates and what is happening in the real world. Light replied the RTF has guidelines to look at proven and non-proven savings for energy efficiency. Monitoring helps them true-up their numbers.

The Regional Technical Forum members include utilities, government agencies (including representatives from the four-state regulatory commissions), stakeholders developing energy efficiency and the ones who have to implement it. The RTF goes deep into details and the committee looks at the larger picture. Light reported that the RTF is hopeful their work will inform future capacity value research on energy measures.

The Council approved the 2017 Regional Technical Forum work plan and budget without objection.

Utility-scale energy storage need to overcome regulatory hurdles

As system adequacy constraints and the need for flexible resources to deal with the load imbalance emerge, utility-scale storage technology and siting is being evaluated. The risks and opportunities in storage were reviewed by an informational panel with the Council.

According to Patrick Balducci, Chief Economist, Pacific Northwest National Lab (PNNL), costs of monitoring equipment and sensors are declining, and storage units can be put anywhere in the house and be connected connect to the Internet. And, economists are working to understand the value streams.

Last year, PNNL hosted state commissioners at Richland to discuss storage, battery chemistry, and costs. One of the panelists, Rebecca O’Neil, PNNL’s program manager, said they learned that storage is not well characterized in existing commission processes, traditional resource planning approaches do not address energy storage system benefits, and addressing storage would be done on a state-by-state basis. She said that the value proposition of utility-scale storage depends on reducing institutional and regulatory hurdles.

Accordingly, PNNL is preparing a report to provide state commissions and staff. It will include both traditional resource planning tools that evaluate energy storage opportunities, and it will describe alternative methods to revealing energy storage system benefits within existing utility regulatory frameworks that support utility decision-making and investment.

Following up on a question regarding technology under development, O’Neil replied that regulators aren’t focusing on a requirement, instead they are looking at ways to properly value energy storage.

John Gibson, Avista’s manager of distribution system operations and technical engineering services, provided an overview of the company’s Turner Energy Storage Project in Pullman, Washington.



Not a substation, this battery at the end of two feeders, will also be used by Avista for grid control, load shifting, frequency and voltage regulation, Gibson said. A centralized controller that can optimize the assets.

Considerable discussion took place on the development of battery storage at the utility level, the interconnectivity to the grid and barriers that will need to be addressed to accommodate energy storage. Council Members noted that Portland General Electric and Puget Sound Energy were evaluating storage in their IRP processes, and the Council is watching with interest.

BPA shares its integrated demand-side management plans

Allegra Hodges, BPA research analyst, briefed the Council on the agency's Integrated Demand Side Management (IDSMS) initiative that will integrate energy efficiency, demand response and distributed energy resources into its overall power and transmission planning, systems and operations. She said, since being defined as a key agency initiative in 2014, the agency has made significant strides in developing a strategic roadmap, coordinating the activities of DSM-related efforts, and developing objectives to refine its direction for FY 2017-2020.

This year they have focused on building demand-side commercialization capability which allows them to defer or replace transmission construction with non-wires alternatives, citing the I-5 initiative as an example. And, a public report on its findings is expected later this year she said. In addition, Bonneville worked with other utilities to create benchmarks, build models to value demand response, and test new technology with demonstration projects and pilots of concepts.

Lee Hall, BPA's manager of distributed energy resources, provided the Council with an overview of a number of the demonstration projects. Hall said that BPA has concentrated on commercial and industrial sectors in the demonstrations and isn't as focused on residential at this time. He said the projects have resulted in a number of key lessons which will be folded into the work being done as Bonneville develops the groundwork for future commercial use of demand response in the agency's Integrated Demand Side Management (IDSMS) efforts. Looking ahead in 2017, Bonneville will continue to look at demonstrations, pilots and products that meet anticipated needs to build their IDSMS.

Member Karier said, "I've heard from different entities that they are interested in providing demand response, but BPA may not want to buy it. Other utilities might be interested; how can BPA help facilitate those transactions?" Robert Petty, BPA's power forecasting and planning manager replied that it is an interesting question and on the "to-do list", but they do not have an answer at this point.

PGE explores the conversion of Boardman to biomass

Since Portland General Electric (PGE) announced its plans to cease coal-fired operation at its Boardman plant the end of 2020, it has been researching alternative ways to keep it functioning. And, converting Boardman to a biomass plant is one option that has been studied by PGE for several years.

Wayne Lei, PGE's project manager, provided Council members with an overview of the company's biomass pilot program. "Biomass" covers a variety of fuels derived from organic materials. A distinct advantage is that biomass will count as a renewable resource in Oregon, but for it to work at Boardman, the fuel has to conform to the way the plant processes coal. Lei discussed the use of waste wood that is "torrified" into a charcoal-like, combustible substance that produces heat, not

smoke. However, an uncertainty is whether it can be outfitted to meet new, ambient air-quality standards, he said.

If the plant can be converted, Lei said it would have a good capacity factor, operating five months a year, averaging output at 240 MW out of a 600 MW plant. Of course, the entire project is predicated on regulatory approval.

Council briefs

Cowlitz Tribe shares its work to preserve natural resources

Rudy Salakory, Cowlitz Indian Tribe, aquatic habitat manager, reviewed the history of the tribe and its efforts to protect, conserve, restore and promote culturally relevant species and landscapes. Creation of a Natural Resources Department, and hiring a forestry expert to look at how they can work from headwaters to the ocean to restore habitat is underway. They have secured \$20 million in funding, and have implemented 27 projects in the region working closely with the Fish and Wildlife program.

Conservation Resources Advisory Committee to examine hard-to-reach markets for energy efficiency

Power Committee Chair and Council Member Tom Karier reported that the Conservation Resources Advisory Committee (CRAC) is examining efforts to extend the benefits of energy-efficiency to hard-to-reach markets. Its first meeting on the topic is November 7, 2016, and it will have a report to the Council in November 2017.

ColumbiaGrid shares its planning efforts

The Power Committee also heard a presentation from Paul Didsayabutra, ColumbiaGrid's manager of grid planning. Didsayabutra described what ColumbiaGrid does, such as looking at transmission needs five and 10 years out. ColumbiaGrid is one of two transmission-planning agencies in the Northwest, according to Didsayabutra.

Fish and Wildlife Committee Update

Program monitoring, research and evaluation methods, and emerging priorities, were discussed along with the unusual ocean conditions and stellar sea lion predation, at the Fish and Wildlife Committee according to Committee Chair and Council Member Jennifer Anders.