

PNWCCREPORT Council



Northwest Power and Conservation Council

Meeting Notes

September 12-13, 2017

Spokane, WA

The headliner of the Spokane meeting was Chelan PUD’s General Manager Steve Wright. The former BPA administrator called for a “hydropower renewal,” calling it our region’s dominant resource and our foundation for our low rates, high reliability and clean air. He expressed concern over public policymakers who give short shrift to hydro’s benefits in setting future greenhouse gas reduction policies.

Reflecting Washington’s environmental ethos, many of the presentations in Spokane described actions that companies are taking to reduce coal use, reduce greenhouse gas emissions and meet future load. Different utilities have slightly different game plans, depending on their location and portfolios, and will address meeting peaks using market purchases or peaking units. All Council Members were in attendance, except for Member Tim Baker, who joined by phone.

The next Council meeting will be in Columbia Falls, Montana, on October 11 and 12, 2017.

In This Issue

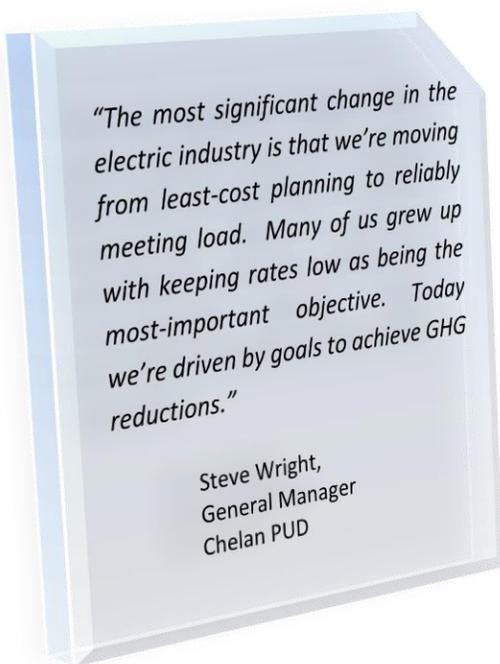
Chelan PUD’s Steve Wright calls for greater respect for hydro	2
Washington’s low-GHG pathway to 2050	3
Idaho Power shares plans for reducing coal	4
Urbanova, a smart city living lab	4
Avista to meet growing load with natural gas peakers	5
Innovative water projects for people, farms and fish	6
Council Briefs	6

The Agenda

Chelan PUD's Steve Wright calls for greater respect for hydro

Asserting the public policy world is taking hydropower for granted, Chelan PUD's General Manager Steve Wright called on policy makers to consider changing how they value and view hydro's importance in meeting greenhouse gas (GHG) reductions, improving system reliability and energizing the West.

The former BPA administrator took exception to current policy that doesn't support hydropower and the importance of hydro to meet environment and economic objectives. And, he continued, as the public demands greater reliability in moving to a digital economy, the services needed (from energy and flexible capacity, to black start capability and inertia), are best provided by one generating resource that does all of them well: hydropower.



Fundamental to the Northwest has been least cost planning. It addresses all the things you have to take into account, and the preparation and hard work that goes into it pays off when difficult decisions need to be made, Wright said.

"The most significant change in the electric industry is that we're moving from least-cost planning to reliably meeting load. Many of us grew up with keeping rates low as being the most-important objective. Today we're driven by goals to achieve GHG reductions," Wright said.

Energy efficiency and hydro could accomplish both strategies of meeting load and achieving GHG reductions. It's hard to imagine a path to decarbonization that doesn't include electrification of transportation and buildings, he said. And, it will impact future power plans whether we like it or not.

With the California cap-and-trade program as the only market in the West, prices at less than \$15 per metric ton are too low to achieve their desired 50-80 percent reductions. We need to understand the impact of their policies on Northwest prices and resources, and as California looks to expand to other states, we want to be close to California ... but not too close, he said.

Long considered an expert on the Northwest hydro system, Wright concluded his remarks by answering the question of whether hydropower and salmon can co-exist. “Yes, it’s something I have believed my entire career,” he said. There are 11 million in the Northwest today, and there was one million in the region at the turn of the last century. Improvements in survival over the last 30 years are well documented, he added.

Just because we have more data on mainstem survival, it should not diminish the value of the biological benefits of off-mainstem habitat restoration, he continued. The habitat has been altered, and in more places than the mainstem of the Columbia and the Snake rivers. It would be a mistake to further degrade the output of the hydro system when it is necessary to achieve a least cost societal approach to GHG reductions, Wright concluded.

Washington’s low-GHG pathway to 2050

While other states are moving toward significant greenhouse gas emission reductions, Washington wants to radically reduce its GHG output by more than 80 percent. Tony Usibelli, special assistant to the director for energy and climate policy, Washington Department of Commerce, said that Washington Governor Jay Inslee commissioned a study on how to meet these aggressive goals.

“It’s a thought piece, not a prediction,” Usibelli explained. A way to understand what some of the implications may be. He pointed to the legacy hydro system which is very clean and added that with an already clean electric system, it appears the state has a disproportionate share of emissions coming from the transportation sector. Three areas of importance: Investing in energy efficiency; increasing the use of low-carbon electricity; and electrifying the economy – especially the transportation sector.

Usibelli also discussed the state’s investment in innovative energy technologies and financing programs through the Clean Energy Fund (CEF). Since its inception in 2013, the CEF has provided a variety of grants to utilities, nonprofit lenders, research and development organizations, and renewable energy technology manufacturers. The results of these programs are being rigorously examined to find

lessons learned and look for new opportunities to use technology.



“From a technological view, we believe we can get there,” Usibelli said. From an economic view, he said it’s costly to change from purchasing fossil fuels to investing in capital expenditures as you build out renewable resources.

Idaho Power shares plans for reducing coal

Many utilities across the United States are considering reductions in coal-fired generation, and Idaho Power is no exception. Phil DeVol, Idaho Power's resource planning leader, presented the company's 2017 Integrated Resource Plan (IRP), which also serves as Idaho's action plan to provide direction and guidance in the future. Foundational is the resource adequacy assessment. And with steady load growth projected at 0.9%, he said their expectation is that load will exceed resources early to mid-2020.

With a fuel supply portfolio that includes clean renewable hydro, natural gas, coal and PURPA projects –moving away from coal is an objective for Idaho Power. And according to DeVol, there have been “spirited discussions” around the economics of owning, operating and retrofitting coal unit. He indicated that by the end of the 20-year IRP window, Idaho Power will exit from 730 MW of 1,100 MW of coal capacity. Natural gas and variable generation are increasingly becoming part of the larger conversation where there is a greater need for flexibility.

Transmission is also key to Idaho Power's planning strategy. The Boardman/Hemingway transmission line, and the Gateway West line in Southern Idaho are needed to fill in. “We see transmission as a cost-effective source for reliability, energy capacity and flexibility,” he said.

Council Member Bill Booth remarked that the Council has heard three or more presentations on how utilities are moving away from fossil fuel-based production. Part of the solution for everyone is that they can go to market to meet peaks, he said. “If everyone is going for the market, are they all digging into the same pocket?” he asked.

DeVol replied that the Council's Resource Advisory Committee is a good forum for discussing this question and to get factual information that will help answer it. He added, as a summer-peaking utility with high irrigation and air conditioning load, Idaho Power sees going to market as a viable option. “But it's an ongoing process to evaluate that load and resource balance,” he said.

Urbanova, a smart city living lab

Heather Rosentrater, Avista's vice president of energy delivery, provided the Council with an overview of Avista's role in the Urbanova Smart Cities project. Located in Spokane's university district, Urbanova leverages network availability and utility infrastructure to offer research opportunities to test new energy-saving technologies.

“New technologies continue to change the energy landscape,” Rosentrater said, “and Avista is proud to be one of the founding partners to come together to create a smart city technology proving ground that anyone can utilize and that everyone will benefit from.”

One of the new technologies already underway is the Smart and Connected Streetlight Pilot, which aims to manage and control streetlights to increase energy efficiency. It also features an urban air quality research and development component, which measures air quality at different sensor points throughout the district.

In addition, Avista was recently awarded a grant from the Washington Department of Commerce and Governor Jay Inslee’s Clean Energy Fund to demonstrate how a Shared Energy Economy can benefit Washington energy consumers. This pilot looks at how various energy assets — from solar panels, battery storage and other utility assets — can be shared and used for multiple purposes, including system efficiency and grid resiliency.



Avista to meet growing load with natural gas peakers

Avista forecasts that natural gas and renewables are going to be the preferred choices for meeting load growth and replacing coal generation in the latest integrated resource plan (IRP) that was released in August. James Gall, Avista’s senior power supply analyst, said that while their last IRP predicted a need for 1,000 MW of new generation, with the impact of conservation on load growth and contract renewals, it’s now closer to 400 MW.

Gall shared a look at the market as Avista sees it over the next 20 years. The IRP recognized the market changes and impact of renewable portfolio standards (RPS) and GHG policies. And with natural gas driving electric prices in the Northwest, Avista’s modeling included numerous market scenarios that looked at varying reductions in GHG and changes to the RPS policies across multiple states. He continued, “The analysis is interesting and it is good for policy makers to see the analysis that policy decisions are based on.”

Avista’s preferred resource strategy is to replace power from the Lancaster natural gas plant with a 200-MW natural gas peaker, which will reduce carbon emissions. In addition, as they look at upgrading their thermal fleet and they will explore opportunities to capture demand response and invest in

storage facilities to replace the deficit as new technology continues to evolve, particularly storage in the next few years.

Member Anders asked a general question about the swings in resource adequacy to meet load across the West. Following some discussion, there was some agreement that it is possible the difference could be in loss of load (LOLP) modeling, something for the Resource Adequacy Committee to discuss.

Innovative water projects for people, farms and fish

Guy J. Gregory, with Washington Department of Ecology's water resources program, outlined the agency's work siting new water storage facilities in the state. Water demand in the winter is low, so the aim is to store it and release it in the summer for "people, farms and fish". With aquifer storage and recovery, they can inject water into rock formations and extract it later.

In Douglas County, they found five different storage opportunities. While it's a little less than they hoped for, it's still 140 cubic feet per second for six months, which is meaningful for users and fish. Gregory explained that aquifer storage creates a very small footprint on terrestrial and freshwater ecosystems. While the cost is low compared other water supply and storage options, the costs are still significant in the \$9,000 per acre-foot range. They're trying to reassess the project to come in at \$2,500 per acre-foot.

In addition, Shell Energy's J.T. Steenkamp described the company's Pearl Hill hydro battery project, which would be located near the aquifer storage facility. The high-head, low-volume, 5-MW pump storage facility can take water from the river or the aquifer, and put it back in the summertime. Steenkamp said the project is slated to be up and running by the end of next year.

Council Briefs

[Seeking clarity on energy-efficiency benefits](#)

The Power Committee delved into a discussion about BPA's rate structure and conservation program. Committee Chair Karier wanted to dig deeply to better understand how rates reward customers (or not) for energy efficiency. What they concluded, he said, is that the rate structure is so complicated, it's difficult to see the benefits from energy-efficiency savings. The utilities realize savings, but it gets lost in the rates.

Member Karier reported that the Council and staff are working on a white paper to analyze the benefits of energy efficiency in the region. It will outline the costs and benefits for Bonneville in implementing energy efficiency in order reach a better understanding of what those benefits are, stated Member Karier.

Council to begin new planning and assessment in 2018

Member Karier revealed the schedule for developing the new Fish and Wildlife Program and Power Plan, and when the midterm assessment will be. It will occur during the second half of 2018 and will be completed at the end of that year. The midterm assessment is to check on the region's progress in implementing the Seventh Northwest Power Plan.