



## **Northwest Power and Conservation Council**

**Meeting Notes**

**October 9 and 10, 2018  
Wenatchee, Washington**

Wenatchee welcomed Council Members and staff with a wealth of information about Central Washington hydro operations and safety, fish and wildlife preservation efforts, and public transit electrification. In addition, the Council released the Mid-Term Assessment of its *Seventh Power Plan* for public comment, and learned that an agreement was reached to extend the Columbia Basin Fish Accords for another four years.

All Council Members were present. The next Council Meeting will be in Portland, Ore., on November 13 and 14. There won't be another Council Meeting held outside of Portland until May 2019, when it meets in Boise, Idaho.

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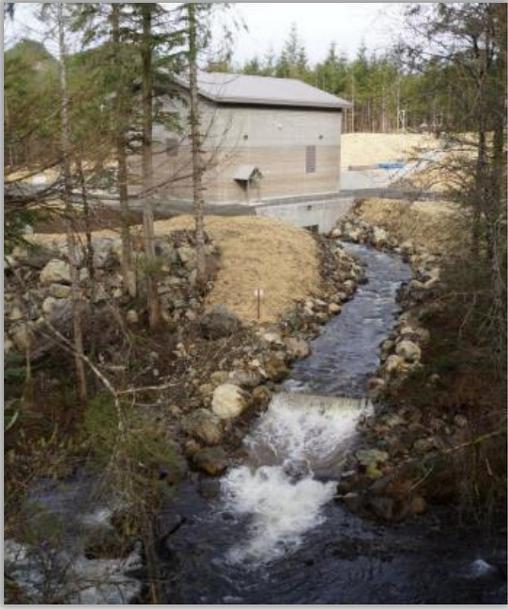
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### **The Agenda**

#### **Snohomish PUD builds Washington's first hydro in 20 years**

Earlier this year, Snohomish PUD completed the first, new, run-of-river hydroelectric projects built in Washington state in last 20 years. The Calligan Creek (6 MW) and Hancock Creek (6 MW) facilities will run nine months a year and will provide the PUD with clean, capacity resources.

The utility could have purchased wind, said Scott Spahr, generation engineering manager, but the PUD wanted long-term assets. The key to building a hydro site is finding one without fish issues, he said.



Calligan Powerhouse – Sept. 2017

Both hydro sites had very low population densities of rainbow trout, and they worked to reduce environmental impacts. Forest fires, followed by record rainfalls, impacted construction, but they still met their timeline and began commercial operation in February. The projects took two years to build at a cost of \$60 million.

Spahr also charted the PUD's historical growth, from 250,000 in 1970, to 800,000 in 2016. He said their retail load was correlated with that increase until about 10 to 15 years ago, when it plateaued due to conservation. While its 2017 IRP analysis identifies cost-effective conservation as its primary tool in meeting load growth, the PUD still forecasts needing capacity resources during extended cold-weather periods and the late summer moving into the late 2020s.

When asked by Member Richard Devlin about the business case for building the facilities, Spahr replied that it boiled down to the board creating their own policy on climate change and deciding to make sure they had their own renewables. There were echoes of being hurt by the Enron situation and having control of our own destiny, he said.

## **Agreement reached to extend Columbia Basin Fish Accords**

An agreement was reached between the Action Agencies, numerous tribes, Idaho and Montana to extend the Columbia Basin Fish Accords until 2022. Peter Cogswell, BPA's acting vice-president of environment fish and wildlife; and Bryan Mercier, BPA's executive manager of fish and wildlife, briefed Council Members on the agreement.

The Accord extensions help the Action Agencies continue to mitigate for the effects on fish and some wildlife resources from the 14 federal dams and reservoir projects that make up the Columbia River System and Reclamation's Upper Snake River Projects.

The takeaway is that the suite of projects is at a reduced level, explained Mercier. He said the next four years will have a \$3.3 annual decrease from the previous 10 years. There's also a substantial reduction on the capital side of the equation. It was \$220 million over the first 10 years. Over the next four years it's \$24 million, so it's a substantial reduction in capital commitment. Mercier said, "It helps BPA move in the right direction to get on a more sustainable financial path, while still leveraging these great projects and good efficiencies with these partners." The total cost of the Accords is \$448.5 million over four years, for capital and expense.

It also was announced that Bryan Mercier is leaving his post at Bonneville to become the regional director of the Bureau of Indian Affairs.

## Mid-Columbia PUDs urge proactive approach to predation

Representatives from Mid-Columbia PUDs (Chelan, Douglas and Grant) told the Council that they are engaged in multifaceted programs to monitor and suppress avian predators and predatory fish in their service areas. These programs help the PUDs meet the objectives of their habitat conservation plans and their project license requirements.

The avian predators in question include cormorants, herons, pelicans, gulls and terns. The PUDs also are working to thwart the spread of predatory fish such as pikeminnow, northern pike and other species that threaten salmon and steelhead smolts.

For example, Grant PUD operates 51 different programs and samples over 830 different locations annually within its Priest Rapids Project area, at an average cost \$477,000 a year. They remove more than 533,500 pikeminnow a year. In 2014, Grant implemented a management program to eliminate large tern colonies on Goose and Crescent islands.

Chelan PUD, which operates the Rocky Reach and Rock Island hydroelectric projects, estimates it has removed almost 1.3 million pikeminnow since 1994, saving an estimated 2.6 million smolts. Lance Keller, Chelan's senior fisheries biologist, told Council members that they are supporting northern pike removal efforts above Grand Coulee Dam, and are continuing monitoring programs to detect northern pike in its service area. Keller reported that Chelan's efforts have achieved no-net impact for salmon and steelhead.

Tom Kahler, Douglas PUD's fisheries biologist, discussed how PIT-tag surveys at the cormorant and heron rookery at the mouth of the Okanogan River revealed predation on all species of fish. Douglas funds projects to remove pikeminnow and to haze predatory birds at its Wells and Methow hatcheries. Douglas, which operates the Wells hydro project, also remains on the lookout for northern pike, using DNA sampling and gillnetting.

"We as a region need to be proactive, and the federal agencies need to work with the PUDs to face the predation issues we have," said Tom Dresser, Grant PUD's fish, wildlife, water quality manager. "They're not going away; they're cyclic. The tern population is a good-news story for now. Grant PUD has some survival studies coming up in 2025-26, and that's a bar we'll have to cross. Northern pike aren't in anadromous waters yet, but it's only a matter of time before they show up and we're faced with very expensive programs."



Council Member Tom Karier pressed the panel on whether they could work together to come up with better metrics on the number of smolts saved. Dresser replied that determining metrics is difficult

because it's an open system with a lot of spawning in the project area. He said they have spent a lot of time, effort and money trying to come up with a population estimate, so they decided that the money is better spent on simply getting rid of predators.

## **Link Transit's rocky road to electrification**

Link Transit, which provides public transportation service for 17 communities in Chelan and Douglas Counties, was an early adopter of electric mass transit vehicles. However, Richard DeRock, Link Transit's general manager, painted a challenging picture of early models that were fraught with reliability, charging, range and maintenance issues.

DeRock traced the history of using earlier models to Link Transit's current fleet. Made in China, the battery-powered buses now have a range of 145 miles, whereas Link Transit's system requires a 200-mile range. There also were problems with the batteries operating in colder climates.

The next generation of buses will be delivered in winter 2019 and should be able to operate in cooler temperatures. Plus, the fueling cost is significantly lower compared to fossil fuel: \$285 per month for an electric bus, versus \$1,381 per month for diesel.

When asked if he's confident that the newer bus models have the bugs worked out, DeRock replied, "I'm hopeful, but I'm not sure the board is. It's been a rough number of years. The manufacturers said the vehicles could do a lot more than they're doing. Short routes work best in warmer climates, but the cold issues are significant. We just don't get the range. When someone says its proven technology, I push back pretty hard."

Jim White, of Chelan County PUD, discussed his utility's efforts to install charging stations in its service territory for passenger vehicles. He also discussed the wireless induction charger for buses. Greater range solves a lot of problems with electric vehicles, White said. As range improves, so will usage.

## **Chelan looks to secure dams in case of earthquakes**

While an earthquake might be less likely in Chelan PUD's service area than in other locales, the utility is evaluating how it can stay operational during a seismic event. Chelan owns and operates three hydroelectric generating projects – Rocky Reach, Rock Island, and Lake Chelan dams.

Bill Christman, Chelan's chief engineer of dam safety/natural resources, classifies their hydro facilities as low downstream hazards, compared to Lower San-Fernando Dam in Los Angeles, which is a high downstream hazard. Still, Chelan has evaluated its water retaining structures for a maximum credible earthquake. They have yet to finalize their analysis for transformers and switchyards. Christman reported that the second step looks at improving control room resiliency, enhanced operator response training, and ensuring that essential hydro control systems remain functional.

Council Chair Jim Yost asked if Chelan had a budget for dam safety. Christman replied that they have a long-range plan, but no structure modifications are planned in the next year or two. They do have money for studies, however.

## **Council Briefs**

### **Regional Technical Forum gets budget boost for *Eighth Power Plan* work**

The Council unanimously approved the Regional Technical Forum's (RTF) proposed budget of \$1.875 million. The budget has a slight increase because the RTF will begin work on the Council's *Eighth Power Plan*, building simulation models and estimates. The Council also voted to approve staff recommendations for the 2019-2020 Regional Technical Forum membership, including the reappointment of Jennifer Light as RTF chair, and Charlie Grist, the Council's manager of conservation resources, as vice-chair.

The RTF was formed in 1999 from BPA shifting programs to utilities. It works to tailor programs to utilities and better assess energy efficiency. It is funded by Bonneville, the Energy Trust of Oregon and investor-owned utilities.

### **Council releases the *Seventh Power Plan's* mid-term assessment for public comment**

The Council voted to release the draft of the mid-term assessment of the Council's *Seventh Power Plan* for 60 days of public comment. Its sections cover the action plan, markets and demand, conservation, demand response, generating resources, and resource strategy implications.

### **Chelan establishes Hydropower Research Institute to share data/advance technology**

The Hydropower Research Institute (HRI) was formed last July to aggregate and share data collected by hydropower owners. Spearheaded by Kirk Hudson, Chelan PUD's managing director of generation, transmission and dam safety, HRI received a commitment from the U.S. Army Corps of Engineers to represent operational data from 110 hydropower plants.

"In the hydropower industry, a lot of advancements have been made on the machine and design side, but the new frontier is in digital transformation," Hudson said. "We can't affect wholesale energy prices, but we can impact the production costs, the reliability, the workmanship and quality of materials going into hydro projects."

The goal by end of the year to have data from Chelan, Southern Company and USACE – representing 30 percent of the hydro in the U.S. Then it will accept new contributors in early 2019.