



Northwest Power and Conservation Council

Meeting Notes
March 14-15, 2017
Portland, Oregon

The full Council convened in Portland up to its elbows in reports, updates and timelines. PNUCC provided a preview of its soon-to-be-published *Northwest Regional Forecast*, while Ocean conditions continue to bedevil fish returns. The Energy Trust of Oregon proudly shared its energy-savings accomplishments in 2016, and the Northwest Energy Efficiency Alliance discussed its plans for continued market transformation successes. The Council was informed about Bonneville’s strategies and timeline for major improvements at Grand Coulee Dam.

The next Council meeting will be on April 11-12, 2017 in Missoula, Montana.

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The Agenda

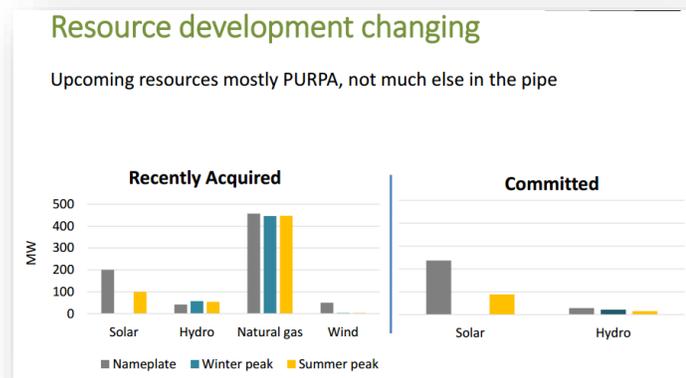
PNUCC forecasts a regional need but sees no cause for alarm

PNUCC, which has been providing its *Northwest Regional Forecast (Forecast)* since 1952, gave Council members a peek at this year’s draft report, which revealed that loads have slipped slightly and that there could be a winter deficit of 3,200 MW by 2021. “We don’t have an expectation that there needs to be a build of 3,200 MW to get back to an adequate system,” said PNUCC’s Executive Director Shauna McReynolds.

This *Forecast* has few, firmly committed resources on the horizon, in part due to regulatory and energy climate uncertainty. And planned resources are not included in the load/resource calculation, she added. In addition, resources from independent power producers are not included in the *Forecast* unless they are under a long-term contract to the utility. As the region readies itself for coal unit retirements, we expect to see committed resources fill in.

Council members inquired about the role demand response could play, and Member Bill Bradbury asked if utilities are resistant to it or if they are working to implement it.

Tomás Morrissey, PNUCC’s senior policy analyst, replied that it’s more likely the latter. “By 2021 we’ll probably see more demand response than we indicate in this forecast,” he said. McReynolds agreed, saying she believes demand response is under serious consideration in the IRP processes.



Also on the demand-side, utilities continue to be aggressive in energy-efficiency acquisition and these efficiency programs are adding up according to the report. She reminded the Council that it is difficult to compare these totals in the *Forecast* with the Council’s tallies since the *Forecast* does not include codes and standards, NEEA and momentum savings.

The *Forecast* continues to find loads are slow to materialize McReynolds said, with growth projected at slightly less than 1%. There are a few individual utilities forecasting robust load growth and it is generally a result of a large industrial load such as a data center.

McReynolds stressed that it’s important to remember that hydropower continues to be an incredibly valuable, carbon-free resource. “We did a [The Value of Hydropower to the Northwest Grid](#) paper recently, and there’s a lot of hydro out there,” McReynolds said. “On the ground, we have over 52,000 MW of utility-owned hardware of which 75 percent is carbon-free. With normal weather, low-water conditions, it becomes 70 percent for winter peak.” She also noted the role natural gas will continue to play, particularly as the coal plants are retired.

Energy Trust celebrates stellar year for energy savings

2016 was a banner year for the Energy Trust of Oregon (ETO), which saved 60 aMW for the state of Oregon through energy efficiency. “Not only did we exceed our overall electric goals by about 109 percent, we also beat the individual goals for our utilities, PGE and Pacific Power,” said ETO’s Executive Director Mike Cosgrove. ETO also accounted for 6.7 million therms in gas savings.

It also was a bountiful year for LEDs, added Cosgrove. Over 80 percent of all the bulbs ETO incentivized were LEDs. In commercial and industrial sectors, streetlights accounted for 90 percent of lighting savings. And there was a 35-percent increase in new, energy-efficient homes. There also was strength in new commercial construction for multifamily buildings and data centers.

Cosgrove said that in the public policy arena, the Oregon Legislature has ETOs full attention considering bills that would affect the public purpose charge in one way or another — such as adding electric vehicles or transportation electrification of an area.

As to where the ETO will find its future successes, Cosgrove explained that its current five-year plan prioritizes emerging technologies. With a large number of pilots underway, he said we're starting to rely heavily on successes in emerging technologies. There is potential for a drop-off in acquiring energy efficiency, and Cosgrove sees emerging technologies is a way to backfill that pipeline.

The ETO supports energy-efficiency and renewable energy investments, and serves 1.5 million customers of PGE, Pacific Power, Avista, NW Natural, and Cascade Natural Gas in Oregon, along with some customers of NW Natural in Washington. The Energy Trust is funded by a 3 percent public purpose charge for electric utility customers, and utility tariffs approved by the Oregon Public Utility Commission. It has an annual budget of \$198 million, the majority of which is directed to electric efficiency. Cosgrove assumed leadership last fall after Margie Harris retired.

NEEA succeeds in moving new technologies to market

The Northwest Energy Efficiency Alliance (NEEA) is downright bullish on emerging technologies. Jeff Harris, NEEA's chief transformation officer, said that while the Energy Trust is concerned about a pipeline of new technologies drying up, NEEA is dedicated to moving new innovations to market. "In 2016, we examined 12 projects to determine if they could be future energy-efficiency opportunities. Of the 12, we chose three, and now they're market transformation programs we'll be working on in 2017." He added that these programs are developed and chosen with input from the region's utilities.

Market transformation is NEEA's bread and butter. "Markets do work," Harris said. "They are very powerful forces, and if we can remove barriers to them or leverage them in ways that advantage energy-efficiency products and services, we can help deliver those to the market at a very low cost."

As Council Member Tom Karier said, "NEEA isn't a household name, but it's represented in everyone's household." When energy-efficient light bulbs were introduced, he said, "the first ones weren't very good. NEEA worked with manufacturers to improve them and made sure they were available at Home Depots. The same with front-loading clothes washers. HDTVs is another huge win for NEEA, and someday it will be the same for water heaters."

Harris cited three technologies NEEA has been working on that made major strides in 2016: heat pump water heaters, Douglas heat pumps and low-wattage replacement lamps. In addition, NEEA trained over 4,000 building officials in four Northwestern states to be ready for new codes when they take effect. They collaborated with all four states to influence IECC and state energy codes. Looking ahead, NEEA hopes to achieve another 1,000 MW in energy-efficiency savings by 2024.

Investments key to Grand Coulee

Bonneville appeared before the Council to discuss its strategy for capital investments for the federal hydro system and to provide specific details on a proposed \$500 million capital investment at Grand Coulee.



Asset Manager Bill Leady provided an overview of applying an asset management approach across the Agency before the conversation shifted to needed work at Grand Coulee Dam, which he called “the moneymaker” for the Federal Columbia River Power System.

Jim Alders, BPA’s project representative to the Bureau of Reclamation, ran through a list of Grand Coulee investments.

Fish returns out of our control as unfavorable ocean conditions dampen returns

Brian Burke, research fishery biologist with the Northwest Fisheries Science Center at NOAA, cut right to the chase: The forecast for salmon and steelhead returns to the Columbia Basin “aren’t looking very good” for 2017, he told the Council.

Burke said that in the last couple of years, there have been poor conditions for ocean survival. Warmer-than-average temperatures in the ocean, called “the blob,” started in 2013 and lasted almost three years. It contributed to poor conditions for the copepods and krill that the fish eat. Across almost all species, returns have declined, said a panel of fish experts.

While temperatures in the ocean are fairly normal right now, the impacts could be lasting, considering that salmon and steelhead spend one to five years in the ocean before returning to spawn. “There are often lags between the physics and biology,” Burke said. The main point is that some of the responses are immediate and some are delayed. We may see changes from something that happened in the past. The ocean ecosystem changed significantly, and is still changing. And the conclusion is that expected returns in 2017 are well below the 10-year mean, he said.

Council Member Guy Norman took a moment to shed some sunshine on the session by reminding attendees that a drop in numbers is out of our control due to productivity shifts in the ocean. “One year in the mid-1990s, the total upriver spring Chinook run was fewer than 13,000 fish,” Norman said. “In terms of the big picture from 1980 through 2016, the last 15 years don’t look too bad.”

Lack of results on tributary monitoring continues to frustrate Council

The effort to pry loose results from tributary habitat effectiveness monitoring programs continued this month, with Fish and Wildlife staff sharing a schedule for identifying what portions to carry forward from ISEMP, CHaMP, and AEM.

Member Karier remained unmoved. "I'm getting worn down, he said. "I'm encouraged that staff is looking at this and has a timeline, but we're in an unusual position because we can't cut funding because nobody will tell us what's useful. These projects cost \$75,000 a month. The onus is on the sponsors to tell us what to preserve. If they can't, maybe it's not worth preserving. It shouldn't take this many months."

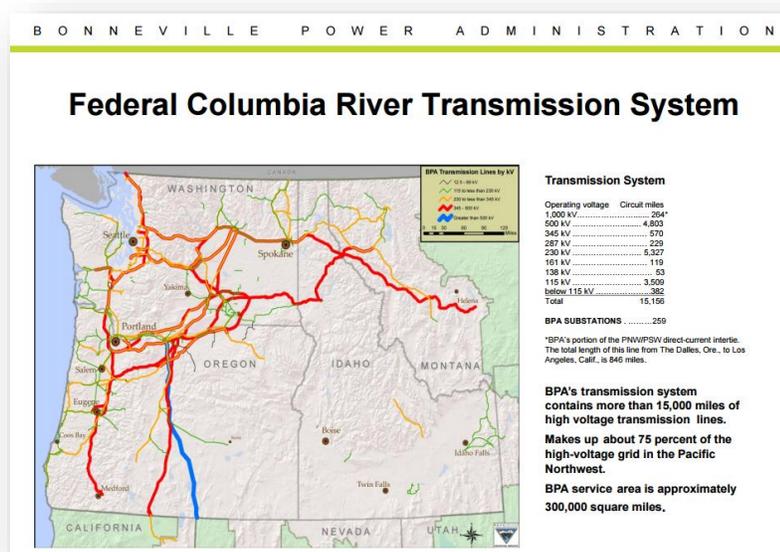
Member Booth agreed with Karier and asked for a one-pager on what we've learned from CHaMP that's valuable. "All this money that has been spent ... what do have that's of value today?" he asked. "Put that in the list somewhere."

BPA shares its approach to cold-weather operations

Built to function in extreme conditions, Bonneville's transmission passes through some very high-altitude areas, so taking care of problems during the winter can be problematic, according to Bonneville's Salah Kitali and John Lahti.

Kitali explained that with generation is on the east side of the system and load on the west side, the transmission paths can get congested.

To prepare for winter the Agency also reviews past challenges and coordinates with the hydro desk, as well as all other generators within the Balancing Authority, to know what generators will be online to ensure system reliability.



Council briefs

More cost savings found

As programs ramp down, cost savings are adding up according to the Fish and Wildlife Committee's cost-savings subcommittee.

Hatchery assessments near completion

Council Member Bill Booth announced that a project to visit all of the program's 14 hatchery sites is complete and the report will be produced in May.

New Fish and Wildlife webpage under development

The Fish and Wildlife Division is developing a webpage that provides access to the Council's fish program activities. It is designed to provide an overview of the Council's efforts for fish and habitat.

An update on water markets and flow restoration

The Fish and Wildlife committee heard an overview of water markets and transactions across the Western United States. Council Member Jennifer Anders said it is an economical way to move water from agricultural for municipal and conservation uses. Plus, it can be done without seriously affecting the agricultural economy.

Industrial customer survey underway

Power Committee Chair and Council Member Tom Karier reported that staff issued an RFP to complete a survey to help define the industrial sector's energy use, as well as the region's electric-efficiency and demand response potential.

Portland General Electric Integrated Resource Plan

PGE's Franco Albi, Manager of Integrated Planning, presented an overview of his utility's Integrated Resource Plan (IRP). The IRP discusses how PGE might meet resource needs over the planning horizon with a mix of energy efficiency, demand response, renewables, and a combination of other resources that are dispatchable and fulfill annual/seasonal capacity needs.