



Northwest Power and Conservation Council Meeting Notes July 11-12, 2017 Vancouver, Washington

All Council Members were on hand in Vancouver, Washington, for a busy two days of customer presentations, cost-saving discussions, and reviews of renewable-energy programs and new technologies. However, what raised the most eyebrows was the release of a study by the Council’s Resource Adequacy Advisory Committee showing the Northwest will be short 400 MW in 2021, following the region’s coal retirements. And increasing renewables coming onto the system may create additional challenges because of increased need for balancing reserves.

The next Council meeting will be in Portland, Oregon on August 15-16, 2017.

In this Issue

Council forecasts 400 MW shortfall for 2021-2022.....	1
Clark PUD surpasses efficiency goals, meets growth through conservation	2
Snohomish PUD provides customer choice and renewable options	4
Council approves staff recommendation on fuel choice savings.....	4
Council Member floats proposal to defund monitoring programs	5
Council Briefs	6

The Agenda

Council forecasts 400 MW shortfall for 2021-2022

7.2% LOLP coincides with loss of 1,500 MW coal in 2021

John Fazio, the Council’s Senior Power Systems Analyst, provided an updated forecast indicating the system will not be adequate, and will be short 400 MW in 2021-2022 if the region only does targeted energy efficiency and gets energy from sited, licensed projects. This forecasted shortfall also coincides with the loss of 1,500 MW of coal by 2021, and an additional loss of 352 MW of coal and natural gas by 2022.

Fazio explained that the Council’s target savings from energy efficiency will be 1,250 aMW through 2021, and the targeted savings between now and 2021 aren’t enough to get us past the 1,500 MW of coal retirements.

There are lots of uncertainties in load growth and on what the region can import, he added –and there is some wiggle room too. “I hate to have the report just say that we need 400 MW by 2022 and everything will be okay,” Fazio said, “because things change.”

“I hate to have the report just say that we need 400 MW by 2022 and everything will be okay, because things change.”

John Fazio
Senior Power Systems Analyst

Every year, the Council assesses the adequacy of the power supply five years ahead to ensure that adequate resource development keeps pace with demand and growth using a five percent loss of load probability (LOLP) as it’s standard.

This means that the system is adequate if there is no more than a 5% chance that curtailments will occur at any time during the year for the coming five years. This study showed a LOLP of 7.2%.

Going forward, the Resource Adequacy Advisory Committee will:

1. Review and update the availability of California market supplies for all months and over all hours.
2. Incorporate the effects of energy-efficiency savings and of codes-and-standards savings directly into the short-term, load-forecasting model for future adequacy assessments.

Council Member Bill Booth said he believes that adequacy is the critical subject for the region, and the aspect that gives him pause is the assumption that we have regionwide production and delivery. “We don’t, especially with the decommissioning of our firm power,” Booth added. “It affects some areas a little and some seriously.”

Ben Kujala said that coal closures could have a huge impact from the standpoint of changing who has the resources and who has the load. “We’ve been careful to label this as a regional picture,” he said. “It’s a way for utilities to see the regional market.”

Clark PUD surpasses efficiency goals, meets growth through conservation

Demand response valued

Demand response has value for Clark as a winter-peaking resource by reducing load and avoiding the need to add generating resources, said Zeecha Van Hoose, Key Account Manager for Clark Public Utilities. However, the greatest barrier to demand response is monetary, she continued.

“We’re asking large customers to modify their operations and reschedule production, but our power prices aren’t high enough to motivate that behavioral change by itself,” she said. “We don’t have an active time-of-use program. To provide incentives, it has to be worth it. Right now, the incentives aren’t high enough.”

Clark continues to participate in BPA’s demand response pilot projects. And demand response is also part of BPA’s non-wires solution to the South of Allston transmission constraint, she added. At this time Clark does not have issues that would drive them to demand response for their distribution needs.

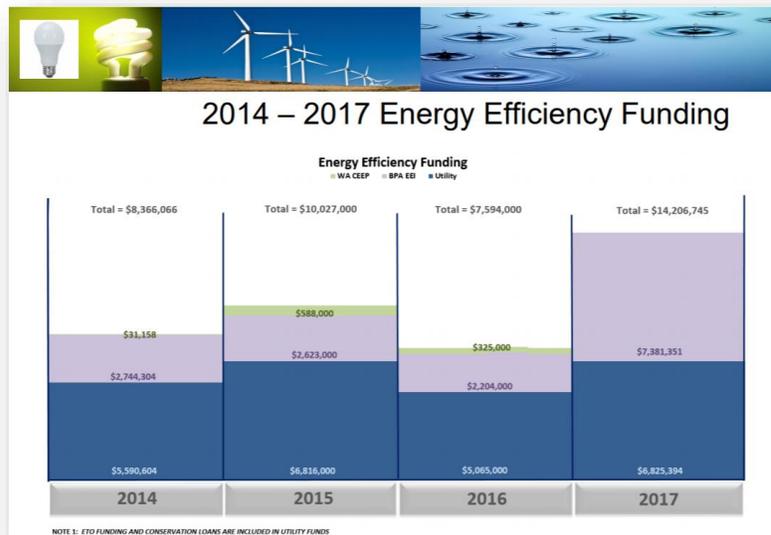
Cost-effective energy efficiency

Energy efficiency is one of its most cost-effective initiatives for their utility, said Larry Blaufus, Clark’s Senior Manager.

Every year since 2005, Clark has invested in taking care of its growth with energy efficiency, and has met or exceeded its goal.

And despite a healthy growth in new customers, between 2012 to 2016 loads remained flat.

Clark will continue to partner with Bonneville and provide efficiency projects to their customers in the future, he said.



Future of power supply resources

Tom Haymaker, Clark County PUD’s Manager of Energy Planning and Resources, talked about the impact of Washington State’s Clean Air Rule. A rule from Department of Ecology that mandates all electricity from gas-fired plants must reduce carbon output by about 30 percent, based on a 2012-2016 baseline.

Clark PUD has the ability to comply over a three-year period, so they have flexibility. Haymaker said Clark will reduce its emissions by running its 248-MW River Road combustion turbine unit less; it won’t be through new technology. “River Road is the only consumer-owned combustion turbine operating on a continuous basis,” Haymaker said. It was built in the mid-1990s to reduce Clark’s load on BPA. “It has saved us money,” he added.

Looking ahead, the Clean Air Rule is in the courts with two lawsuits pending. The 2016 carbon tax initiative was defeated, but there were eight proposed carbon taxes in the Washington State legislature, none of which passed, Haymaker said. “As planners, we worry,” he said. “We fret over capacity planning for the future. The current regulatory environment provides no certainty for development of any dependable and dispatchable resources.”

Snohomish PUD provides customer choice and renewable options

Providing customers with choice is important, said Jessica Matlock, Snohomish County Public Utility District Director for Government and External Affairs, and Snohomish County PUD is working directly with their customers to provide opportunities for all customers to support their renewable and carbon-free goals.

Matlock said major companies and small businesses are shifting to renewables for corporate branding. “It’s a national issue and will hit many utilities in the Northwest,” she said, naming Boeing, Target and Costco among some of the Snohomish County PUD customers seeking renewable options to fulfill corporate sustainability goals. And residential customers want choice too, and meeting their expectations by providing options means doing things differently.

Continued investments in EE, DR, R&D, EV and a Microgrid

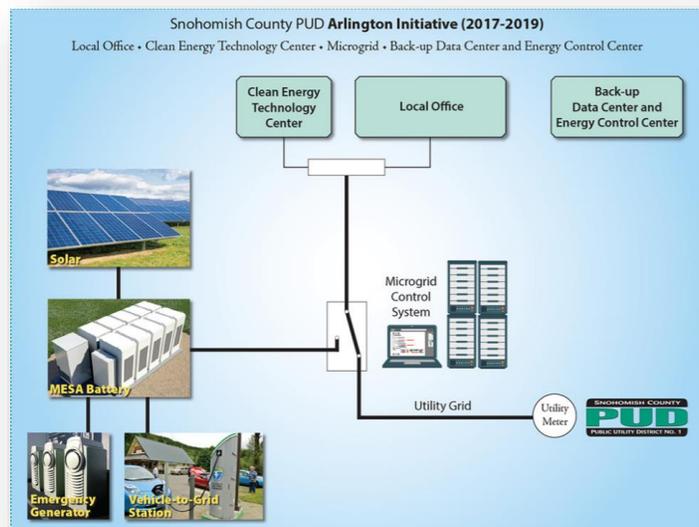
Snohomish is continuing their investments in energy efficiency by creating energy efficiency programs that are aligned with their customer base, she said. In addition, they are redesigning their solar program, creating a demand response program, continuing research and development on energy storage, and looking to develop an innovative electric vehicle (EV) program.

When it comes to demand response, the utility is examining approaches to a more-robust program. Starting small and learning from pilot programs. The recent BPA-EnerNOC pilot had positive results, she said. Snohomish had five customers in 2016-17 with eight sites, 14 events and a 21.8-MW load reduction.

Matlock outlined the utility’s R&D energy storage initiative, which has installed three batteries and is about to install a fourth.

The program’s goals are to provide grid support and ancillary services, renewable energy integration, Microgrid Grid Resiliency and Test Modular Energy Storage Architecture (MESA).

The utility is also designing a 500 kW microgrid that will house a clean-energy technology center and local office for crews, she said. It will also be a backup data center and energy control system. Snohomish will be one of the first utilities in the West to do so.



With a region expecting significant growth for electric vehicles, Matlock said the forecast for Snohomish’s service territory is 57,000 electric vehicles by 2036 which would amount to 15 aMW of load. Strategic placement of charging stations to reduce their impact on the grid, off-peak charging

strategies and EV as a demand response product are all being evaluated. “We’re not seeing a huge rush to EVs because of the lack of infrastructure,” she said. “Once we have that, the EVs will come.”

Council approves staff recommendation on fuel choice savings

The Regional Technical Forum (RTF) sought Council guidance for how to estimate savings from measures where consumers or builders have a choice in fuel. “If some gas units are replaced by electric units, they (RTF) want to properly account for any impacts on the electric system,” said Jennifer Light, RTF manager. The RTF’s policy advisory committee recommended starting with an assumption of 0% other fuels in the baseline, and to monitor the market.

Avista, a committee member, wrote a minority opinion. In it they recommended the RFT restrict measures to electric, or to start with an assumption of 2–6% gas to electric.

Input from NW Natural and the Northwest Gas Association (NWGA) was solicited. And NWGA asked to postpone the adoption of any framework until an analysis could be done to inform an assumption – or use 5% gas to electric in their assumption. NW Natural recommended requiring program controls and accounting for the impact of incentives in the analysis.

The Council voted to support staff’s recommendation to:

- Proceed to estimate savings for such measures.
- Use a starting assumption of 0% other fuels in the baseline.
- Monitor this assumption for significant, clear indications of other fuel-to-electric conversions.
- Treat conversion to electricity as zero savings – not negative savings.

Member Tom Karier asked about the current trend on the balance between gas and electricity. Charlie Grist, the Council’s Conservation Resource Manager, said 90% of new hookups for single-family space heating are gas, with a higher concentration of electricity in multifamily and manufactured housing. Grist said, there is a lot of potential from savings for existing homes, which is primarily what this work is getting at.

Council Member floats proposal to defund monitoring programs

Once again Council’s fish and wildlife staff was in front of Council Members to brief them on the current use of the tools and products from the three BPA monitoring projects: Integrated Status and Effectiveness Monitoring Program (ISEMP), Columbia Habitat Monitoring Program (CHaMP) and Action Effectiveness Monitoring (AEM).

Leslie Bach, staff Senior Manager, told Council members that staff had interviewed the fish and wildlife program managers and found just two of the tools ISEMP, CHaMP and AEM — PIT-tag detection systems and fish in/out facilities — were in use and valuable for program implementation – the 13 other tools and products were either limited or not used, she said.

Member Guy Norman said he struggles with where the connection to changes in fish productivity and habitat treatment is. Member Karier expressed his disappointment in the inability to find value in ISEMP, CHaMP and AEM given the current funding level of \$700,000 per month, every month for monitoring programs.

“It’s not our responsibility to figure out what’s useful in the project, it’s the responsibility of the project sponsors,” he said. The fact that we’re having difficulty in finding value in this project is a sign. We’ve spent \$60–\$70 million on this concept and it is clearly a failure.”

Member Karier suggested Bonneville stop renewing contracts associated with ISEMP, CHaMP and AEM immediately and instead look at developing new contracts that would ensure the projects provide essential data necessary to evaluate the effectiveness of current habitat investments. Adding, the contracts should be evaluated by the Independent Scientific Review Panel and the Council consistent with the research plan to ensure data collected is useful.

Member Karier said he would look for Members’ support in defunding ISEMP, CHaMP and AEM, and offer it as a motion at a future meeting.

Council Briefs

[Clark Public Utilities tops J.D. Power](#)

Jane Van Dyke, Clark Public Utilities District Commissioner, joined the Council to share that Clark Public Utilities received word that they ranked highest in the midsize utility segment in the West region for the 10th consecutive year, by J.D. Power in the 2017 electric utility residential customer satisfaction study.

[PGE presents demand response strategies](#)

The Council’s Power Committee members learned about Portland General Electric’s demand response pilot programs from Josh Keeling, who oversees the effort. PGE has a dozen different programs, including testing pricing models (raising prices during peak hours), water heater market transformation, contracting with third parties and developing electric vehicle off-peak charging programs.

[Battery briefing to Council’s Power Committee](#)

Council staff provided a briefing on different types of batteries, performance and cost being looked at as options for utilities in integrating renewables. Member Karier added that the active ingredients of lithium batteries are cobalt and graphite, which are found in areas of the world where it might be difficult to satisfy demand. And the cost of lithium has tripled in the last few years, he said.