



Northwest Power and Conservation Council Meeting Notes September 17 & 18, 2019 Corvallis, Oregon

With policymakers racing toward a carbon-free world, it behooves energy analysts and producers to check in and ensure there's enough system adequacy to keep the lights on. The Council's John Fazio, senior power analyst, provided his annual look at the loss of load probability for the region in the face of upcoming coal plant retirements.

It's looking likely that BPA's flirtation with the Western Energy Imbalance Market will become a full-blown relationship. Steve Kerns, BPA's director of grid modernization, said a decision will come by month's end. Tom Eckman reported on litigation possibilities over federal energy efficiency appliance standards. And Jennifer Light, manager of the Regional Technical Forum, provided an update on the region's progress in achieving the *Seventh Power Plan's* conservation goals.

Council Members Jim Yost, Richard Devlin, Ted Ferrioli, Guy Norman, Pat Oshie, Jeffery Allen and Bo Downen were in attendance. Council Chair Jennifer Anders joined by phone. The next Council Meeting is October 15 and 16 in Seattle, Washington.

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The Agenda

Coal retirements increase likelihood of energy shortfalls

With the announced coal retirements by 2021 the estimated regional loss of load probability (LOLP) will be at 7.5%, and beyond the Council's threshold of 5%, reported John Fazio, senior power analyst. The subsequent expected coal retirements by 2024, will raise the LOLP to 8.3%. Fazio noted that another 1,853 MW between 2024 and 2032 is expected to be retired. If those coal retirements occur earlier without replacing that generation, the LOLP could go to 33%. "We don't need a computer model to show we might have a resource shortfall," he said.

For the last 20 years, the Council has produced an annual report on the adequacy of the region’s power supply, looking ahead five years. The Council deems the regional power supply to be adequate if the likelihood of having one or more shortfalls in a future operating year is less than or equal to 5% (i.e., annual LOLP ≤ 5%). That translates into one bad event in 10 years.

These results could change significantly if future load growth and/or market conditions were to change. Also, individual utilities are facing varying new resource needs and are planning for those needs in their integrated resource plans.

BPA to issue record of decision on joining EIM

Bonneville has proposed signing an implementation agreement with the California Independent System Operator (CAISO) to move toward joining the Western Energy Imbalance Market (EIM). Steve Kerns, director of grid modernization for Bonneville Power Administration, said a record of decision is expected to be issued in late September 2019. Kerns said the modeling suggests that dispatch benefits from EIM participation will quickly pay for itself and result in ongoing annual net benefits of \$29 to \$34 million.

Kerns told Council Members that BPA views the EIM as one piece of a well-designed market. Additional market functions are required to fully compensate BPA for the capacity value of the flexible and carbon-free federal power system, he added. BPA will continue to work with the CAISO and stakeholders to enhance regional resource adequacy by ensuring that flexible resources are appropriately compensated for the services that they provide.

Kerns outlined the business rationale for moving forward, saying that EIM participation will also:

- Result in an efficient dispatch of generation to meet load across the entire EIM footprint;
- Provide increased visibility and discipline in the dispatch and marketing of Federal power and transmission assets; and
- Create additional visibility of conditions across the grid that will enhance reliability.

“Joining the market helps you get your act together,” Kerns said. “Otherwise, there’s a price to pay. It will provide more discipline to BPA, and value to the agency and its customers.”

Bonneville initiated a formal stakeholder process in July 2018 and began discussion with CAISO in September 2018.

EIM Participants Timeline

CAISO & PacifiCorp	Nov. 2014
NV Energy	2015
Puget Sound Energy	2016
Portland General Electric	2017
Idaho Power	2018
SMUD	2019
Salt River Project	2020
Seattle City Light	2020
LADWP	2021
Turlock Irrigation Dist.	2021
Avista	2022
Tacoma Power	2022
Tucson Electric Power	2022

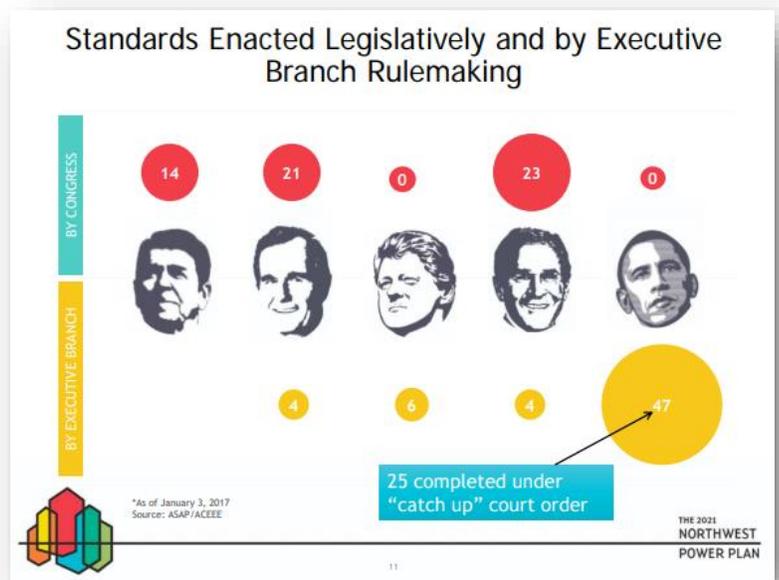
Proposal to relax lightbulb standards — court battle likely

A U.S. Department of Energy (DOE) proposal to eliminate lightbulb efficiency standards will lead to litigation and energy planning uncertainty, stated Tom Eckman, former Council Power Division director and current consultant.

Eckman talked about the importance of federal appliance energy efficiency standards in power planning. He said the new standards implemented since the Council's Seventh Power Plan are accounted for in the Council's load forecast, and they reduce forecasted regional loads. Appliance efficiency standards also provide baselines for the Council's energy efficiency supply curves.

Between 2008 and 2016, the pace of adopting new standards was unprecedented and had a significant impact on load for utilities. However, since 2017, the DOE has missed statutory deadlines for reviewing 22 standards and 17 test procedures.

While the slowdown in federal standards efforts does not have a marked effect on savings in the near-term, a continued slowdown could have significant impact on long-term goals and increase the cost to utilities to achieve all cost-effective conservation, Eckman explained.



The DOE plans to publish 18 actions to energy conservation standards before the end of 2019 and 11 actions related to test procedures. The concern is that they will be litigated, Eckman said. For example, the DOE recently released a rule reversing prior lightbulb energy efficiency standards that would eliminate the efficiency standards for about half of the six billion lightbulbs used in U.S. homes and businesses. Another proposal eliminates the 2007 Energy Independence and Security Act's "backstop" 2020 standards for "A-lamps," the pear-shaped bulbs that make up the other half of the lightbulbs used in U.S. homes.

Eckman said that Washington and Oregon will join 14 other states and New York City in litigation. It's a big deal if DOE violates the anti-backsliding provisions of the Energy Policy and Conservation Act, Eckman said. Many states have already adopted the standard in state law, and the DOE said state law will be preempted by this ruling. So, there's a state's rights issue as well. It also can impact energy planning and the ability to achieve conservation targets.

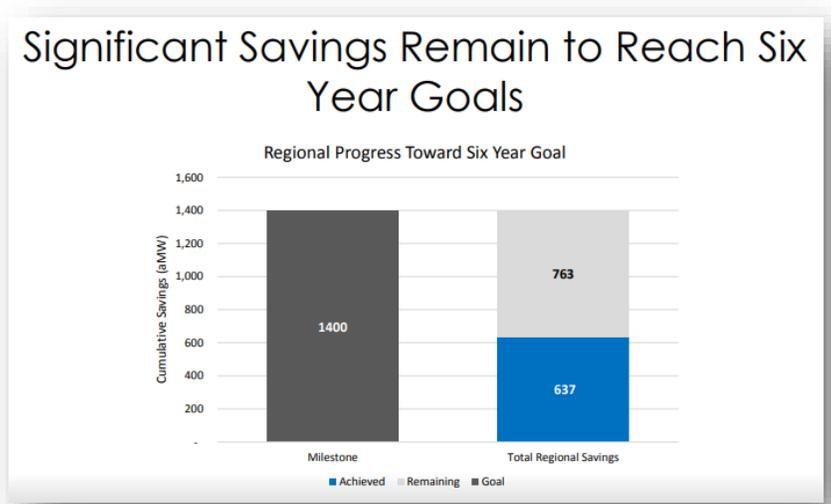
An area where progress is being made is negotiated rulemaking. The American Heating and

Refrigeration Institute petitioned DOE’s Appliance Standards and Rulemaking Federal Advisory Committee (ASRAC) to negotiate a standard for commercial variable refrigerant flow air conditioners and heat pumps (known as VRFs). They should have a standard by the end of the year and then it will go out for a rulemaking process. Eckman said that manufacturers aren’t happy because they thought they would be done, but the industry’s testing didn’t represent how efficient the equipment is, and it’s about 50% wrong. Work by the Council, California IOUs, Northwest Energy Efficiency Alliance, and the American Council for an Energy-Efficient Economy have worked to ensure that test procedures have realistic efficiency ratings.

Meeting Council’s six-year conservation goal — a challenge

While the region is on track at the halfway point for realizing the Council’s *Seventh Power Plan* conservation goals, reaching the full, six-year goal will be difficult in the face of declining program savings. Currently, the region has saved 637 aMW, compared to the halfway milestone of 600 aMW. It would need to achieve another 763 aMW to achieve the six-year goal of 1,400 aMW.

Jennifer Light, Regional Technical Forum manager, shared the annual Regional Conservation Progress (RCP) survey with Council Members. It tallies total market savings, program savings, momentum savings, and codes and standards savings from Bonneville’s (on behalf of their public utilities), the region’s investor-owned utilities’, Energy Trust of Oregon’s, and the Northwest Energy Efficiency Alliance’s energy efficiency data.



Light said 60 percent of the savings has come from residential lighting. Many of the savings are from general service lamps. But starting in 2020, these lamps can’t be claimed in the target. NEEA savings increased in 2018, but they are forecasted to decrease in 2020.

Light said that significant potential remains in the residential sector. The region is ahead of goal in commercial and on track with agricultural, industrial and utility efficiency. Shifting the emphasis toward HVAC and water heating will help in meeting potential, Light said. Lighting is what’s driving the commercial side.

Light said that Bonneville is currently achieving less than 42% of the regional target — 123 aMW versus 155 aMW – they determine BPA’s savings by taking total BPA program savings, plus 42% of other region accomplishments.

Peter Cogswell, BPA’s director of intergovernmental affairs and regional relations, told Council Members that the agency exceeded its *Sixth Plan* goals by 100 MW. They have questions about the market adjustment. The bottom line is that it’s significant as it reduces their savings by about a third. We haven’t seen all the data that went into the market adjustment and I hope we can get alignment on that, he said. We think there’s a lot at stake and we’re working hard to achieve the objectives set out in the *Seventh Power Plan*, he continued.

Council Member Jim Yost said the Council is looking at the glass half-empty: “It shows me we projected too much; it’s like finding a \$10 bill and being disappointed that it’s not a \$20.” He said the Council set very aggressive targets in the *Seventh Plan* and “a lot of us thought they were too high, but thought it was a good goal. We all knew that lighting was going to be in a downturn after the CFL boost.” Rather than looking at missing our target, he said, we should say we got pretty close and that it was a success.

Council Member Richard Devlin said if the region falls a couple hundred megawatts less, it might affect whether we meet our adequacy standards. Member Yost replied, if we keep building wind and solar without fossil generation, the LOLP will be higher. Let’s look at the whole picture, he said.

Working to quantify new resource environmental costs and benefits

Council staff is working on a methodology for quantifying environmental costs and benefits of new resources for the *2021 Power Plan*. General counsel John Shurts said there’s a lot they know about the environmental effects in the Power Plan, which is important, but none relate to the methodology of how to quantify benefits. For example, in areas that are not regulated, there will be issues about natural gas production, and how well are we capturing those environmental effects. Staff will bring a proposed methodology to the Council in October for discussion and general approval for its use as in developing the Power Plan.

Example: State Clean Energy Regulations

Several states have adopted renewable portfolio standards and more recently, clean energy/carbon reduction policies to address emissions and climate change in the electricity sector

The diagram shows a process flow with four steps: Load Forecast, Existing System Dispatch, Gen Res Reference Plants, and Portfolio Analysis & Modeling. It includes icons for a truck and a leaf.

THE 2021 NORTHWEST POWER PLAN