

PNWCCREPORT Council



Northwest Power and Conservation Council

Meeting Notes

September 11 and 12, 2018

Eugene, Oregon

At the Eugene Council meeting, Eugene Water and Electric Board’s (EWEB) Susan Ackerman offered a lower-cost prescription than renewable portfolio standards for achieving greenhouse gas reductions: carbon pricing. In addition, NEEA’s Susan Stratton told Council members how her utility plans to use different approaches to achieving energy efficiency in the face of tightening utility budgets. Council staff provided an overview of the Bitcoin industry and why cryptocurrency miners are setting up shop in the Northwest.

All Council Members were present. The next Council meeting will be in Wenatchee, Washington, on October 9 and 10.

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The Agenda

Power supply and preparedness top priorities at EWEB

In discussing EWEB’s supply portfolio, Susan Ackerman, EWEB’s chief energy officer, said that as a practical matter, EWEB will continue to depend upon BPA for a significant chunk of its power. She stressed that BPA is working hard to be competitive in 2028 and she applauds Elliot Mainzer for doing what he can to adjust the corporate culture. But they need help in ensuring that fish and wildlife spending obligations are as prudent as they can be, she said. Cost control is going to be important.

Turning to what the future might hold for power supply, where carbon policy and regionalization of markets land will shape utilities' focus. Ackerman told Council members that an energy policy with carbon pricing is preferable to renewable portfolio standards (RPS) in reducing greenhouse gas emissions because carbon pricing favors carbon-free, flexible resources such as hydro generation. Renewable Portfolio Standards have a negative impact on wholesale electric markets, she said.

Ackerman said that according to a recent PGP/E3 low-carbon study, increasing states' renewable portfolio standards gets you half of the carbon reduction you need, but costs twice as much. "We wish Oregon would put a price on carbon instead of RPS," she asserted. "Carbon policies should address carbon, not technology."

Regarding markets, she said that the only way we can cost-effectively synch a lot of renewable generation to load is through a larger grid footprint. She observed that the EIM is growing quickly while the development or expansion of the CAISO is evolving at a much slower pace.

Ackerman also talked about EWEB's other major focus – emergency preparedness and disaster recovery. She said the region could be due for a Cascadia subduction zone earthquake, which could leave the utility without grid support for weeks or probably months. To that end, EWEB is designing microgrids around generation and water distribution services. They are piloting a microgrid at the Howard Elementary School, the idea being that they can serve the community from there during periods of great disruption.

NEEA strategy shifting to get more bang for the buck

Susan Stratton, the Northwest Energy Efficiency Alliance (NEEA) executive director, reported that it is altering approaches in its 2020-2024 Business Plan as utility budgets tighten and energy efficiency becomes more expensive. NEEA is an alliance of utilities working to affect market transformation and energy efficiency.



One new approach is integrating electric and natural gas operations to work together on residential new construction and residential building stock assessment research. Another is adding carbon and capacity metrics when selecting products. For example, if a product is lighting or a water heater, does it have demand response capability?

NEEA is exploring electric vehicle charging and opportunities to enable functionality for efficient products. NEEA also is transitioning some mature programs to the market, such as ductless heat pumps, and it will wind down its reduced-wattage lamp replacement program since people are going to LEDs.

NEEA is scaling back some of its program activities and new initiative investments in favor of focusing on six product categories: consumer products, motor-driven, HVAC, lighting, new construction and water heating. To save money, it is eliminating its Conduit website and will make its Efficiency Exchange Conference biannual.

Energy efficiency is getting more expensive and harder to find as we've picked off the low-hanging fruit, Stratton said. Utility funders are tightening their belts for many reasons, so the NEEA looking for other partners to join them to get more bang for the buck. She said NEEA's 2020-2024 Business Plan will go out soon for public comment.

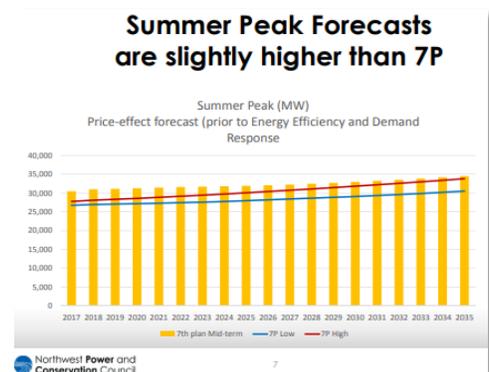
Loads in the ballpark of Seventh Plan forecasts

After evaluating a variety of economic drivers, the Council staff assessment is that energy loads are still "in the ballpark" of the Council's Seventh Power Plan.

Staff looked at a comparison between the Council's Seventh Power Plan and the Midterm Assessment, which reveals a number of key economic drivers impacting loads:

- The region's population has been increasing faster than forecasted in the Seventh Plan.
- There are more residential units than was forecast.
- Commercial floorspace is growing and the industrial sector is flat.

In addition, winter peak is within the Plan forecast, while summer peak is above forecasted. There were also some improvements to the modeling, explained Member and Power Committee Chair Tim Baker. He said that based on updating these economic drivers, and doing a price effect load forecast, the assessment is that the energy loads are within the range of the Seventh Plan.



Northwest offers a cushy climate for cybercurrency growth

Requests aplenty, actual connections not materializing

In a short amount of time, the Northwest has become a destination of choice for miners of Bitcoin and other cybercurrencies. Massoud Jourabchi, Council staff economic analysis manager; and Devin Bales, Council intern, gave a primer on Bitcoin mining and its impact on Northwest loads.

Why is the Northwest a haven for cybercurrency miners? Bales said it's for the same reason it's so attractive for locating data centers: there's reliable communications infrastructure as well as reliable, plentiful and cheap power.

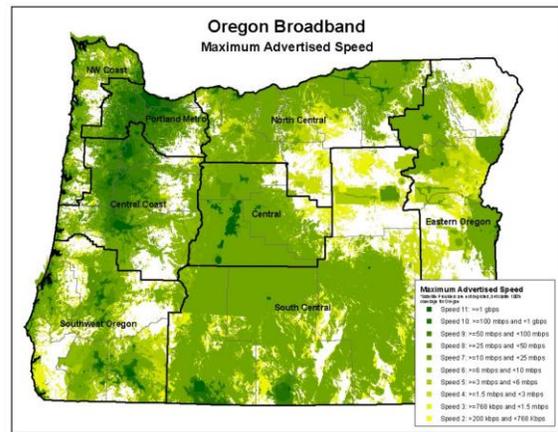
A survey of utilities shows that depending on the scale of mining, a utility may not know there is a mining operation in their service area. The survey also showed that in 2017, the known mining load was about 38 aMW. In 2018, there has been a rush of connection requests after Bitcoin hit a high early in the year, but many of the connection requests are not going through. Bitcoin miners do not provide economic growth comparable to other industrial activities, and meeting electrical demand for this class of customers require a careful risk assessment. Miners can shut down any time and leave, Jourabchi said, therefore utilities are tailoring special term contracts that put the economic risk on the miners instead of ratepayers.

Broadband access grows in importance

To provide insight on the region’s reliable communications infrastructure, Christopher Tamarin, telecommunications strategist for the Oregon Business Development Department, provided an overview of Oregon’s telecommunications network infrastructure. He discussed how broadband is a foundation for economic growth, job creation, global competitiveness and a better way of life. As a meta-infrastructure, broadband enhances power grids, transportation systems, water and wastewater systems, and the emerging Internet of Things.

Oregon ranks seventh in the nation for broadband penetration, Washington is second, Idaho 47th and Montana is 51st (Washington, D.C., is ranked as well).

In addition, Oregon is a destination for undersea cable services with a total of \$300–\$500 million in projects. Oregon’s coast is relatively safe, the state permitting process is efficient, and customers like Oregon’s diversity and easy access to U.S. networks and data centers.



Council Briefs

Nelson stresses open communication

Jeff Nelson, Springfield Utility Board general manager, provided a light and fun talk on the importance of open, unbiased communication. Using sleight of hand and a deck of cards, he illustrated the problem of initial perceptions, and discussed importance of educating customers and policymakers.

He said to listen and understand what is important to customers, and make sure your solutions align with their interests or the problems they are trying to solve. “We are always trying to make sure we’re not forcing the outcome,” Nelson said.

Midterm Assessment under review

Staff has prepared sections of the Midterm Assessment for Power Committee review. There are four sections left and the Committee heard about three of them: load forecasts and markets, conservation and resource strategy. The full Council will see those sections as a final draft document in October. It then will be sent out for public comment.

Council releases white paper on Northwest energy consumption

The Council approved the release of its white paper: Recent Trends in Energy Consumption and their Impact on the Northwest Economy. The Council's paper shows that if the regional economy had held the 1990 levels of efficiency in energy usage, regional electricity loads would have been about significantly higher in 2015.