

Richard Devlin
Chair
Oregon

Ted Ferrioli
Oregon

Guy Norman
Washington

Patrick Oshie
Washington



Northwest Power and Conservation Council

Bo Downen
Vice Chair
Montana

Jennifer Anders
Montana

Jim Yost
Idaho

Jeffery C. Allen
Idaho

Council Meeting Minutes Council Central Offices 851 SW Sixth Avenue, Suite 1100 Portland, OR 97204 April 14-15, 2020

Tuesday, April 14, 2020

Chair Richard Devlin called the meeting to order at 1:07 p.m. Council Members Jeffery Allen, Jennifer Anders, Bo Downen, Ted Ferrioli, Guy Norman, Patrick Oshie and Jim Yost joined by phone. The meeting was held as a webinar due to the coronavirus health emergency. The next meeting also will be a webinar, scheduled for May 12 and 13, 2020.

Reports from Fish and Wildlife, Power and Public Affairs committee chairs

Fish and Wildlife Committee

Council Member Guy Norman, Fish and Wildlife Committee chair, reported on a well-attended virtual meeting.

1. There was an update on the Fish and Wildlife amendment process, specifically the extension of Part 1. Eight workshops have been held since the January extension. Lots of input has been provided by fish and wildlife managers. The updated version of Part 1 was presented by staff. They got partway through it and will present more on April 28. There will be a draft to the full Council in May with a public review in the fall.
2. Brian Burke, research fishery biologist with NOAA's NW Fisheries Science Center, gave the annual ocean research update. The takeaway was there's an expectation of more marine heat waves and ocean blobs in the future. This reduces food supply, increases predators, and lowers the ability of salmonids to survive in the ocean. The stoplight chart showed slight improvement over last year. The interesting part was looking at freshwater mortality versus ocean mortality. Because of the coronavirus,

the May research has been cancelled and the June portion is up in the air. We'll see how much of that research for 2020 can be salvaged, he said.

3. The committee received an update from Washington Department of Fish and Wildlife, Oregon Department Fish and Wildlife, and Idaho Department of Fish and Game on Columbia basin returns. Some are improved but not too high. Sockeye has significantly improved. Steelhead is very low, but hatchery sockeye is well above forecast.
4. There was an update from staff on the resident fish and sturgeon review. The Independent Scientific Review Panel (ISRP) completed its review on April 3. A decision was made to grant a 60-day extension for responses to that review due to the coronavirus. The response deadline is now June 23. Public comment will go through September 7, with a Council decision in October.
5. There was a report from staff on cost savings. There was a follow up on a discussion with BPA on for a research project and northern pike suppression. They didn't reach a resolution, but reached a commitment from BPA to work together on a process to work on how to work on cost savings and management dollars, and how to fund Council priorities.

Power Committee

Council Member Pat Oshie, Power Committee chair, reported they are adjusting the expected timeline for the Power Plan's release by a couple of months. A draft is now expected by February 2021, due to the workload impacts due to the coronavirus and the region's response. The final plan will be completed by May 2021, which could bleed into June, depending on public input.

There was a combined presentation by Daniel Hua, power system analyst, and Tina Jayaweera, senior energy analyst. Hua reviewed the 2021 Power Plan climate scenarios. He shared how the scenarios compare to one another, and how they impact the historical record of heating and cooling degree days, and high and low winter and summer flows and temperatures. Next, they layered climate change impacts over the record of historical temperatures in the region and energy saving measures. There may be more energy efficiency savings from heat pumps. With more cooling degree days expected in the summers going forward, we gain efficiency, Kujala said. We could lose efficiency in winter heating requirements due to expected warmer winters. Utilities and others will get a chance to weigh in on this topic at the Conservation Resource Advisory Committee meeting later this month.

The committee looked at an out-of-region load forecast and a load forecast for California. Member Oshie said across the WECC, we're seeing very modest projected load growth (at or below 1%), except in California, where electrification policies are expected to lead to greater demand. British Columbia and Alberta are showing significant load increases

(6,000–8,300 aMW) going forward. Some of it is driven by economic diversification and moving away from fossil fuels.

There was a discussion on how hourly load patterns are changing due to behind-the-meter solar. An afternoon dip in demand due to the duck curve is contributing as well. Next, they looked at BPA's expected load. BPA and Massoud Jourabchi, economic analysis manager, discussed how to determine forecasts going forward. BPA is looking at a flat load forecast. There probably will be a slight dip in 2028. Their overall percentage of load served is expected to be reduced from 35 to 28 percent. He praised the positive work environment between BPA and Council experts.

Public Affairs

Council Member Jeffrey Allen, Public Affairs Committee chair, said they have decided not to send a "hold the date" announcement for the Congressional Tour in light of so many scheduling unknowns. It will be reviewed in a month.

1. Western Flexibility Assessment

Thomas Carr, staff attorney and economist for the Western Interstate Energy Board, began his presentation crediting the team members involved in the study. The purpose of the study is to investigate the flexibility of the Western Interconnection over the next 15 years, and to determine if it will be flexible enough to operate with large amounts of variable generation. The key study period covers 2026 to 2035. For this timeframe, the group developed a baseline case and two scenarios.

Policies in the region have been driving toward high levels of renewable integration and clean energy. They looked at the clean energy assumed to occur in the different states and fed that data into four different models. They started with the capacity expansion (AURORA) model to identify the resources needed to meet targets. To test the expansion plan's resource adequacy, they used the GENESYS model. They next analyzed the system with a production cost model, which provided output on an hourly basis. To analyze reliability and potential strains on the system, they used a Powerflow model to look at the transmission system.

Carr said the Baseline Case represents the expected future as these models develop. It assumes a reduction in the coal fleet with 7 GW of plant retirements. Natural gas stayed fairly constant with a slight decrease. Renewables increased: wind and solar increased 9 GW a year during the study period.

Policy goals in the western states show that by 2026, states have to have 33% clean energy. By 2035, state policies move higher to 64% clean energy. These are the benchmarks in the Baseline Case.

Baseline Case assumptions include a regionalization of energy markets. The EIM will be working and there is the equivalent of a day-ahead market. It also assumed load growth in line with regional forecasts and utility IRPs. Also, it assumes there are enough renewables to meet clean energy goals.

Curtailments (the percentage of energy produced that was not able to get to market) are an indicator of system flexibility. In 2026, renewable curtailments are estimated to be 3%. By 2035, they grow to 20%. This also means the region won't attain its clean-air policy targets. It's an important finding in what needs to change in the system, Carr said.

He said another important result is what's happening with power flows throughout the system. Changes in solar energy are showing that power will flow to wherever it's needed and wherever the prices are highest. We'll be seeing major changes throughout the interconnection, he said. We're going to see a different world operationally, and it will be a challenge and an adjustment. It's an opportunity for a more flexible system.

In the 2020s, interregional exchange is a viable and common flexibility strategy. By the 2030s, a lack of buyers for excess renewable power is partially to blame for flexibility challenges.

Also, the Powerflow model shows that the transmission system is robust and versatile, but it does have limitations. Carr said the study shows very little system congestion in 2026, but the addition of renewable generation uncovers transmission limitations and constraints will be more widespread by 2035.

Carr reminded the Council that the Baseline Case is the expected future. It has very little additional transmission, except for projects that were already in the pipeline and approved. So, by the end of the 2030 period, the system will be pressed on capacity.

He described two scenarios: the Integration Strategies Scenario and the Limited Coordination Scenario.

1. The Integration Strategies Scenario adds additional transmission and increased storage (both four hours and longer-term). It assumes electric vehicle charging at the peak of the day, while there is a lot of surplus energy. They made the system more diverse with additional solar in the Northwest, which improved flexibility. This scenario also met the clean energy goal in 2035.

2. The Limited Coordination Scenario shows the effects of no increase in the coordination of Western wholesale power markets. Carr said it's a dismal picture if the region doesn't move to more-efficient markets. Curtailments will climb, transmission congestion will increase and they will not be able to hit clean energy goals. Under this scenario, the region barely hits the 2026 clean energy goal, he said.

The study's resource adequacy findings for the Northwest found that if no generation is added, a capacity need of 1,100 MW occurs no later than 2030, Carr said.

The Baseline Case includes sufficient capacity to maintain Northwest reliability through 2035. It assumes 16 GW of renewables, 3.2 GW of gas, and 5.9 GW of thermal retirements occur by 2035. Gas was added in the baseline.

If no gas is added in the Baseline Case, a 500 MW capacity need arises by no later than 2030 (8% LOLP), increasing to a 1,500 MW need in 2035 (23% LOLP). Even if public policy needs in the region are met, a minimum of 1.5 GW of firm capacity is still needed to ensure reliability.

Long-term capacity needs for the Northwest system, after accounting for capacity supplied by policy-driven resources, can be met with gas, long-duration storage, or increased access to market purchases.

The results of this study were very sensitive to the load forecast assumption.

Member Oshie observed that part of the study made a reference to market changes. What do you envision as needed changes to the existing marketplace and transmission? Carr said we would have an EIM market and participants could trade a day ahead. It allows for more coordination to move resources around. As for transmission, they did very little. There were a lot of coal plant retirements, and they picked up the flows going around the system. By the mid 2030s, there is a need for transmission expansion at the local and higher levels, he said.

Member Oshie asked, with regard to EIM and its expansion, is it a scenario where all the large and mid-sized generators and utilities participants in EIM? Carr's recollection is that all were participants in regionalization. In the more-restricted Limited Coordination Scenario, it only had existing EIM members.

2. Update on BPA Energy Efficiency Action Plan

Joel Cook, BPA's senior vice president of power services, introduced Jamae Hilliard Creecy, acting vice president of energy efficiency, who stepped into her new role in March. She has been with the agency for 17 years. He discussed the purpose of the Energy Efficiency Action Plan.

Cook told Council Members that the agency plans to invest \$634 million over six years in energy efficiency to achieve 532 MW at the low end, and 567 aMW at the high end, which is 90 percent of the original goal. The Plan's goal is 581 MW. BPA looks forward to working with the Council to make strategic energy efficiency investments.

Jessica Aiona, BPA's industry economist, discussed the history of the Action Plan, which is a roadmap for BPA's part of the Council Power Plan's energy efficiency goal.

She said changes have occurred since the targets were set in 2016: BPA's strategic plan and an agencywide cost competitiveness initiative to keep rates low and contain costs. They also completed the 2018 Resource Program, which looks to acquire higher-cost and harder-to-reach savings. Also, there has been a significant slowdown in the development and adoption of federal energy efficiency standards. This has had a dampening impact on BPA's savings forecast.

Aiona described the agency's different saving streams: Programmatic, momentum and market transformation.

Programmatic savings are the direct result of BPA programs and make up the bulk of the agency's budget. The agency's savings goal is 352 aMW. The residential and commercial sectors are expected to achieve 96% to 102% of the original energy efficiency Action Plan goals. It's important to note that Bonneville is shifting away from low cost and abundant lighting savings, to more costly and difficult to acquire HVAC and weatherization savings, she said. They use the Regional Technical Forum's savings estimates where available.

Momentum savings are modeled and reported. Bonneville is looking to achieve 184 aMW at the high end and 168 aMW at the low end. The goal was 200 aMW. Aiona said significantly less savings from federal efficiency standards are being quantified due to rulemaking inactivity.

Market transformation savings are the direct result of Northwest Energy Efficiency Alliance (NEEA) initiatives, which span retail products, codes and standards, and residential and commercial HVAC. They anticipate achieving 86% of the original

Action Plan forecast of 29 aMW. Bonneville expects 25 aMW over the six-year period, but they won't know the total until they close the books on the Seventh Power Plan. Aiona said the Momentum and NEEA savings are likely to change, and the savings will be trued up to account for differences in baselines at the end of the Action Plan.

Member Oshie asked about the participation by utility customers in energy efficiency programs. Utilities have appeared before the Council in Idaho and Montana and he is curious how BPA sees the barriers to implementing measures in smaller utilities. Danielle Walker, BPA's energy efficiency and evaluation manager, said they would follow up with a reply.

Aiona said BPA is on course to invest \$634 million on energy efficiency over six years in three categories: conservation purchases, market transformation and conservation infrastructure.

- Conservation purchases are funds to acquire energy efficiency. A total of \$423 million has been spent in this area over six years. It doesn't include money for self-funding. She said 33 percent of their savings were self-funded in addition to what BPA has been spending.
- Market transformation is money to NEEA.
- Conservation infrastructure covers the administrative costs to run programs, research within BPA and costs for contract personnel.

She explained a small decrease in conservation purchases in the 2016 and 2017 period, and the 2018 and 2019 period. That's because BPA reassessed its self-fund percentages. She then detailed other spending shifts.

Member Devlin asked if the remaining \$139 million is in conservation infrastructure. Aiona said it is.

Member Devlin said it's too early to say in the 2021 Power Plan what portion will be met by energy efficiency. He said there have been comments that the agency was overestimating market transformation and there was the potential for double counting. A couple of years ago, staff estimated the shortfall between 14 to 49 MW from the overall goal. Staff indicated it could be as much as 100 MW over that. That would be about one-quarter from where we anticipated BPA would be in meeting its share of energy savings. It's difficult to figure where you'll end up, but we need to find a better way to do this. He said we don't want to end up being short at the end due to an overcalculation of market transformation. If you were 149 aMW short of the overall goal, that would be a fairly substantial impact.

Aiona said her next slide would address some of those statements.

Member Downen asked for a clarification in the change of assumptions. Aiona said they expect some of their savings come from self-funded savings. Those are reported to BPA by customer utilities. In 2016-17, we assumed a 25-75 split. In 2018-19, we shifted it to a 70-30 split. What we're actually seeing is a 66-33 split over the entire plan period, between BPA-funded and self-funded savings.

Aiona shared a slide listing some report clarifications:

- BPA savings look different than the Council's Regional Conservation Program report.
- Momentum and NEEA savings are likely to change.
- There are differences between the Plan baseline, what BPA funds, and what end-user customers are seeing come off their bills.
- Savings will be trued up to account for differences in baselines at the end of the Action Plan period. We need to figure out the market transformation savings at the end of the period, she said.
- Technical and policy discussions between Council and BPA staff on how to report savings achievements will continue.

Cook summarized the presentation by reiterating that BPA, customer utilities, and the region have much to be proud of and expect to achieve over 500 aMW of savings. He said relying on savings that are out of BPA's control should be considered when developing goals for the 2021 Power Plan. Further, BPA will continue to work with Council and stakeholders to focus on savings that provide the highest value.

The Integrated Program Review will establish BPA's budgets, including energy efficiency for 2022–2023. The public process for this begins in June.

Member Devlin said his take is that rather than BPA estimate what their momentum savings is for the 2021 Power Plan, the Council will say what they expect from program savings. Danielle Walker replied they need to discuss the different roles in power planning.

In an answer to Member Oshie's earlier question on barriers to programs, Dave Moody, BPA marketing lead, said as we shift to more-complex programs that are harder to achieve, it will require a presence in homes and buildings, instead of relying on lighting measures.

3. States' panel on Incident Command Response (ICR) for invasive species

Kendall Farley, policy analyst, introduced Stephen Phillips, Pacific States Marine Fisheries Commission; Captain Eric Anderson, Washington Department of Fish and Wildlife; Rick Boatner, Oregon Department of Fish and Wildlife; Thomas Woolf, Montana Fish Wildlife and Parks; and Lloyd Knight and Nicholas Zurfluh, Idaho State Department of Agriculture.

Stephen Phillips covered the history of the Interagency Rapid Response Plan. He said they have had a mussel program since 1999. They started thinking about putting together an Interagency Rapid Response Plan in the mid 2000s. A memorandum of understanding was signed by multiple agencies in 2008. It's been updated in 2011 and 2014. He talked about the process of testing the plan, and then the steps taken to fund and implement it.

Nicholas Zurfluh talked about Idaho's rapid response activities. He covered the history of sampling activities. There are multiple sampling events a week during the summer monitoring program. There have been no suspicious detections in Idaho. They have assistance from partners. They also are surveying for invasive plants, snails and other organisms. He discussed the components of Idaho's plan. They focus on seven key areas: verification of detection, initial notification, activate CRB interagency plan, define extent of infestation, external communication, containment and control.

Idaho's Lloyd Knight talked about the Hells Canyon Complex. He said a lot goes on there given it's a shared water body between two states, tribes and the U.S. Forestry Department. One of the challenges is a lot of recreational activity. He discussed potential containment activity.

Montana's Thomas Woolf said they had a mussel detection in late 2016. Staff responded quickly. They have increased detection and outreach efforts. Mussel guidelines were formalized. They had a Flathead Lake response joint exercise.

The focus for 2020 is to delist Canyon Ferry, use quality control and expanded enforcement, add COVID protocols and expand partner involvement. Woolf discussed mandatory watercraft inspections and future planning. He said neighboring North Dakota doesn't do anything for invasive species. South Dakota would like to, but it doesn't have any money. Internet boat sales is a loophole they're trying to close.

Rick Boatner talked about Oregon inspection stations on Interstate-84 and Interstate-5. He showed a map of where the mussels are and they're not in the Pacific Northwest. Monitoring efforts were discussed. He said detection is like finding a needle in a haystack. Oregon has two different rapid response plans. One for Columbia waters and one for coastal and southern Oregon waters. He walked through the process once mussels are first detected.

Captain Eric Anderson is heading up Washington's watercraft inspection stations. He discussed preventative measures and ran through the location and performance of the inspection stations. Those found 18 boats with mussels last year.

The Spokane station received a grant to have a permanent decontamination unit in order to neutralize the threat onsite. He discussed the equipment, training and personnel used to conduct a rapid response. They did an exercise at Lake Roosevelt last year and learned a lot of lessons. They plan to hold the exercises on a biennial basis.

Member Norman said the interagency coordination is essential for responding correctly. He asked Captain Anderson about the timeline for getting chemical treatment approval. He replied it takes several months just to get approval for a biodegradable dye, so they're looking at a hurdle.

Chair Devlin recessed the meeting at 3:51 p.m.

Wednesday, April 15, 2020

Chair Devlin brought the meeting to order at 9:01 a.m.

4. Update on the Marine Mammal Protection Act Section 120(f) Permit Application

Mark Fritsch, project implementation manager, introduced Robert Anderson, National Marine Fisheries Service (NMFS), West Coast Region.

Anderson said since the initiation of the mammal removal program in 2008, states have removed 230 mammals. He said there have been some benefits to removal in reducing the consumption of salmonids by California sea lions. But that was followed by an influx of Steller sea lions so the tables have turned.

The parties submitted an application to amend the Marine Mammal Protection Act 10 months ago to make it easier to lethally remove California and Steller sea lions. Key changes lessened the restrictive criteria for removal of animals. It changed it to an area-based management approach for animals within a geographic area. It also opened the scope of applicants, allowing specific tribes that could be authorized to lethally remove mammals.

Anderson traced the process and timeline for the amendment. A task force will submit recommendations to the NMFS on July 14, 2020. It will have 30 days to make a decision.

Member Norman asked if the task force is a diverse body. Anderson replied it is and it represents conservation organizations, marine mammal organizations, states and tribes. Members represent diverse perspectives and views. Member Norman asked if Anderson expects a positive decision and if a permit will be available following August 14. Anderson replied he expected there will be.

Member Allen asked why it took six months to put the task force together. It will be 20 months from when it was signed to implemented. Is this our best effort? Yes, it's in line with prior authorizations, replied Anderson. In forming the task force, it takes effort to find people willing to step aside from their jobs and to travel.

5. Update on historical regional greenhouse gas emissions:

Gillian Charles, senior energy policy analyst, gave her annual presentation on regional greenhouse gas (GHG) emissions. She reminded Council Members that there is usually a lag in the data provided by EIA. This presentation is for 2018 emissions. There will be sneak peek at 2019 data later.

The focus of the report is on CO₂ as the primary GHG. She listed other types of emissions. Referring to a graph, she said in 2018, CO₂ emissions for the region were 45 million metric tons. It's been flat for the last three years. In general, we're seeing a slight decline in the region. She said fossil fuel generation tracks CO₂ emissions. Hydro generation is the inverse of the fossil fuel line. Good hydro years mean less fossil fuels. Further, energy efficiency is increasing and so are renewables.

Charles looked at the resources dispatched to meet load. For example, 2011 was a great hydro year and 2010 was not great. In 2002, coal was the dominant fossil fuel resource and it gradually gave way to natural gas. Gas overtook coal generation in 2018.

Member Anders asked about demand. Charles replied it has been fairly flat. Generation is jumpy. Not all resources generated go to the regional load, so the graph doesn't correspond to regional load.

Charles discussed new resources since the Seventh Power Plan through 2019. One new gas plant came online as well as new wind and solar. With expected coal retirements, the region will go from 7,200 MW in 2016 to 2,700 MW at the end of 2028. We'll be down to 30 percent of the coal fleet. She said none of retirements are affecting emissions yet. But the historical contribution to emissions are about half since 2000. In 2003, they were 58 percent. In 2017, they were about 38 percent. The remaining coal units are Colstrip 3 and 4, and Jim Bridger 3 and 4. They account for 35% of historical emissions.

Charles discussed the WECC region's coal reductions. In 2019, coal was about 35,000 MW. It drops to 15,000 in 2032. Then it's stagnant through 2036. Oregon

won't have coal operating after 2020. Alberta has significant coal fleet now, but it will be gone in 2030.

Charles reviewed the clean energy policies and carbon regulations by state. She also discussed national emissions. The trend is downward, although it increased slightly in 2018 due to more heating and cooling load. Renewables are increasing steadily, while hydro remains a small percentage of generation at the national level. Gas is increasing in capacity and generation, while coal is declining. Charles showed a carbon intensity chart for the nation, which is the amount of carbon per unit of energy generated. The Northwest has a much lower intensity, 19% vs. 42%, due to the role of hydro in the region.

Next, she looked at noncarbon emissions associated with power production, such as sulfur dioxide and nitrous oxide. Both have been in major decline due to Clean Air Act retrofits on coal plants. There are very small amounts compared to CO₂. When methane is combusted for electricity generation, the emissions are relatively insignificant. However, upstream emissions are more significant. Recent studies show that in the U.S., methane emissions from the gas and oil supply chain are larger than previously expected. Preliminary Council staff analysis shows that regional natural gas generation is still cleaner than coal on a GHG basis; however, the gap between the fuels is narrowed when considering upstream methane.

The final data for 2019 emissions will not be available until around November 2020. However, regional demand is down 1.3% (January – August) in 2019 compared to 2018. According to NOAA's water supply forecast, the flow at The Dalles was below normal (for reference, 2018 was above normal). In 2019, about 250 MW new solar and wind went into service, and no coal units were retired. It's likely that 2019 emissions will increase, primarily due to a "poor" hydro year; however the recent flip in fossil fuel dispatch may soften the extent of the increase.

Charles said forecasts show a short-term, sharp decline in emissions due to coronavirus shutdowns.

6. Briefing on the analytical process for the 2021 Power Plan, Part 4

Ben Kujala, Power Division director, presented the fourth and final presentation on what analysis goes into the 2021 Power Plan. This installment covered:

- resource strategies,
- forecasting electricity sales,
- cost-effective methods for providing reserves,
- model conservation standards, and
- developing a methodology for identifying cost-effective energy efficiency measures.

Resource strategies: Kujala said this evaluates what resources should be pursued to ensure a reliable power supply. This analysis examines risks such as fuel prices, regional growth, wholesale market electricity price and hydro conditions. Staff examines potential regional policies and decisions. It also looks for solutions that minimize cost and risk — including investment in new generation and demand-side resources.

The process has a resource strategy adequacy check that considers:

- Plant retirements and additions (out of the region);
- The reliance on external markets and adherence to planning reserve margins for WECC planning areas;
- Existing state and regional policies; and
- Operational feasibility.

Forecasting electricity sales: Kujala said they need to know the regional load for the next 20 years. They do it by:

- Using resource strategy outcomes:
 - Regional energy efficiency target
 - Market reliance on out-of-region resources
 - Expected regional demand response adoption
- Forecasting energy use:
 - Behind-the-meter solar and solar + storage
 - Transportation
 - Natural gas consumption
 - Other usage

Develop cost-effective methods for providing reserves: Kujala said the Northwest Power Act says the plan shall include: *An analysis of reserve and reliability requirements and cost-effective methods of providing reserves designed to insure adequate electric power at the lowest probable cost.*

He discussed operating and planning reserves in the Council's modeling. Operating reserves are used to cover short-term mismatches between load and resources. Planning reserves should include any additional requirements to address long-term mismatches between load and resources. Reserves are made up of things you need to do to address forecast error, both short- and long-term, he said.

Member Devlin said, given the rapid closure of coal plants, and last March's perfect storm where there was a lack of availability of natural gas and an inability to move power in on regional interties, it has put a lot of focus on utility adequacy and reserves. Can you distinguish that from previous planning periods?

Kujala replied that we want to be more explicit on the adequacy requirement. We have had it in previous plans, but there's been a recent focus on operating reserves due to the increased penetration of variable generation. In this plan, we want to check the box and wrap it into our analytics, he said. We want a model that captures the ups and downs. The March incident would likely be regarded as an odd, infrequent event.

Adequacy assessment is taking a temperature, not prescribing a solution, Kujala continued. It provides the context needed to understand where we are. The size, scale and scope of the resources will inform the conversation.

Member Oshie asked for a generic definition of loss-of-load probability. Kujala said some say it's one event in 10 years, but it's hard to get everyone to use the same statistic. John Fazio, senior power systems analyst, replied that the LOLP doesn't mean the likelihood of a blackout or brownout. It's the likelihood that utilities will have to take actions to keep the lights on. It could be expensive purchases or curtailments. We call it the likelihood of taking costly actions we'd prefer not to take, he said.

Member Oshie said that as we go forward with the Power Plan, Council members will get asked about it and whether our system is at risk. This answer gives us a platform to respond.

Model Conservation Standards (MCS) and Surcharge Methodology: Kujala said the Power Plan should include:

1. Standards designed to produce all power savings that are cost-effective for the region and economically feasible for consumers taking into account financial assistance.
2. Also, a surcharge methodology would be an incremental charge to Bonneville customers not meeting the standards.

MCS: Kujala said these are a prescriptive means of acquiring energy efficiency – that is, specific requirements such as building insulation levels or utility program features.

The Power Act directs the plan to include MCS applicable to:

- (i) new and existing structures;
- (ii) utility, customer and governmental conservation programs;
- (iii) other consumer actions for achieving conservation.

The Act requires:

- The standards reflect geographic and climatic differences and other appropriate considerations; and

- That the Council design the MCS to produce all power savings that are cost-effective and economically feasible for consumers, taking into account financial assistance from the Bonneville Power Administration and the region's utilities.

Surcharge Methodology

- Kujala said it may be imposed on Bonneville customers' full load or the portion of their load not meeting the MCS;
- Should be designed to recover additional costs incurred because projected energy savings have not been achieved;
- Must be no less than 10 percent and no more than 50 percent of the rates for a customer's load or the portion of load not meeting the MCS; and
- Provides a strong incentive to utilities and state and local jurisdictions to adopt and enforce the MCS.

MCS in the Seventh Plan

Kujala said it is focused on three areas intended to improve program design and delivery:

- Ensuring full participation in programs
 - MCS-1 – Improve participation in programs from “hard to reach” or “underserved” markets.
- Achieving voltage optimization
 - MCS-2 – Evaluate and pursue savings on utility distribution circuits.
- Enhancing codes and standards
 - MCS-3 through MCS-7 – efforts related to supporting building codes and Federal standards.
 - Much of this is accomplished through NEEA.

Develop a methodology for identifying cost-effective energy efficiency measures:

Kujala said if the benefits outweigh costs, the measure is cost effective relative to the Plan findings. An LED lightbulb is a good example.

He said the economic potential is determined by the resource strategy analysis. After the regional energy efficiency target is established, we need a method for determining if new measures are cost-effective relative to the Plan results.

7. Background presentation on Bonneville's statutory responsibilities with regard to power sales and resource acquisitions

Tim Johnson, an attorney in Bonneville general counsel's office, gave a background presentation on Bonneville's statutory responsibilities and authorities with regard to power sales and resource acquisitions. He was joined by John Shurts, staff general counsel. Member Devlin said the topic was courtesy of Member Downen.

Shurts said one of primary elements of the Power Plan is a resource strategy for resource acquisitions by BPA. He reviewed what the agency statutory authority is for power acquisitions.

Johnson talked about their authority under the Northwest Power Act, but also under other acts. We approach and implement the Northwest Power Act by taking into account all the statutes that govern Bonneville's marketing, sales and resource acquisitions, he said.

"Need" based resource acquisition is the authority to supply contractual/operational need. If there is no need, there is no basis to acquire. Bonneville looks at loads vs. resources, planning basis, the Council's plan, and its internal White Book/Resource Program.

Johnson talked about three firm power customer classes (publics, coops and IOUs), the acquisition of resources, how they determine need, economic operations, managing resource risk, and firm power sales contracts.

Member Downen asked how BPA's Administrator ensures he is consistent with the Northwest Power Act and the Power Plan's recommendations? John Shurts, general counsel, said that the main focus in the Act is major resource acquisitions, and there's a very structured process for it. "The Council signed a letter with BPA that it can know what the agency is acquiring," he said. "There's an obligation with the Northwest Power Act that it will be cost-effective. We get regular information. If we see something problematic, we raise the issue. The ongoing conservation program is the biggest part of our interaction. What are the targets and what is BPA's share? That's where most of the conversation is."

Member Devlin asked what is administrator's obligation to follow the energy-efficiency requirements in the Plan? Johnson replied that, as Bonneville's lawyer, there is no compliance by the administrator — it's a plan.

"Everything is a forecast, but it provides guidance to the administrator as to what he will acquire," Johnson said. "It's 'guidance,' not compliance. When people come in and tell one actor how to behave or do something, then we lose the ability to work together. We're not supposed to be on opposite sides. Conservation is the preferred resource at BPA. That's why it gets the 110 percent benefit over other resources."

Shurts suggested that guidance and compliance aren't the terms we should be focusing on, rather it's consistency. There's an obligation that the administrator has to acquire conservation that the administrator determines is consistent with the Plan. It's a substantive obligation, he said, even though it's not a direct mandate. When we evaluate what Bonneville's doing, we think in that term.

Member Devlin asked about the Columbia Generating Station. Would it be considered a new acquisition or a current asset? Johnson said CGS is a grandfathered resource, there is no acquisition there.

Member Devlin asked if there would be a discussion of cost. Johnson said that gets complicated because of Bonneville's agreement with Energy Northwest. It would be an issue if Bonneville were losing 1,100 MW.

Johnson talked about the post-2028 landscape. He said the statutes remain the same, regional contracts expire, the residential exchange settlement expires, and post-2028 has yet to be determined.

Member Devlin asked about a scenario where not all contracts are renewed and they have power within their firm capabilities. If a firm came in, how long could they contract for that power?

Johnson replied it depends on the statutory door are they come through. If it's 5b, supply will be forthcoming. If we need to get more resources, then other aspects of the plan really matter. If it's just short term, then we can offer a contract to them as a surplus sale. It depends on the availability of the power as supplied. They are subject to a five-year notice to recall that power if it's needed for a preference customer. We have never issued a five year recall in modern times.

Member Devlin asked about power sales, cost recovery and the energy price spike in the first quarter of 2019. Johnson said they learned from the energy crisis, not from last year's momentary spike in prices. Fundamentally, BPA has to recover its cost. When we do a rate proceeding, do they recover our costs? That's what rates are set to. Also, what are the risks we might be confronting? We include risk in cost recovery. Our annual rates recovered those costs.

Shurts asked Johnson to explain the agreements Bonneville signed with PGE and Puget, and how it relates to preference customers. Johnson said those are sales BPA determined to be surplus. As a resource supply, it's been sold. Then you have less for risk supply. BPA addresses that risk component with the pricing of that product.

8. Discussion of Columbia River System Operations Draft Environmental Impact Statement

John Shurts said the official comment period for the Columbia River System Operations Draft Environmental Impact Statement ended on Monday. We didn't prepare an official

Council comment. We did want to put it on the agenda to make some brief comments. There are three points:

1. We recognized the constraints federal agencies worked under to prepare this large document.
2. It's not a fish and wildlife program, it's not the power plan or a reflection of our obligations to make those plans.
3. The EIS is problematic for fish and wildlife. It largely ignores the Council's Fish and Wildlife Program.

Patty O'Toole, Fish and Wildlife Division director, thanked BPA for presenting on the EIS. The draft recognized the Northwest Power Act as a foundation underneath all the alternatives. There were many detailed references to BPA's Fish and Wildlife Program, but there was little mention of the Council's program.

Ben Kujala said that on the power side, they saw a use of the Council's analysis. We were happy to see that, he said. A lot of information was taken from the Council, but the Council did not prepare the analysis of the alternatives and would not necessarily come to the same conclusions.

Member Devlin remarked that on the fish and wildlife program, the issue isn't that it wasn't cited, it's that there was no recognition of the substantive requirements BPA has under the Power Act.

Council Business:

Northwest Power and Conservation Council Motion to Approve the Minutes of the March 17, 2020, Council Meeting

Vice-Chair Downen moved that the Council approve for the signature of the Vice-Chair the minutes of the March 17, 2020, Council Meeting held in Portland, Oregon and via webinar, as presented by staff.

Member Yost second.

Motion passes without objection

Northwest Power and Conservation Council Motion to Authorize the Staff to Contract with PSR for Cloud Computing Support Services at a Not-to-Exceed Contract Price of \$115,000

John Ollis, planning and analysis manager, said they already signed a contract to run the GENESYS model. This is a staff estimate to get us through the Power Plan time period for storage. Andrea Goodwin, senior counsel, clarified it's for cloud computing services.

Vice-Chair Downen moved that the Council authorize the staff to contract with PSR for cloud computing support services to support the GENESYS model in an amount not exceed \$115,000, as presented by staff.

Member Yost second.

Motion passes without objection

Public comment

Wendy Gerlitz, NW Energy Coalition

Commenting on BPA's energy efficiency presentation, she said the NW Energy Coalition is concerned about BPA's shortfall. There's a discrepancy on size of shortfall, she said. The actual number could be 100 MW greater than presented yesterday, which would be a 25% shortfall. The NW Energy Coalition pointed out in comments on the Council's Seventh Power Plan that the targets should be the minimum achieved. That puts the 25% in context. BPA's conservation programs are extremely successful. The member utilities' programs are successful, even though costs are going up over time. They do a good job with their acquisition, so what's the problem? The program budgets are consistently underfunded by BPA. Their "direct conservation purchases" have gone down from 2017 to 2021. They offer three recommendations:

1. BPA plan is to true-up savings and discrepancies. We don't think that's sufficient, she said. There isn't enough time to know how far behind they are. We want to know the shortfalls now.
2. Increase the energy efficiency budget in 2022–2023. We had a commitment they would make up the shortfall in the last period. This would get them on track to meet targets.
3. Going forward, address what BPA can control through its programs. Remove momentum and market transformation from the calculation. Having the Council estimate momentum on the front side would be helpful. The use of model conservation standards is another good option.

David Moskowitz, The Conservation Angler

Moskowitz represents a wild fish conservation group based in Washington and Oregon. He remarked on:

1. Regarding the 2020 salmon steelhead report given to the Fish and Wildlife Committee, the forecasts are incorrect. They said 150,000 fish passed Bonneville. It was 75,600. The forecast isn't 199,700, fish it's 99,000. The bright spot was that wild steelhead outnumbered hatchery steelhead. In the future, state should use charts with longer historic timelines and use a consistent numeric range.

2. Federal actions related to mass marking and tagging of hatchery fish. Due to COVID concerns, some tribes and the federal government are not completing mass marking of fish. It's a great concern that will impact fisheries over several years.
3. The suspension of sampling and monitoring ocean fish.

Scott Levy, Bluefish.com

Levy commented on steelhead runs. He talked about removal of the Snake River Dams and said it would reduce rates. He recommended running their removal through GENESYS, but remarked that certain Council Members aren't interested in providing complete information.

Member Devlin told Levy that questioning people's motives rarely leads to positive results. Levy said he's unsure of how to get positive results from the Council.

Talking about future Council Meetings, Member Devlin said conditions probably won't change in the near future. May will be another webinar and he's unsure about June.

Member Anders acknowledged Member Devlin's skill in running a meeting under difficult circumstances.

Chair Devlin adjourned the meeting at 12:26 p.m.

Approved May 13, 2020

/c/ Bo Downen

Vice Chair