Northwest Power and Conservation Council
Minutes of March 9-10, 2021 Council Meeting

Council Chair Richard Devlin brought the meeting to order at 8:33 a.m. Council Members Jeffery Allen, Bo Downen, Ted Ferrioli, Doug Grob, Guy Norman, Patrick Oshie and Jim Yost joined by phone. The meeting was held as a webinar. The next Council Meeting is scheduled for April 6-7, 2021 and will also be by webinar.

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

Fish and Wildlife Committee

Fish and Wildlife Committee Chair Allen reported the committee met Monday and Tuesday. Monday was a performance indicator workshop, the first of four to be held every two months. They had 56 attendees. There were three takeaways:

1. Gathering, tracking, and reporting the data is complex, and they need the whole region's help.
2. Reached an agreement on strategies and indicators.
3. Settled on workgroup structure.

The committee heard a presentation from Maureen Hess, fish and wildlife program analyst, on Columbia River Basin salmon and steelhead hatchery programs located above Bonneville Dam. The entire Columbia Basin has 140 million hatchery smolts annually, versus 1.6 billion from Japan and 1.5 billion from Alaska. The need for long-term asset management and increased operation and maintenance funding for Columbia hatcheries is already well known and was discussed further.

The committee heard a presentation from BPA's Crystal Ball and Scott Donahue with assistance from staff on the Budget Oversight Group (BOG), its history and progress. It was a good overview of the tool.

Power Committee

Chair Pat Oshie said the committee met and discussed three items and the Power Plan schedule.

First was a presentation by John Ollis, planning and analysis manager, on the Power Plan Needs Assessment. The region has significant needs in the Action Plan timeframe. Most of the need occurs in the winter, which is not unexpected. The Northwest is

primarily a winter-peaking system. The market has low-priced power every season of the year, and the Northwest hydrosystem has demonstrated it can utilize these low-cost power opportunities. Conservation helps address adequacy issues. Member Oshie said it's a bit of a surprise that inside the region, no additional generating resources seem to be needed, according to the early modeling. Outside the region, thermal plant retirements will drive the acquisition of additional resources. Looking at a market availability analysis, the modeling shows we will likely be importing power from the WECC in the early years and exporting outside the region by 2027. This could create some transmission congestion at critical nodes.

Looking at resource pricing, there's an expectation that the Mid-C will follow the California duck curve with very low, middle-of-the-day pricing.

Looking at resource adequacy, staff presented a mixed message, and pointed out that more work needs to be done. In 2023, the loss of load probability goes to 32%, and in 2025 it is forecasted to be at 27%. Staff is looking hard to see if there are forecast errors. However, in 2027, the LOLP dips down to 1%, and in 2031, it's at 3%; these results are very preliminary.

Looking at associated system capacity contributions, Ollis said early modeling shows that energy efficiency can eliminate peak resource needs during the winter. Spring peaks tend to be more difficult to eliminate, but energy-limited resources such as batteries, hydropower, pumped storage, and thermal resources tend to be most effective. Summer peaks can be difficult to eliminate, but energy-limited resources, energy efficiency and Gorge wind seem most effective. In the fall, all nonsolar resources address peaks effectively. This work is not final and is not to be considered by anyone to be conclusive.

The staff also presented on the system integration forum on equity that the Council staff hosted on February 19. The advisory committee members requested that the Council investigate matters of diversity, equity, and inclusion within the power plan process. This forum encouraged people to be involved to share what they see happening elsewhere in the region. The attendance at the forum was high - 130 people representing regional utilities, advocates, environmental consumer advocates, national labs, and state agencies throughout the region. Later in the spring, a report will be completed by the consultants who facilitated by the system integration forum.

Finally, Power Division director Ben Kujala presented a rates analysis from the Regional Portfolio Model (RPM) output. Bills are likely to be lower because extremely low market prices outside the region are reducing costs to serve load inside the region. Fuel costs

in the RPM are much lower than fuel costs reported by utilities in 2018, given the amount of renewable resources built that have no fuel costs. Further, population growth outpaces cost growth and also reductions in energy-efficiency spending by utilities, resulting in decreasing costs.

The Power Plan timeline is still on target for a draft by early summer.

Public Affairs Committee

There was no Public Affairs Committee report. Chair Devlin announced this is Member Ferrioli's last Council Meeting.

1. **Briefing on ocean observations and outlooks for salmon returns: Brian Burke, NOAA**

Mark Fritsch, program review and implementation manager, introduced Brian Burke, National Oceanic and Atmospheric Administration (NOAA). Burke said ocean conditions have not been great and will get worse with climate change impacts. He listed different types of ocean indicators and described the Pacific Decadal Oscillation (PDO). Right now, we are in a negative PDO pattern. It tends to be a time when salmon does well. Another indicator is El Niño. It comes from the Equator and is warmer than average. Colder than average is La Niña, which is what we're in now. Colder temperatures equate to improved salmon survival. Northeastern Pacific marine heatwaves are increasing. The Blob lasted a long time, from 2014-2016. It was bad because it came right up to shore. We experienced shorter warming waves in 2019 and 2020. We're expecting another marine heatwave this year. PH changes in the ocean are troubling. Those are especially bad for crab. Biological responses to changes include range expansion, a lack of food and an increase in disease.

Burke listed three monitoring and research projects:

1. Newport Hydrographic Line and Northern California Current Survey.
2. Juvenile Salmon and Ocean Ecosystem Survey (JSOES). Funded by BPA.
3. SOBaD (salmon ocean behavior and distribution). It tags salmon to track juvenile and adult fish through their environment and pair their movement with environmental conditions.

Copepod biomass was high this summer, which is an important factor in salmon survival. The Northern copepod are like cheeseburgers for salmon. Southern copepod are more like celery.

The catch per unit effort (CPUE) was below average for Chinook for 2020. Burke showed an ocean condition indicator stoplight chart with a mix of positive and negative signals.

Predation on juvenile salmon remains a large data gap. Burke discussed the problem of avian predators coming from New Zealand, and pinnipeds and dogfish.

Burke said early in their research, they determined salmon have stock-specific behavior and go to certain places. Showed a stock-specific stoplight chart for spring Chinook, fall Chinook and Coho. They put the information into a forecasting model. One-step ahead predictions are 48k spring chinook in 2021 forecasted. None of the forecasts are good for spring Chinook.

Burke discussed life cycle models and climate change effects. He said populations quickly declined in climate change scenarios, and there is sensitivity in different life stages. He said this isn't a problem down the road, it's something happening now.

He listed action items and said it's time to ramp up our efforts. We need data and models to inform us of what's happening in the oceans. His conclusions are:

- We saw both good and bad signals in ocean conditions.
- Carryover effects from the river and estuary represent important management levers. Said he was unsure of which levers to prioritize.
- Now is the time to ramp up recovery efforts and identify additional management actions.

Member Norman said although ocean conditions are sobering, it's always encouraging to hear that there are things we can do to make a difference for the smolts heading into the ocean. He asked about the connection between ocean conditions, project monitoring and program effectiveness. What's the success of what we're doing?

Burke said there are carryover effects and the impact varies year to year. Some data is showing when fish are in the estuary and growing, and they tend to survive better in the ocean. That's not true every year. It depends on ocean conditions and predators. Some years, the work in freshwater has an impact, sometimes it doesn't.

Member Norman said, looking at the slide showing marine heat in 2021, made me think about our North Pacific partners' stocks. Any indication of what's happening over there and the relationship with their management and stock returns? Is there a dialogue on these ocean conditions? Burke replied, yes, in the science community, there are. These

conditions aren't limited to the Columbia Basin. Look at the Frasier. We're not as involved in that part of it. Solutions will have to be bigger and bolder than looking at one stock or life stage.

Member Allen said we recommended that a predation study be done. What kind of work could be funded? Burke said we know how many avian predators there are, but no idea what they're eating. Whether birds are something we should pay attention to, we don't know. An avian survey would help us know the major players. It's difficult to provide management advice without specific data. We manage mammals in the river and the ocean. We just don't manage them for salmon survival.

Member Grob wondered if there's any place where you have an unfettered river where one can see how an undisturbed river performs. Burke said there are comparisons we can make, none as pristine as you'd like. The Frasier is one. As we work our way up the coastline, there are more pristine rivers. We know a lot about larger picture patterns and trends. A lot of people see declines in populations. In Bristol Bay, sockeye are doing well. The Frasier River used to have 20 million sockeye return. This year, more returned to the Columbia than the Frasier. There's no context as to why. Hardly any are doing well. It points to the importance and sensitivity to the ocean stage.

Patty O'Toole said the Council hosts an ocean science management forum to promote dialogue on how this information can be used. They plan to host one toward the end of this year. It's a good forum for exchanging information collected through our programs.

2. Briefing on Columbia River Basin salmon and steelhead returns for 2020 and run forecasts for 2021

Mark Fritsch of the Council fish and wildlife division staff introduced Tim Sippel, Charlene Hurst, Washington Department of Fish and Wildlife; Art Martin, Oregon Department of Fish and Wildlife; and Chris Sullivan, Idaho Department of Fish Game.

Sippel described the U.S. v Oregon Technical Advisory Committee:

- It consists of staff from federal, tribal, and state entities.
- TAC 'reconstructs' Columbia River salmon and steelhead returns post-season and develops preseason forecasts.
- TAC reviews salmon and steelhead stock status as the runs progress and provides in-season run size updates.
- In-season updates allow fishery managers to adjust fisheries to remain within ESA limits/management guidelines.

Sippel shared 2020 returns and 2021 forecasts for the Columbia River. He discussed swings in abundance. They use Bonneville data and harvest data from fisheries.

For total spring Chinook, Sippel said, they are predicting returns of about 170,000 fish where they saw 156,000 fish last year. For summer Chinook, the 2021 forecast is 77,600, and the actual last year was 65,494. Total fall Chinook is predicted to be 580,800, and the returns in 2020 were 577,400.

He said sockeye forecasts are below last year's and below 5 to 10-year averages at 155,600. It's been tough to predict this species, he said. Returns have been very volatile. Recent returns have been historically high. In 2020 there were 342,302.

With coho, they look at ocean stocks. They don't have a forecast and returns figure for the Columbia River. That's being worked out now. He said the forecasts have raised some eyebrows.

Looking at steelhead, they're also challenging to forecast, he said. The A index steelhead are headed for the Upper Columbia. They predict 89,200 in 2021, and saw 75,392 in 2020. B index steelhead are headed to Snake River. They predict 7,600 in 2021, and saw 32,199 in 2020.

Sippel presented a review of numbers from non-Indian mainstem sport fisheries, non-Indian commercial fisheries, and Treaty Indian fisheries.

Sippel added some conclusions:

- 2020 Upriver Spring Chinook return was third lowest since 1999 (2019 was second lowest)
    - 2021 forecast would be third lowest
- Upriver summer steelhead returns were mixed
    - Poor A-index due to very few 1-salt fish returning
    - B-index returned much higher than forecast and provided unexpected fishing opportunities
- Several other salmon stocks returns were much stronger than predicted
    - Likely a response to improving environmental conditions
    - Upper Columbia summer Chinook, Columbia River coho, and most fall Chinook stocks, including Lower River Hatchery, Pool Upriver Bright and Upriver Brights.

Chris Sullivan, Idaho Department of Fish and Game, presented returns and forecasts for the Snake River. He said there were some bright spots and not-so-bright spots. Looking at natural origin spring/summer Chinook, he said the numbers have come out of a trough. For hatchery-origin spring/summer Chinook, the situation is concerning. There have been very limited fisheries for the past few years and this coming year. It's been challenging to meet their group stock needs. They're expecting a similar situation to last year. Hatchery and natural origin numbers track each other.

When we're on the decline, we tend to over forecast. When we're abundant, we tend to under forecast. Hopefully, these are lower forecasts than what we might experience this next year.

He summarized the information as follows:

Spring/summer Chinook:
Natural-Origin forecast for 2021 is 8,150, versus returns of 8,565 in 2020.
Hatchery-Origin forecast for 2021 is 18,783, versus returns of 21,564 in 2020.

Fall Chinook:
Natural-origin fall Chinook is somewhat of a success story. Increased returns have led to successful fall fisheries. For hatchery-origin fall Chinook, Sullivan recognized the help of the Nez Perce Tribe. This population has been wildly successful. There have been robust fishery opportunities. Idaho Power has helped with fish releases.

Natural-origin forecast for 2021 is 7,210, versus returns of 8,068 in 2020.
Hatchery-origin forecast for 2021 is 17,500, versus returns of 19,254 in 2020.

Summer steelhead:
Natural origin summer steelhead climbed out of the trough in 2020.
Hatchery origin summer steelhead is notoriously difficult to forecast. They had to implement restrictions on fisheries and probably will have to do so this year.

Natural-origin forecast for 2021 is 14,450, versus returns of 15,252 in 2020.
Hatchery-origin forecast for 2021 is 35,470, versus returns of 41,291 in 2020.

Sockeye:
Natural origin sockeye is hopefully moving in the right direction.
Hatchery origin sockeye's 2021 forecast is twice what we saw in 2020. There are challenges at the hatchery. The Snake River survival working group is working to evaluate ways to improve the returns.

The Natural-origin forecast for 2021 is 189, versus returns of 197 in 2020.
Hatchery-origin forecast for 2021 is 274, versus returns of 134 in 2020.

Member Allen thanked the presenters. He said it's easy to make the mistake that this is a recovery program, and we all are working towards that. But I appreciate your showing us how our efforts impact mitigation.

Member Norman recalled when he was a member of the TAC. He understands how forecasts are derived from databases and brood-specific relationships. Is there coordination with ocean survival information? Sullivan replied the ocean is a piece of the puzzle we consider. We try to work ocean indicators into our models. While we can get good information, the sibling regressions are the best models over time for predicting fish returns.

Sippel described how forecasts are developed through different processes. There's interest in incorporating ocean information from NOAA.

3. Robustness of EE Scenario Full Council Summary

Power Division director Ben Kujala shared the results of a model study that looked at the future impact of energy efficiency on system capacity if there is a large amount of cheap renewable generation available. "We are in a different place on what models are showing us relative to the past," he said.

The Seventh Plan forecasted 1,400 aMW in conservation by the end of 2021. Now, conservation purchases in 2027 are forecasted to be 550 aMW. Near-term adequacy needs drive early energy efficiency purchases, which start to fall off as the system meets the adequacy criteria.

To test the robustness of energy efficiency, they tested the sensitivity of the regional resource acquisition cost and risk to the varying amounts of energy efficiency available.

They changed the ramp rates assumption to reflect increased/decreased acquisition due to:

- Changes in energy efficiency budgets due to unforeseen policies;
- Uncertainty in impacts; and
- An increase/decrease in the maximum acquisition over 20 years to reflect possible new technologies or slowdowns.

Some of the questions they asked include:

- What is the total system cost?
- How much energy efficiency is acquired?
- Does it increase or decrease adequacy?
- What are the impacts on greenhouse gas (GHG) emissions?

Staff conducted an energy efficiency ramping test, a bin test, a negative-cost energy efficiency only test, and GHG testing. The GHG testing represents two questions: What happens when the social cost of carbon (SCC) is excluded? What if you cannot build new natural gas generation? Kujala said energy efficiency is less responsive to SCC change in the near-term with updated adequacy information. There is a surprisingly minimal amount of GHG emissions reduction by eliminating new gas-fired generation.

The biggest change in system costs was when they looked at extremely high adequacy needs. It also showed the biggest increase in energy efficiency acquisition, and also increased the builds for all other resource types.

Additional system costs are extremely low, basically about $2 to $3 billion in 2016 fixed annual payments. Our region spent about $14.7 billion in 2018 on the electric system. Some of the costs that are in that $14.7 billion are captured in this kind of incremental $2 to $3 billion cost numbers. It's not a minimal percentage, but it's not a huge percentage of additional cost into our system.

The amount of energy efficiency acquired is surprisingly sensitive to how the supply curves are assigned in the bins and how quickly those bins ramp. Adequacy needs seem to be the one thing that can really drive the higher energy efficiency acquisition.

He said, looking at the model, if energy efficiency and every other resource are driven by a higher adequacy need, I don't know that says energy efficiency is necessarily the first strategy that's used to reduce system cost. It's just one of many tools that need to be brought to bear.

Vice-Chair Downen asked if this a stress test for energy efficiency. There seem to be a lot of caveats. You noted we need to do more work in this area as to what eventually gets rolled into the Power Plan as an energy efficiency marker.

Kujala replied that's fair. Maybe the easiest things that come out of a test like this is where it doesn't make as big a difference as one might expect. If we look at faster ramps, we acquired more energy efficiency, and that makes sense. But here's a little

more nuance about what that means — It means system cost goes up, and there are different results in terms of adequacy. The capacity contribution does have an impact, and we saw in terms of other resources, but it doesn't seem to have a huge impact on the amount of energy efficiency that comes out. And so, if your thesis is that an increased capacity contribution would change the energy efficiency result, that's something that we've tested and didn't see support. It's helping us blend some strategies together to understand what is a good resource strategy for the region. It also helps us eliminate some things that people think would have a big impact, but don't necessarily.

Chair Devlin asked, why do you consider our results so far as preliminary? We have had some very adverse reactions from the outside world, given what we projected might be the need for energy efficiency in the coming plan.

Kujala replied they put this together to have a comparison. People want to see this as a forecast from the Council on the future. I don't want to represent it that way. This is a way that the system works when you have a really large build of renewables outside of our region to keep the entire Western grid adequate. So you have to believe that all the utilities will work towards this larger build of renewables, and the strategy for replacing retiring plants is the overbuild of renewables. Then you have to look at the social cost of carbon, which is driving some results. This is a good representation of what we're asking. But it's not necessarily the most likely future. We're trying to say, given these assumptions, these are the results we see.

Chair Devlin observed that we're looking from a regional basis. Looking from the view of the BPA, which may not be in the position of being able to build new resources, if we consider a low water year and maybe even lower in the 2030s, when BPA can't meet the needs of preferred customers, it has to go to market. If it could develop 300 or 400 megawatts of energy efficiency in the next nine or 10 years, that might be preferable to going to market to meet peak loads when the cost might exceed energy efficiency. It could vary by utility.

Kujala replied, yes, it would vary. BPA is unique. It's easier to look at other utilities. It depends on what your goals are. We're trying to come to a regional resource strategy to put their individual strategies into context. The Council's former Power Division director Tom Eckman called it the happy family strategy.

Chair Devlin referred to the slide showing no new gas generation. Unless I misunderstand, we're looking at additions to the generating system, but we're assuming that is gas, what we have is substantial. So it's logical there would be modest reductions

in emissions. It's logical as we look at the market.

Kujala said we have a very low market price that gets oversupplied as time goes on. The dispatch of natural gas resources gets lower and lower. The more-efficient gas plants will be run all the time, whereas less-efficient ones won't be used as much. In our model, we assume all the resources stay in the mix.

Member Grob said most utilities have acquired energy efficiency in the past and have an energy efficiency department. The low-hanging fruit is gone. Does it make sense for them to get it more aggressively to address near-term reliability issues? I'd hate to see them dissolve the effort they've made.

Kujala replied that the region's utilities have invested heavily in energy efficiency, and there's a lot of infrastructures to support it. The Council has tried to demonstrate all the values we get from that. These model results are contrary, but they're model results. This is a critical question we have to be careful about how we approach. We're going to have more scenarios. We're going to do more work. There might be futures with higher load growth that paints a different picture. But there will be an issue of taking policy implications into consideration in addition to the models. There are a lot of utilities with programs and a lot of investment in them and unwinding that could present some challenges down the road. Blending together model results with legitimate and very important considerations is something that we're going to be balancing going forward.

4. State of the Region's EE Programs: Successes and Challenges of Adapting to COVID

Tina Jayaweera, power planning resources manager, introduced the panel: Corey Corbett, Puget Sound Energy; Ryan Finesilver, Avista; Dave Moody, Bonneville Power Administration; Ross Holter, Flathead Electric; Jennifer Finnigan, Seattle City Light, and Koral Miller, Mason PUD 3.

Puget Sound Energy – Corey Corbett provided an overview of Puget Sound Energy's service area and customer count, and then discussed the impacts of COVID on their programs. Corbett said he's seen a hike in building material and raw material costs, such as insulation, heat pump water heaters and steel. Almost 20 percent of restaurant businesses have closed, which has impacted PSE's dedicated food service program. Small business closures and variable operating hours have impacted customer decisions to purchase new energy-efficient equipment.

In the field, home visit programs shifted to self-install programs, and the refrigerator recycling program moved to a curbside pickup. The commercial and industrial programs turned to picture-based or video-based audits.

He described the implementation of safety protocols for PSE's workers, pivoting to having staff work from home and protecting essential workers in the field.

There were also impacts to PSE's ability to conduct whole-building analyses. PSE uses whole-building data to quantify savings. They have a couple of options for strategic energy management as well as pay-for-performance programs and others that use needed data. They have over 1,000 buildings that participate in the program, including school districts, commercial property management, retail, and municipal customers. COVID affected matters such as industrial production rates and occupancy and other aspects of commercial building use, all requiring non-routine adjustments in the analyses. About 50% of the savings could be lost due to some of those baseline adjustments.

Avista – Ryan Finesilver reported that Avista's experience was similar to PSE's. In 2020, they implemented their COVID emergency response program in stages. They've been in the critical stage since mid-March. There's been no nonessential travel, and everyone is working from home.

He said that between Washington and Idaho, the utility planned for 63,000 MWh of conservation. In Washington, they achieved about 60% of their overall targets. In Idaho, they reached 93% of our target. They had the most significant shortfall in site-specific programs and prescriptive lighting.

Avista's multifamily program to install energy-efficient equipment was hurt by the pandemic. We did some leave-behinds with property managers, but it didn't go well, he said. Going forward, they plan to have an implementer present while maintaining social distancing. They're using Zoom to meet virtually with customers.

Avista has also started using on-demand kits. They are looking forward to 2021 to focus on relationships. April and May will tell us if we've improved, he said. They have a business partner program to engage more with contractors and vendors, and they hope to get back to their direct-install program.

BPA – Dave Moody reported that efficiency has already become harder to acquire as they transition away from lighting programs. Bonneville has experienced significant delays in commercial projects and residential activity. Anything that requires a

contractor to go into a person has encountered quite a lot of resistance. The result is a reluctance of businesses wanting to invest in conservation. Not having experts on the premises will affect us for years to come, he said.

He said there had been a lot of good work in commercial HVAC. Bonneville provides incentives for commercial sectors. There's considerable interest in managing ventilation and managing systems to address potential virus transmission.

There have been uneven impacts across BPA's customer base. Tri-Cities was hit very hard by COVID early on. They've had a tougher time recovering than customers in Idaho.

An unexpected innovation is photo verification of direct installs. Instead of having someone on-site to install light bulbs and showerheads, they're having customers take pictures of those installations. There is continued uncertainty, but he's confident it will get better.

Flathead Electric – Ross Holter said Flathead has 70,000 members and is growing rapidly. There was very little energy efficiency until 1998. The was a spike in 2002 and 2003 for industrial projects. There was another spike in 2011 with BPA-funded programs. Flathead does not use self-funding. Now energy efficiency is tougher to get as the proverbial low-hanging fruit is harvested. Lighting is already efficient. During COVID, they stopped doing on-site energy conservation audits, but are starting to do them again. Energy efficiency will just continue to be harder and more costly to get, he said. There will always be an emphasis on it, our customers want it, but it's hard to see where the technology goes in greater efficiency.

Seattle City Light – Jennifer Finnegan discussed the utility's territory and customer numbers. Last year, they had an incentive budget for conservation of about $12 million. They have a staff of 40. Finnegan said they were proud to achieve 93% of their conservation target last year despite hiring and budget freezes. A lot of staff moved to other projects in response to COVID. For 2021, they are streamlining offerings to customers and doing more contractor outreach. They are increasing investment into electrification and technology, and are applying an equity lens to all decisions. They committed not to raise rates this year so that they will be doing this without more money.

Mason PUD 3 – Koral Miller reported that the Shelton-based utility has a free wi-fi program for the underserved. It has helped improve high-speed internet service for students, but anyone can use the hot spots. They are educating customers about

energy tracking apps, which has helped decrease call volume. They also inform customers about solar energy and help them interconnect to the grid. Comparing 2018 with 2020 shows a significant reduction in project spending and kilowatt-hours saved. We need to take a hard look at what savings will be feasible going forward, she said.

Member Ferrioli to leave the Council

Chair Devlin said Member Ferrioli's service has come to an end at the Council. Devlin noted that they've always gotten along well, even when Member Ferrioli was the Oregon Senate Republican leader and he was the Democratic leader.

Member Ferrioli thanked Oregon Governor Kate Brown for the opportunity to serve on the Council. He thanked Oregon's office staff, Karl Weist and Leann Bleakney, and thanked Member Norman for his Fish and Wildlife Committee leadership and their work on the Program Addendum. He praised his fellow Council Members and offered a number of policy suggestions for the Council.

Members Oshie, Grob, Norman, Yost, Allen and Downen praised Ferrioli's knowledge and contributions.

Council Business

Council approval of the February 2021 Council Meeting minutes

Member Downen moved that the Council approve for the signature of the Vice-Chair the minutes of the February 10, 2021, Council Meeting held in Portland, Oregon via webinar, as presented by staff.

Member Oshie second.
Motion carried.

Draft Annual BPA Fish and Wildlife Cost Report

Member Downen moved that the Council release the draft Report to the Northwest Governors on Bonneville's Fish and Wildlife Costs for Fiscal Year 2020 for a public comment period extending through April 9, 2021, as presented by staff.

John Harrison of the Council's Public Affairs division presented the draft report.

Member Ferrioli second.
Motion passed.

Contract with PSR Soluções e Consultoria em Energia Ltda (PSR)

Member Downen moved that the Council authorize staff to contract with PSR for cloud computing support services in an amount not to exceed $100,000 to support the continued execution of the redeveloped GENESYS model for use in the 2021 Power Plan, as presented by staff.

John Ollis of the Power staff explained the need for the continued services of PSR.

Member Yost second.
Motion passed.

Amendment to Contract C2021-03 with Systematic Solutions, Inc.

Member Downen moved that the Council authorize staff to amend Contract C2021-03 with Systematic Solutions, Inc. to add additional tasks to further enhance the Energy 2020 model in support of the 2021 Power Plan scenario analysis and add $18,164 to the budget for a total amended contract budget not to exceed $85,356, as presented by staff.

Steve Simmons, Power Division staff, explained the need for the contract amendment and additional services.

Member Norman second.
Motion passed.

Amendment to Contract C2021-53 with Kearns & West, Inc.

Member Downen moved that the Council authorize staff to amend Contract C2021-53 with Kearns & West, Inc. to extend the contract term and their facilitation services through June 30, 2021, and add $25,000 to the budget for a total amended contract

budget not to exceed $50,000, as presented by staff.

Andrea Goodwin, senior counsel, explained the need for the amended contract and additional services.

Member Oshie second.
Motion passed.

Public Comment

Jim Waddell – civil engineer and PUD commissioner. Thanked Council for the work they do for ratepayers. If we listen to what the models are telling us, it's indicative of a system in significant change. Look at some scenarios where we look at the costs of assets. When prices get so low, there's a shift to renewables.

Scott Levy – with bluefish.org. He appreciated Waddell's remark about stranded assets and would apply that to the Lower Snake River Dams. He talked about a graph and how to replace the retired megawatts.

Liam Doucet talked about the need to breach the Lower Snake River Dams and the costs and environmental impacts of retaining them. He talked about communities that rely on the endangered salmon BPA has spent billions on recovery. The dams need to be breached now to save money, save power, save salmon, and reduce emissions.

Nina Sarmiento – from Port Angeles, Washington. She talked about endangered salmon and orca. Council has taken zero leadership to save these species. The solution is to breach the Lower Snake River Dams this year as a least-cost salmon recovery method. Hatcheries harm native species. Extinction will be on your shoulders, she said.

Chair Devlin adjourned the meeting at 2:09 p.m.