Northwest Power and Conservation Council
Meeting Summary
November 17, 2021
Portland, Oregon – Webinar

Council Chair Guy Norman brought the meeting to order at 8:30 a.m. Council Members Jeffery Allen, Doug Grob, Ginny Burdick, Patrick Oshie, Jim Yost, Chuck Sams, and Mike Milburn joined the webinar. The next Council Meeting is scheduled for December 15, 2021.

Chair Norman began the meeting by welcoming new Council Member Ginny Burdick of Oregon highlighting her experience in journalism, energy policy, and public service. Member Burdick thanked the Council and expressed that she is looking forward to participating in this orderly process of determining energy and fish policy for the region.

Reports from Committees

Fish and Wildlife Committee

Member Allen, Fish and Wildlife Committee Chair, reported on the Fish and Wildlife Committee Meetings held on November 16, 2021.

1. The Phase 2 Implementation Plan: Testing Feasibility of Reintroduced Salmon in the Upper Columbia River Basin

Technical representatives from the Upper Columbia United Tribes (UCUT) gave a presentation on the ongoing work aimed at the reintroduction of anadromous fish in the Upper Columbia River Basin. UCUT's Phase 2 Reintroduction will take place over a period of 20+ years and will cost $176 million (~$8.5 million per year). The plan proposes a number of pilot projects to introduce the potential of restoring salmon runs above Chief Joseph and Grand Coulee Dams, as well as some small hydroelectric projects on the Spokane River. The plan includes nursery operations, trap-and-haul efforts, temporary passage structures, passive integrated transponder (PIT) tagging, genetic studies, securing broodstock, and the supporting infrastructure and facilities that are required. They will use adaptive management in monitoring migration and real-time studies on passage, juvenile and adult survivability, and adult return spawners. UCUT has raised $1.2 million in funding from a variety of sources to begin this effort, and they are seeking more funding in order to move forward. The Council will consider aspects of this effort including potential funding and work with other agencies that will have an important role in the implementation of the plan.

2. Staff Report on Status of Program Priorities

Fish and Wildlife Division Director Patty O'Toole provided an update on the progress made in implementing the Council's Fish and Wildlife Program priorities as defined in the 2014

Fish and Wildlife Program and its 2020 Addendum. O'Toole reviewed 10 priorities called out for particular attention in the Program and discussed the accomplishments over the last 7 years. Asset management was identified as a key priority for fish managers. Since this determination was made, $2.8 million has been directed toward maintaining existing infrastructure including hatcheries and screens. Staff reviewed their efforts in working with the Columbia River Inter-Tribal Fish Commission (CRITFC) to mitigate avian predation and blocked passage areas. Member Allen was encouraged to note that a lot of great work has been done using cost savings in this era of flatline budgeting. He commended the staff on their diligence in opportunistically finding ways to fund these efforts and get them off the ground.

Power Committee

Member Oshie, Power Committee Chair, reported on the Power Committee Meeting held on November 16, 2021.

Council staff gave an overview of the online traffic they're seeing since the draft 2021 NW Power Plan was posted. The subjects that are getting the most attention are the basic assumptions used in the Plan and conservation methodologies. The committee also reviewed the public comments and responses for the draft Power Plan since its release. Member Oshie addressed subject matters that have raised concern in the region, particularly concerns about resource adequacy. He mentioned that there is growing public concern about whether the Plan truly represents the resource adequacy risk to the region caused by the eventual retirement of thermal facilities, but that this is largely a misunderstanding. Member Oshie stressed that the Plan is calling for a number of new resources to ensure reliability. The Plan recommends 3,500 aMW of new generators, a significant about of energy efficiency (between 750 and 1,000 aMW), and demand response. The Power Committee will continue to analyze the risk of reliability problems and report to the Council and to the public as the work moves forward.

Member Oshie also addressed the public concern over the lack of energy storage in the draft Plan. He explained that the Plan recommends strategies both for the Northwest region and the entire WECC region which includes the Northwest. For the WECC region, the Plan does recommend thousands of additional aMW of storage including solar battery installations, pump storage installations, and standalone battery facilities. He said that the Plan does not call for a major buildout of storage facilities in the Northwest region because the hydro system already has the capability to cost effectively provide flexibility to the system through peak events. Currently for the Northwest region, it is not cost-effective to build storage facilities, but it may be in the future.

Member Oshie provided highlights from the State of Utilities Annual Report. The region continues to recover from economic slowdown resulting from Covid-19 mitigation strategies implemented. Regional employment dipped significantly for the low-income employees.

Regional temperatures continue to break records. Regional demand for electricity and natural gas were reduced significantly. The region continues to produce more goods and services with reduced natural gas and electricity consumption. The region continues to have low electric and natural gas bills. Growth in Summer peaks continue to outpace winter peaks. The heat-dome experienced in June 2021 caused large number of fatalities for humans, marine life, and damage in other eco-systems. June peak demand increased by 4,500 MW from a historic average of about 28,000 MW.

Member Oshie also provided highlights from the Natural Gas Price Update report. Prices have been volatile since the summer going from $2.75 per MMBtu in mid-June of this year all the way up to $6.00 in October before leveling off. Gas prices can rise or fall based on supply and demand fundamentals, or even just the perception of fundamentals. In the near-term, these fundamentals include pre-winter storage levels, production outlooks, and demand and weather forecasts. Member Oshie said it appears that gas prices will come back down to around the $3.00 range by the spring of 2022.

Fish and Wildlife and Power Committee meeting materials for November 2021 can be found here: https://www.nwcouncil.org/meeting/council-meeting-november-16-2021

Election of Council Interim Vice-Chair

With the departure of Richard Devlin, and Member Norman assuming Chair responsibilities, the Council took a moment to formally take nominations for Interim Vice-Chair. Member Oshie nominated Member Doug Grob of Montana to serve as Vice-Chair.

Motion to nominate Council Member Doug Grob from Montana as Interim Vice-Chair

Chair Norman moved that the Council nominate Council Member Doug Grob from Montana as Interim Vice-Chair.

Member Sams seconded.

Discussion – Member Oshie emphasized Member Grob's qualifications for the position of Vice-Chair. Member Grob has a history of serving in key leadership roles, he understands well the Council's governance process, and he's served as the Co-Chair of the Public Affairs Committee.

Voice vote – all in favor, none opposed.
Motion was approved.

Council Meeting Agenda Items

1. Discussion with Tribal Policy Representatives from the Upper Columbia United Tribes (UCUT)

Policy representatives from the Coeur d'Alene, Colville, Kalispel, Kootenai, and Spokane tribes addressed the Council to discuss their approach to The Phase 2 Implementation Plan: Testing Viability of Reintroduced Salmon in the Upper Columbia River Basin. Tom Biladeau, a Habitat Restoration Biologist with the Coeur d'Alene Tribe provided introductory slides noting that the plan is "a stepwise and scientifically adaptive approach to test the feasibility of restoring salmon to the Upper Columbia River basin that is focused on collaboration, cost effectiveness, and benefits for the entire region." The plan does not advocate for changes to power, risk management, or specific operations of the dams. The plan calls for utilizing interim, small scale upstream and downstream passage projects at the 5 hydroelectric facilities within the U.S. portion of the blocked areas. These projects should increase natural and hatchery-origin salmon throughout the Columbia River system leading to more fish available for harvest throughout the basin and at ocean fisheries. They believe that since salmon is a keystone species, their reintroduction will bring nutrients back into areas that haven't had them in over 100 years. In addition, they stated that reintroduction would bring health and economic benefits to all communities in the Upper Columbia Region, add resiliency to climate change, and would be a step toward restoring the cultural and spiritual heritage for the Upper Columbia River tribes. The UCUT Tribes believe this approach is aligned with the Council's Fish and Wildlife Program and they want to work collaboratively with the Council to move this work forward.

Caj Matheson, Natural Resources Director for the Coeur d'Alene Tribe requested that the Council work with the members of the Upper Columbia United Tribes (UCUT) to take the next steps forward to reintroduce anadromous fish to the blocked areas above Chief Joseph and Grand Coulee Dams. A request that the Council help identify funds to implement the long-term vision was advanced by Joe Maroney, Director of Fishery and Water Resources for the Kalispel Tribe of Indians. Jarred-Michael Erickson, Coville Business Council Member and Fisheries Committee Chair asked that the Council aid in the identification of rearing space and donor stocks. He also reiterated that UCUT isn't just doing this work to benefit just the Upper Columbia River Tribes, they're doing it for everyone in the entire system, and that much of the funding to date has come from tribal funds. Sue Ireland, Fish and Wildlife Department Director for the Kootenai Tribe of Idaho encouraged collaboration and requested that the Council engage in outreach efforts as well as participate in regional discussions to advance this important work. Finally, Honorable Chairwoman Carol Evans of the Spokane Tribal Business Council closed the presentation speaking about what the loss of the salmon over generations has meant to UCUT tribes. She said that if the Council supports UCUT in these efforts, it will help them garner support from other entities in the region. Chairwoman Evans noted that the solution for salmon and the whole Columbia River system must be approached holistically.

Member Sams thanked the UCUT representatives and commented that the Implementation Plan is a great example of the progress being made toward the Council Fish and Wildlife Program's priorities such as the need to investigate mitigation options. He said he hopes the Council will continue to support these scientific and collaborative efforts to help tribes return home the salmon that have been gone for so long, so they can be back in their homelands and be part of the ecosystem. He applauded UCUT for their collaborative approach.

Member Oshie commented that he appreciates the scientific, collaborative approach developed and implemented by UCUT, and that it leaves no doubt that they're being thorough in asking and answering the questions being raised. He said that he looks forward to seeing this group and others more often, and that the presentation highlighted that continued communication between UCUT, the Council, and other entities within the basin will lead to eventual success.

Member Grob added that he appreciates the dedication and passion of the people doing this work and hopes the Implementation Plan will be successful.

Chair Norman expressed appreciation for all of the presenters and acknowledged the great collaborative work done over the past few years. He said that with the implementation of this plan, he can see a direct connection to the 2014 Program and the 2020 Addendum. He suggested it would be good for the Council and UCUT to connect with relevant forums to work through how the Implementation Plan will move forward. The Council's next step is to continue communication with Bonneville. He thinks it would be useful to have an agenda item in a near future Council meeting with the blocked area anadromous fish working group, particularly with the federal agencies, to continue moving this plan forward.

Presentation materials are posted with this summary here:
https://www.nwcouncil.org/sites/default/files/2021_11_1.pdf

2. Cyber Security at Utilities and in Infrastructure

Joe Frohlich from the Cybersecurity and Infrastructure Security Agency (CISA), and primary Cyber Security Advisor (CSA) for the state of Montana gave a presentation on cybersecurity threats and the services of the CISA. The CISA Cybersecurity Advisor program promotes cyber resilience through various engagements and performing risk and resilience-based assessments. CISA works with public and private partners to defend against today's threats and build more secure and resilient infrastructure for the future.

Cyberspace and its underlying infrastructure are vulnerable to a wide range of risks stemming from both physical and cyber threats and hazards. Sophisticated cyber actors

and nation-states exploit vulnerabilities to steal information and money and are developing capabilities to disrupt, destroy, or threaten the delivery of essential services. Cyberspace is particularly difficult to secure due to a number of factors: the ability of malicious actors to operate from anywhere in the world, the linkages between cyberspace and physical systems, and the difficulty of reducing vulnerabilities and consequences in complex cyber networks. Of growing concern is the cyber threat to critical infrastructure, which is increasingly subject to sophisticated cyber intrusions that pose new risks. As information technology becomes increasingly integrated with physical infrastructure operations, there is increased risk for wide scale or high-consequence events that could cause harm or disrupt services upon which our economy and the daily lives of millions of Americans depend. Considering the risk and potential consequences of cyber events, strengthening the security and resilience of cyberspace has become an important homeland security mission.

Frohlich highlighted CISA's no cost services including assessments, exercises, workshops, and reviews that evaluate and strengthen an organization's cybersecurity capability. Information on CISA's services can be found on their website here: https://www.cisa.gov/publication/cisa-services-catalog

Member Burdick asked with all the defensive strategies for cybersecurity, what is being done to go on the offensive against ransomware and other criminal activities, and what can the Council do as local infrastructure to participate in the process.
Frohlich said that other than the FBI and the Department of Defense, organization should not attempt to go on the offense. CISA and its role with the Department of Homeland Security is that defensive measure. The best thing most organizations can do is report threats to the proper agencies.

Presentation materials are posted with this summary here: https://www.nwcouncil.org/sites/default/files/2021_11_2.pdf

3. Northwest Energy Efficiency Alliance Annual Report

Executive Director Susan Stratton, and Chief Transformation Officer Jeff Harris of the Northwest Energy Efficiency Alliance (NEEA) gave an overview of NEEA's operations, their accomplishments to date, and future plans.

The Northwest Energy Efficiency Alliance (NEEA) was created in 1996 to drive market adoption of energy-efficiency products, services, and practices for the benefit of utilities and consumers and the region. This year, NEEA celebrates 25 years of market transformation. NEEA is a vehicle for Bonneville and regional electric and natural gas utilities to band together to produce results that would be difficult to accomplish without the collective voice of 140 utilities and 13 million customers. The scope of NEEA's work includes scanning for emerging technologies, assessing opportunities for market leverage, conducting research

and product testing, providing data and analysis for regional and national code and standards organizations, and managing a portfolio of market transformation initiatives for both electric and natural gas energy efficiency.

Since its creation in 1996, NEEA has delivered over 1,400 aMW of cost-effective energy efficiency through market transformation and the cost of savings from NEEA programs has been very low – about 2.7 cents per kWh. In addition, NEEA's work in emerging technologies has been instrumental in providing data for many of the conservation measures new to the 2021 Power Plan.

In year 3 of their 5-year business plan (2020-2024), NEEA is on pace to meet or achieve their goals for this cycle. NEEA's focus this coming year is to bring new energy efficiency market transformation products and initiatives into their portfolio. NEEA has 14 initiatives in their portfolio, and plan on adding up to 5 more in 2022. The initiatives are separated into the categories of consumer products, integrated systems, and codes, standards and new construction. NEEA is currently engaged in strategic and business planning for the 2025-2029 cycle.

Member Oshie asked if Harris could give an overview of the process of how NEEA decides to create a market transformation program around an emerging energy efficient technology. Harris said that the process they use has been refined and honed over the last 25 years, and they have it down to a stepwise approach.

1. Identify an emerging technology - e.g., NEEA is currently scanning over 40 new energy efficiency opportunities.

2. Characterize the market – NEEA explores how and by whom is the product is being manufactured, where parts and supplies come from, and what the vulnerabilities are in the supply chain. They also want to understand the competitive environment – who stands to profit by the acceleration of this innovation into the marketplace, and who the incumbents are that might act as barriers to this new technology getting a bigger market share.

3. Identify barriers and opportunities – They identify what the barriers are to the product not getting wider adoption, and they identify market conditions that could lead to wider adoption.

4. Develop strategic interventions to address market barriers and opportunities – e.g., One simple intervention could be giving consumers a way to easily distinguish between an inefficient model and an energy efficient model of a product.

5. Measurement and evaluation – This is a key component in the process. NEEA is careful to define how success is measured once the interventions are in place.

6. Adapt over time – NEEA focuses on how barriers and opportunities change as the

product becomes more adopted in the market, and they adjust interventions accordingly to reach wider market adoption.

Presentation materials are posted with this summary here:
https://www.nwcouncil.org/sites/default/files/2021_11_3.pdf

4. Energy Trust of Oregon Annual Report and Organization Updates

Michael Colgrove, Executive Director of the Energy Trust of Oregon, briefed the Council on the Energy Trust's 2020 Annual Report, forecasted 2021 achievements, plans for 2022. He also touched on implications of the 2021 Oregon legislative accomplishments on Energy Trust operations and strategic priorities.

Energy Trust's 2020 Annual Report can be found here:
https://www.energytrust.org/wp-content/uploads/2021/04/2020.Energy-Trust-Annual-Report.pdf

2020 and Forecasted 2021 Achievements

Last year Energy Trust largely met or exceeded their 3 primary annual goals for electric efficiency, natural gas efficiency, and renewable generation. This is a significant turnaround from their forecasting early in the pandemic.

Energy Trust saved 43.2 aMW of electricity which was just under the goal of 45.4 aMW. This savings is split between Portland General Electric and Pacific Power at 60% and 40% respectively. Electric savings goals and results have been trending down in recent years due to a variety of market transformation successes including transforming the lighting market that delivered some of the most cost-effective electric savings in the portfolio. Future savings forecasts also show that there is significant cost-effective electric savings potential that will need to be accessed via emerging technology, innovative program approaches, and new offers tailored to specific customer needs. For 2021, Energy Trust is forecasting to achieve about 99% of the 2021 electric savings goal.

Natural gas efficiency improvements completed last year saved 7.5 million Therms which exceeded Energy Trust's goal by 10%. Savings resource assessments show that cost-effective gas savings potential is tied up in more expensive projects, and emerging technologies will need to be accessed via new and innovative approaches. For 2021, Energy Trust is forecasting to achieve about 120% of the 2021 natural gas savings goal.

Last year was a strong year for renewable generation with 4.2 aMW (127% of goal) generated from solar projects and a large biopower project at a wastewater treatment plant at the City of Salem.

Over the 7th Power Plan period to date (2016-2021 forecast), Energy Trust is Projecting to achieve about 126% (338 aMW) of the goal for Oregon investor-owned utilities.

2022 Planning Activities

In 2022, Energy Trust's investments and actions are guided by 4 organization goals:

1. Achieve savings and renewable generation goals while addressing the needs of customers who experience significant energy burden or are impacted by disaster events

2. Expand support for community-led approaches to increase access to clean energy

3. Create development capabilities that will allow us to increase funding to deliver more savings and generation and expand our ability to meet changing customer and utility system needs

4. Implement new work strategies to adapt and thrive in our changing environment while supporting staff and managing operating costs

Colgrove stressed that there is volatility underlying these goals. Energy Trust anticipates that the impacts of the pandemic will continue into 2022. The unpredictable nature of the (post-pandemic) economy makes it very difficult to forecast savings and spending.

Energy Trust is projecting to invest $213 million of utility customer funds of which about $117 million will be in direct incentives. This is projected to save 50.1 aMW and 6.8 million annual Therms. Their work is also projected to generate 4.0 aMW and avoid 4.5 million tons of carbon dioxide. They are also seeking opportunities for complimentary and leveraged funding - communicating with a variety of community action agencies to deliver more savings opportunities to some of their lowest income customers.

Colgrove commented on Energy Trust's plans to innovate across programs, engage communities, support disaster recovery and preparedness, and continue Diversity, Equity, and Inclusion (DEI) work.

Colgrove gave an overview of Oregon House Bill 3141. In 2021, Oregon HB 3141 modernized the public purpose charge by extending it for 10 years, reducing it from 3 percent to 1.5 percent of annual utility revenues, requiring 25 percent of the renewables public purpose funds to benefit low-income customers and allowing it to be used for distribution system-connected technologies that support reliability, resilience, and integration of renewable energy (among other things). The law moves electric efficiency funding from the public purpose charge into the standard rate-making processes used by the Oregon Public Utility Commission for PGE and Pacific Power. This change effectively removes any sunset on the efficiency funding.

Presentation materials are posted with this summary here:
https://www.nwcouncil.org/sites/default/files/2021_11_4.pdf

5. American Shad Report by the Independent Scientific Advisory Board

Members of the Independent Scientific Advisory Board gave background on the history of shad in the Columbia River and the impacts of shad on salmonid species.

American shad were introduced to West Coast rivers in the late 1800s and rapidly expanded. Shad colonized upriver reaches of the Columbia River Basin as the hydropower system developed, using passage facilities provided for native salmonid species. Shad abundance in the Columbia River has increased markedly since the 1960s, with almost 8 million adults counted at Bonneville Dam in recent years. The non-native shad is now the predominant anadromous fish species in the Columbia River Basin.

Currently there is little or no evidence of strong food web effects from high shad populations. There are plausible scenarios where shad effects on salmon in the Columbia are positive, negative, or neutral. The very large numbers of non-native shad suggest long-term negative effects, but the nature of those effects, if indeed they are present, remains to be determined.

Shad also have limited potential for commercial fisheries as a means to manage or suppress the populations, and there seems to be little interest or demand for Tribal shad fisheries, despite shad's abundance. As a non-native species, shad do not have an apparent cultural role among the Tribes within the basin. Risks and uncertainties about possible shad effects on declining native species and to cultural practices warrant increased attention by resource managers in the Columbia River Basin. At a minimum, counts of shad at major dams should continue. Models could be developed to initially assess which effects and interactions might be ecologically and economically important. If interactions are shown to be detrimental, use of subsurface passage in fish ladders could be explored to reduce upstream shad migration. To explore these risks and uncertainties, the ISAB's report examines what is known about shad's role and impact in the ecosystem, about the areas needing additional investigation, and about how fisheries co-managers and hydrosystem operators might consider shad within the context of their activities.

The ISAB report can be found here:
https://www.nwcouncil.org/fish-and-wildlife/fw-independent-advisory-committees/independent-scientific-advisory-board

Vice-Chair Grob asked why shad are far less popular in the western U.S. than they are in the eastern U.S. for commercial and recreational fishing. Professor Tom Quinn mentioned

that shad are very bony fish and can't be easily fileted, prepared, and consumed like other fish. In addition, the shad in the west are very small compared to the east, so the actual yield would be significantly smaller and perhaps not worth the effort if they were to be processed commercially.

Presentation materials are posted with this summary here:
https://www.nwcouncil.org/sites/default/files/2021_11_5.pdf

6. Council Business

Council approval of the October 2021 Council Meeting minutes

Vice-Chair Grob moved that the Council approve for the signature of the Vice-Chair the minutes of the October 13, 2021, Council Meeting held in Portland, Oregon via webinar, as presented by staff.

Member Yost seconded.
No discussion.
Voice vote – all in favor, none opposed.
Motion was approved.

Council approval of comments to Department of Energy on Manufactured Housing Energy Efficiency Standards

Vice-Chair Grob moved that the Council approve the comment letter to the U.S. Department of Energy in support of its supplemental notice of proposed rulemaking to establish energy efficiency standards for manufactured homes, as presented by staff.

Member Oshie seconded.
No discussion.
Voice vote – all in favor, none opposed.
Motion was approved.

Public Comment

Scott Levy, host of bluefish.org, referenced a previous public comment to the Council in which he presented data showing an estimated 44 million metric tons of CO2 sequestration as a potential from Idaho's forests that would arise from the recovery of salmon and steelhead (due to the proposed removal of the Lower Snake River Dams). He wanted to inform the Council that this estimate has increased substantially. He presented a graph showing a potential increase to 200 million metric tons of CO2 sequestration over 30 years.

This is a conservative estimate assuming it would take this amount of time for the forests to reach their maximum size after dam removal and restored fish populations. He compared this to the Council's 2005 estimate of emissions from the Pacific Northwest (170 million metric tons of CO2).

Levy then turned to an article written by Congresswoman Cathy McMorris Rodgers in which she defends the dams saying that barging on the river "keeps 150,000 semi-trucks off of the roads, 39,000 train cars off rails, and 1.25 million tons of carbon out of the air each year." Levy countered this saying that the Rodgers' carbon data is hugely inflated (20 times what the Columbia River System Operations EIS reported).
In closing, Levy said there is a carbon sequestration engine sitting idle in Idaho's degrading temperate forest and that sequestering 200 million tons of CO2 would have global implications for the betterment of the environment. He implored the Council to address this with their governors.

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

Northwest Power and Conservation Council meeting materials for November 2021 can be found here: https://www.nwcouncil.org/meeting/council-meeting-november-16-2021