

**Guy Norman**  
Chair  
Washington

**KC Golden**  
Washington

**Jim Yost**  
Idaho

**Jeffery C. Allen**  
Idaho



## Northwest **Power** and **Conservation** Council

**Doug Grob**  
Vice Chair  
Montana

**Mike Milburn**  
Montana

**Ginny Burdick**  
Oregon

**Louie Pitt, Jr.**  
Oregon

### **Council Meeting Summary** **November 15 - 16, 2022** **at Portland, OR and via Webinar**

This a summary of the agenda items that came before the Council at its November 15-16, 2022, public meeting and, where appropriate, the actions the Council decided upon. The summary is intended to provide a general synopsis only for each agenda item. For further details, the complete set of information for the meeting includes the meeting agenda, the packet and presentation material for each item, the recording of each agenda item during the meeting, and subsequent documentation of any decisions by the Council. These meeting materials are posted with this summary at <https://www.nwcouncil.org/meeting/council-meeting-november-15-2022/>.

#### **November 15, 2022**

Council Chair Guy Norman brought the meeting to order at 11:01 a.m. Council Members Jeffery Allen, Ginny Burdick, KC Golden, and Doug Grob, were in attendance in Portland, Oregon. Council Members Mike Milburn, Louie Pitt, and Jim Yost were in attendance via Webinar. The next Council meeting is scheduled for December 13-14, via webinar.

#### **Motion for Council to Meet in a Closed Executive Session**

Vice-Chair Grob moved that the Council meet in executive session to discuss matters pertaining to the Council's organization, structure and personnel, and matters pertaining to civil litigation.

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

Following the motion approval, the Council met in a closed executive session.

## **Council Meeting Agenda Items**

### **1. Update on Bonneville Power Administration's Energy Efficiency Program**

Council staff, Kevin Smit, introduced Jamae Hilliard Creecy, Vice President of Energy Efficiency. Hillard Creecy presented an overview of the Bonneville Power Administration's (BPA) inaugural annual review and also the accomplishments, value, and action plan for Energy Efficiency at BPA. Hillard Creecy indicated that the inaugural annual review highlighted last year's achievements, provided insight into BPA program-focused areas, and included accomplishments over the Seventh Power Plan period. Hillard Creecy informed that BPA achieved 537.5 aMW of energy efficiency, 93% of the Seventh Power Plan's target. Hillard Creecy stated that the primary reasons for the shortfall were the Covid-19 pandemic slowed program throughout the region, lighting savings declined as the market quickly transformed to LEDs, and Federal codes and standards were paused, limiting the expected contribution to momentum savings goals.

Hillard Creecy addressed the disparity between the savings estimates made by the Council and BPA. Each organization's savings figures frequently differ, which has caused confusion. Hilliard-Creecy reiterated the earlier Council demands for continued cooperation between the organizations to achieve alignment. Hillary Creecy mentioned a downward trajectory of programmatic savings during 2020 and 2021. NEEA has provided 136 aMW of savings for BPA since 2016. Regarding momentum savings during the Seventh Power Plan, Hillard Creecy indicated a savings of 68.8. Hillard Creecy explained that energy efficiency provides many benefits, including enabling customer success and creating economic benefits for the community while building a resilient future and minimizing environmental impacts. Hillard Creecy mentioned that energy efficiency is helping improve the grid's ability to cope with a new world, including offering customer resilience in extreme events due to past efficiency upgrades. Hillary Creecy provided an overview of BPA's energy efficiency action plan, including BPA resource program, the Council's plan, and customer needs. The draft 2021 plan period forecast calls for at least 300 aMW of energy efficiency. Hillary Creecy believes that BPA is well positioned to meet the Power Plan target and meet Council's criteria.

Hilliard-Creecy responded to a query from Member Golden by stating that she does not foresee a time when energy saving will not be a crucial element of a good solid business plan. Member Golden pointed out that the objective set by Bonneville in its proposed energy efficiency action plan is below the range established by the Council in the 2021 Power Plan. He expressed hope that, as Bonneville modified the draft, it would consider the upper elevation of the range. Member Grob mentioned the absence of time-of-use incentives in Bonneville's future efficiency plans. According to Hilliard-Creecy, Bonneville is looking for situations where energy efficiency and demand response may coexist, emphasizing that they are also considering utility distribution conservation.

Presentation materials are at: [https://www.nwcouncil.org/fs/18102/2022\\_11\\_1.pdf](https://www.nwcouncil.org/fs/18102/2022_11_1.pdf).

## **2. Update on Northwest Energy Efficiency Alliance Accomplishments and Plan**

Council staff, Kevin Smit, introduced Susan E. Stratton, Executive Director of Northwest Energy Efficiency Alliance (NEEA), and Jeff Harris, Chief Transformation Officer, to summarize NEEA's accomplishments in the past year and over its 25-year history. Stratton and Harris will also brief the Council on NEEA's 2023 operations plan and discuss strategic and business planning currently in progress for the 2025-2029 business cycle.

Stratton started by acknowledging this will be her last time presenting Council as she is retiring at the beginning of 2023. Stratton mentioned she has been connected to the energy efficiency industry for about 44 years and has high hopes for the future. Stratton underscored her delight in the successes of NEEA and the region's capacity for collaboration in energy efficiency. Providing a big-picture overview for 2023, Stratton mentioned that the alliance enters 2023 during a dynamic time for the economy and the energy sector, bringing opportunities and challenges. Stratton emphasized that NEEA's electric portfolio trajectory remains strong. NEEA anticipates exceeding its goals for electricity savings but falling short on the natural gas front. Stratton emphasized the efforts made by NEEA in the areas of new technology and market change. She pointed out that equipment designers are beginning to consider how a whole system functions and how to identify common efficiencies. Stratton emphasized that energy efficiency is critical all over the country due to current concerns over resilience, resource adequacy, and carbonization. Stratton added that the federal government is investing more in energy efficiency and other parts of the country are looking to enhance their energy efficiency model.

On the emerging technology front, Stratton indicated that NEEA has a very robust program that identifies new products, new uses, or a combination of products that give new opportunities for market transformation. NEEA is responsible for testing and vesting products with a high potential for success, and the program helps spread the risks to the utility members that wouldn't be able to test these products on a stand-alone basis. Stratton explained that a significant portion of emerging technology includes innovation around efficiency and features that include decarbonization, grid resilience, and load flexibility. Focus areas for 2023 include continued regional coordination, expanded extra-region engagement, and continued focus on HVAC and water heating.

Stratton provided an overview of the 2023 Market Transformation Portfolio, which includes products, integrated systems, and new constructions. Stratton also educated the Council on its natural gas portfolio, which includes efficient rooftop units, high-performance windows, and gas water heating. On the 2022 Market Transformation Milestones, Stratton emphasized new TVs specification based on a NEEA-developed test procedure, the first new energy efficiency standard for manufactured homes in 25 years based mainly on Northwest data, and recent collaborative efforts around triple windows. Stratton informed that the region had created 879aMW cumulative savings from 1997-2021. Several key research initiatives for NEEA are almost finished. As the Northwest End Use Load Research (EULR) project comes to a close, new load forms will be produced for the first time in more than 30 years. NEEA also anticipates starting work on the next commercial building stock assessment (scheduled for release in 2025–2026) and releasing its updated residential building stock assessment in the middle of 2023. The draft business plan for the upcoming cycle, Cycle 7, (2025–29), will be released in the summer of 2023. At the end of 2023, the NEEA Board is anticipated to vote on the Cycle 7 business plan.

Chief Norman thanked Stratton and NEEA for the organization's work over the years. Member Grob asked regarding ground source for heat pumps, and Harris responded that pre-plumbing makes a lot of sense for pre-construction, and NEEA is working on advancing cold-climate heat pump performance. Member Golden expressed his gratitude for NEEA's work and asked how rapid electrification and decarbonization will change the energy efficiency landscape. Stratton mentioned that NEEA is tackling a few unique initiatives, such as researching new technologies or launching demonstration projects that address load fluctuation and resilience.

Presentation materials are at: [https://nwcouncil.org/fs/18100/2022\\_11\\_2.pdf](https://nwcouncil.org/fs/18100/2022_11_2.pdf).

**November 16, 2022**

## **Reports from Committees Chairs and Executive Director**

### **Fish and Wildlife Committee**

Member Allen, Fish and Wildlife Committee Chair, reported on the Fish and Wildlife Committee Meeting held on November 15, 2022.

#### **1. Bonneville Fiscal year 2023, Start of the year Fish and Wildlife budget update**

Council staff introduced Jason Sweet, Bonneville Executive Manager Fish and Wildlife, accompanied by Scott Armentrout, Bonneville Environment, Fish and Wildlife Vice President and Rodrigo George, Bonneville Manager, Business Operations Fish and Wildlife. Bonneville provided an update on the Fish and Wildlife Direct Program's expense and capital budgets for fiscal year 2023, along with a review of 2022 actual budget spent. Bonneville reported that they spent 95% of last year's Fish and Wildlife budget of \$247M in line with historical averages. The planning budget for 2023 is \$268M with a target spending of \$247M. In FY2024 and FY2025, funding for Bonneville's F&W Program is anticipated to rise by 8%.

For the report and the presentation materials, see [https://www.nwcouncil.org/fs/18095/2022\\_11\\_f1.pdf](https://www.nwcouncil.org/fs/18095/2022_11_f1.pdf).

#### **2. Status of Double Crested Cormorants in the Columbia River Estuary and Implications for Survival of out-migrating Juvenile Salmon**

James Lawonn of Oregon Department of Fish and Wildlife, Tom Skiles of Columbia River Intertribal Fish Commission and Lynne Krasnow of NOAA Fisheries presented to the Committee a brief overview of recent adjustments in the population and distribution of double-crested cormorants in the Columbia River estuary. The presenters informed the Committee about implications for the survival of salmon classified as endangered species under the Endangered Species Act (ESA) and highlighted attention to the effects of predation in colonies upriver from East Sand Island, notably at the Astoria-Megler Bridge costing the State of Oregon Department of Transportation about \$1M a year.

For the report and the presentation materials, see [https://www.nwcouncil.org/fs/18099/2022\\_11\\_f2.pdf](https://www.nwcouncil.org/fs/18099/2022_11_f2.pdf).

## **Power Committee**

Member Grob, Power Committee Member, reported on the Power Committee Meeting held on November 15, 2022.

### **1. GENESYS Review Process and Preliminary Adequacy Results**

John Ollis, Council's Manager of Planning and Analysis, and Dor Hirsh Bar Gai, Council's Power System Analyst provided another update on all the efforts to revisit assumptions in the GENESYS model to better understand the limitations and capabilities of the regional hydro system. The presentation provided the first look at the preliminary results for the adequacy assessment. This work is leading towards the 2027 Resource Adequacy Assessment, which will provide the first check on the Council's 2021 Power Plan resource strategy. The Committee indicated that this update indicates the region is beginning to gain more acceptance of the new GENESYS to provide good data.

For the report and the presentation materials, see [https://www.nwcouncil.org/fs/18101/2022\\_11\\_p1.pdf](https://www.nwcouncil.org/fs/18101/2022_11_p1.pdf).

### **2. Inflation Reduction Act and Changes to EV Tax Credits and EV Infrastructure**

Brian Dekiep, Council's Senior Analyst Montana Office, presented to the Committee many of the current issues regarding electric vehicles, charges and recent legislation that is impacting all aspects of EV production and sales. The presentation included up-to-date information on the Infrastructure Investment and Jobs Act (IIJA), and the Inflation Reduction Act (IRA). Staff also covered the National Electric Vehicle Infrastructure plans that are being implemented by the states. Northwest states will generally be focusing on charging station on major highways than secondary roads for the next five years with this federal funding.

For the report and the presentation materials, see [https://www.nwcouncil.org/fs/18098/2022\\_11\\_p2.pdf](https://www.nwcouncil.org/fs/18098/2022_11_p2.pdf).

## **Public Affairs Committee**

Member Pitt, Public Affairs Committee Chair, reported that he and other committee members are working with the Council's new Public Affairs Director, Ann E. Gravatt on messaging and committee planning.

## **Executive Director Report**

Bill Edmonds, Council's Executive Director, reported to the Council on Council's staff work. Edmonds reported that Oregon has a new Governor-elect, Tina Kotek, and new US House of Representative members in Montana, Oregon, and Washington and ensured the staff will coordinate with the new members to inform them about the Council's work. Edmonds highlighted staff's future work, especially on a collaboration between the Fish & Wildlife and Power Division on utilizing complex data sets to gain more information on wildfires on transmission lines. Edmonds also reported on staff's participation a recent ISAB's upper Columbia tour for their review of the Upper Columbia United Tribes' (UCUT) Phase 2 Implementation Plan. The tour included visits to Chief Joseph and Grand Coulee dams. Lastly, Edmonds mentioned that the Council has hired a new RTF Manager.

## **Council Meeting Agenda Items**

### **3. Presentation by Columbia Basin Trust**

Bill Edmonds, Council's Executive Director, introduced Johnny Strilaeff, President and CEO of the Columbia Basin Trust (CBT), David Raven, Vice-Chair, Trust Board of Directors of Columbia Basin Trust, and Katie Kendall, Senior Manager of Special Initiatives of the Columbia Basin Trust to provide a high-level overview of the organization.

Raven provided a brief overview of the history of the CBT. At the urging of the residents of the Columbia Basin, the Province of British Columbia in 1995 authorized the formation of the CBT to help the area most negatively impacted by the development of the storage dams under the Columbia River Treaty between Canada and the United States. The two goals of the Columbia Basin Trust Act were to establish a trust overseen by a board of Basin residents and distribute to the area funds representing a fair portion of the continued downstream benefits obtained under the Trust.

Strilaeff indicated that the CBT serves the region consisting of all the watersheds that flow into the Columbia River in Canada. It is 80,000 km<sup>2</sup> and has a population of 165,000 people. Strilaeff reiterated that the Trust's resources could not be used outside the region. The Core Functions are to generate a predictable, sustainable, and appreciating income stream to fund the delivery of benefits obligations and corporate operating expenses and to deliver benefits that serve to strengthen the social, economic, and environmental well-being of the Basin, its residents, and communities.

Strilaeff indicated that its 2023-2023 priorities include climate resilience and working with indigenous people, among others, and includes over seventy individual programs.

Raven added that since the Trust was established in the middle of the 1990s, there has been a tight working connection between the CBT and the Council, documented by a Memorandum of Understanding and Cooperation initially signed in 2000 and then reaffirmed in 2011. This arrangement has allowed the Council and the CBT to share information and work together to understand and deal with mutual issues, challenges, and opportunities that have benefited the basin as a whole. Raven reiterated his appreciation for the partnership with the Council.

Kendall presented some common interests between the Council and the Columbia River Trust. Kendall shared that the hydropower generation owned by the CBT cumulatively produces 800MW of capacity and 2900 kW power of annual generation. Initiated in 2017, the CBT has an ecosystem enhancement program that improves ecological health and native biodiversity in various ecosystems. Kendall mentioned that the CBT has a salmon reintroduction initiative that draws on indigenous knowledge and western science to better understand different options to reintroduce salmon to the river. Other programs highlighted were the aquatic and terrestrial invasive species. Strilaeff looks forward to ongoing dialogue and collaboration between both organizations.

Member Pitt expressed his gratitude to the CBT for collaboration with indigenous people in their work. Member Golden is interested in how the Trust sets and invests in priorities. Strilaeff mentioned that embedded in the Columbia Basin Trust Act is a restriction against the Trust in taking on any responsibility that falls on any other level of government. Strilaeff indicated that the Trust coordinates with communities and has continuous communication with the community to understand what is most important to the residents of the Basin. Member Burdick asked regarding the funding stream of the Trust. Strilaeff explained that energy purchasing agreements stretch into the late 2030s and 2040s. Strilaeff added that they are beginning to access and understand what the energy market will look like at that time to have better knowledge of investment value. Member Allen mentioned a success story in the population growth of burbot in Idaho thanks to the help of Canada. Member Norman asked regarding the Columbia River Treaty negotiations and how the CBT is handling the uncertainty of the outcome. Strilaeff explained that the CBT does not have a role in the negotiations, but the CBT is watching with interest due to the impact it will cause to the residents of the Basin. Strilaeff also noted that he looks forward to ongoing dialogue and collaboration between both organizations.

Presentation materials are at [https://www.nwcouncil.org/fs/18092/2022\\_11\\_3.pdf](https://www.nwcouncil.org/fs/18092/2022_11_3.pdf).



#### **4. Portland General Electric Virtual Power Plant**

Tina Jayaweera, Council's Manager - Power Planning Resources, introduced Franco Albi, Director, Regional Integration for Portland General Electric (PGE), to present on PGE's process of creating and growing its "virtual power plant" (VPP) and how it works to maintain a reliable and adequate electric system for its customers. Albi introduced himself and expressed the importance of collaboration to move from uncertainty to confidence. Albi indicated that PGE has been able to keep steady service even under extreme weather conditions due to the VPP. Albi revealed that PGE VPP is ready to grow and transform from an emergency measure to a resource that gives value 24/7, 365 days a year, after several years and extreme weather occurrences. Currently, the VPP is a 225 MW "live" network comprising demand response (90 MW), battery storage (5 MW), and demand side generation (130 MW). Due to their inherent modularity, VPPs may expand dispersed energy resources and provide variable loads to accommodate a range of supplementary services and system demands.

Albi indicated that in the near future, PGE intends to build a technological platform that will connect to an advanced distribution management system and grow the VPP by 10%. PGE plans to gradually expand the VPP over several years, working on each component concurrently rather than sequentially. Albi explained that a VPP is defined as a power plant consisting of Distributed Energy Resources (DERs) and flexible loads, orchestrated through a technology platform to provide grid and power operations services.

Albi emphasized that PGE is operating a VPP today and can economically guarantee resource adequacy while also decarbonizing, thanks to their methodology of constantly learning and an emphasis on developing excellent customer connections. Albi explained that the capability progression framework consists of acquisition and progression, and the VPP platform consists of resource and system planning, resource pipeline development, operations and engagement, and interconnection.

Member Grob questioned if PGE intended to use the VPP when the market was favorable. The idea is to have grid and power operation services aligned at the times they are most beneficial, according to Albi, who also pointed out that there are tariffs in place regulating when customers may rely on home demand response. In addition to grid services, PGE anticipates growth in its solar PV resource, increasing customer demand response program participation, and access to customer EV storage—all things that might be added to the VPP to boost its capacity and capabilities. Member Allen inquired how utilities encourage their EV consumers to join for utility-managed charging, providing an example from Xcel Energy, where the sign-up rate was meager. Albi added

that PGE has roughly 18,000 registered EV owners, the equivalent of about 1 GW of mobile storage. He pointed out that PGE cannot now handle it but that their managed billing program is meant to teach them how to do it in a way that preserves the customer's personal agency. Member Golden followed up by asking if PGE was considering vehicle-to-grid, where users may divide up their storage and sell some of it to the grid. PGE is investigating, according to Albi. Member Burdick was intrigued about the importance on customer trust and the dramatic positive results that occurred in California. Albi explained that PGE is continuously engaging with their customer and informing them about ongoing engagement on their demand response programs

Presentation materials are at [https://www.nwcouncil.org/fs/18097/2022\\_11\\_4.pdf](https://www.nwcouncil.org/fs/18097/2022_11_4.pdf).

## **5. Grant PUDs Activities on Small Modular Reactors**

Jennifer Light, Council's Director of Power Planning, introduced Grant PUD's Chief Resource Officer, Kevin Nordt, to present to the Council on the organization's exploration of constructing a small modular reactor (SMR) in Grant County, Washington. Kevin spoke about the upcoming requirements, Grant's evaluation of the various technologies, and their choice of the X-energy Xe-100 as a potential future development. According to Nordt, the requirement to meet load growth with clean, stable, reliable, and flexible power supplies is the driving force for investigating new resource alternatives. Nordt reported that SMR's key attributes included small geographic footprint, increased safety, less cost, and scaling in size.

Grant PUD decided on X-Xe-100, energy's a four unit, 320MW, highly flexible SMR that uses Triso-X fuel from X-terra after carefully weighing all of its options. Triso X fuel is extremely safe and powered by proprietary tri-structural isotropic (TRISO) coated particle field. Grant PUD values the fact that SMRs, and this specific technology in particular, are high energy density resources with minimal environmental impact. This factory would only require a little more than half an acre of space, according to Nordt. With a license predicted to last 60 years, Nordt speculated that this technology may very well last up to 80 years, bringing down the estimated levelized cost of energy to the mid-\$50s/kw range. Grant PUD, X-energy, and X-terra are collaborating with the Nuclear Regulatory Commission (NRC) on a number of licensing matters, pre-site characterization work, and a preliminary safety study report with a projected online date of 2028. Nordt indicated that Grant PUD wants to keep growing and powering the local economy and is working with Energy Northwest and seeking to add more local consumers of electricity. Nordt emphasized that significant early progress is being made to support a full plant deployment before the end of the decade.

Member Burdick asked about the handling of nuclear waste. Nordt indicated that the volumes are not large and there is a dry cask storage on site until the national repository is built. Nordt mentioned that there is an opportunity to reprocess the waste in solid form. Member Golden inquired as to any variations in waste management between an SMR and a conventional nuclear power station. They are comparable, according to Nordt, and the Triso-X "pebbles" are very challenging to break into from the standpoint of proliferation. Member Golden also asked about the technology's adaptability. The flexibility, Nordt retorted, comes from the mechanism itself. There is a large turn-down capability and advantageous ramping speeds even with just one genset running. It was compared to a modern mixed cycle combustion turbine by Nordt.

Presentation materials are at [https://www.nwcouncil.org/fs/18093/2022\\_11\\_5.pdf](https://www.nwcouncil.org/fs/18093/2022_11_5.pdf).

## **6. The Renewable Hydrogen Policy and Project Landscape**

The Executive Director of the Renewable Hydrogen Alliance (RHA), Michelle Detwiler, was introduced by the Council's Principal Analyst, Steven Simmons, to talk about recent Federal and State policies relating to the use and production of hydrogen as well as current and upcoming hydrogen projects in the Northwest. Detweiler gave a high-level review of the RHA, advocating for effective hydrogen policy that meets statutory GHG emission reduction targets. With more than 75 members, the RHA is a non-profit trade group founded in 2018 to expand the renewable hydrogen industry throughout the Northwest.

Detwiler provided a general outline of how clean, renewable hydrogen is produced and described its applications. Detwiler informed the Council that the Pacific Northwest is fortunate to possess a number of the characteristics required to be at the forefront of advancing clean energy and clean fuel because of the climate policies adopted in Washington and Oregon, low power costs, an abundance of renewable resources, and an active and influential environmental justice advocacy group. Detwiler discussed the current initiatives being worked on in the Pacific Northwest's numerous industries, many of which had emerged during the last four years, including the Douglas County PUD Wells Dam Renewable Hydrogen Production Project and the Advance Clean Energy Storage (ACES) Project in Delta, Utah. Detwiler explained the federal initiatives on hydrogen policy and funding, including production tax credits. Detwiler added that without hydrogen, the economy could not be wholly decarbonized.

Member Milburn inquired as to the existence of any U.S. power facilities using hydrogen fuel. The Mitsubishi Power hydrogen conversion project at the closing Intermountain Power Project coal plant was mentioned by Detweiler. When the plant restarts in 2025,

a mixture of hydrogen and gas will be burnt in the short term. Still, Detweiler anticipates that if turbine technology catches up, these facilities will be able to burn 100% hydrogen. Detweiler mentioned that PNNL had researched the Northwest's geology characteristics to ascertain the viability and accessibility of storage options.

Presentation materials are at [https://www.nwcouncil.org/fs/18096/2022\\_11\\_6.pdf](https://www.nwcouncil.org/fs/18096/2022_11_6.pdf).

## **7. Council Business**

### **Approval of October 2022 Council Meeting Minutes**

Vice-Chair Grob moved that the Council approve for the signature of the Vice-Chair the minutes of the October 11, 2022, Council Meeting held at Corvallis, Oregon and via webinar, as presented by staff.

Member Allen seconded.

No discussion.

Voice vote – all in favor, none opposed.

Motion was approved.

The approved minutes of the October 2022 Council meeting and other materials from that meeting are at [https://www.nwcouncil.org/fs/18094/2022\\_11\\_7.pdf](https://www.nwcouncil.org/fs/18094/2022_11_7.pdf).

### **Public Comment on any issue before the Council**

No Public Comments.

Chair Norman adjourned the meeting at 11:46 a.m.