

Efficiency Exchange Conference

Event Schedule

Tue, May 02, 2023

7:30 AM

Registration and breakfast

🕒 7:30 AM - 9:00 AM, May 2

9:00 AM

Keynote: Maria Pope, CEO, Portland General Electric

🕒 9:00 AM - 10:15 AM, May 2

10:30 AM

The IRA Home Rebate Programs: A Blessing or a Burden?

🕒 10:30 AM - 11:45 AM, May 2

The \$8.8 billion Home Energy Rebate Programs are a once-in-a-generation investment in residential energy efficiency and electrification nationwide. The Program will help to retrofit homes and reduce energy use through whole-home retrofits and electric equipment installations, similar to existing utility and program-administrator programs. Funding will be provided to State Energy Offices, territories and Tribes who will be responsible for development and implementation based on federal program guidance. The purpose of this session is to discuss the opportunities and challenges of the state-run home rebate programs. How can utilities benefit? What are the concerns? How can we work together? How do we get it right?

BPA Bootcamp: “No One Told Me That!”

🕒 10:30 AM - 11:45 AM, May 2

With the goal of further developing a community of energy efficiency professionals through understanding and knowledge of a shared background and common goals, this session offers a fun, light-hearted, informative glimpse at the origin and evolution of energy efficiency from the top levels of Bonneville Power Administration (BPA) to the utilities’ boots on the ground.

The session will provide the background needed to understand why energy efficiency programs exist and how they bring value to BPA and the utilities. It will introduce key BPA personnel such as Contracting Officers Technical Representatives (COTRs) and Energy Efficiency Representatives (EERS), highlight important program dates, share what BPA is doing to help utilities, and identify energy efficiency’s place in a utility and in society at large.

Conservation Voltage Reduction and Voltage Optimization Refresher

🕒 10:30 AM - 11:45 AM, May 2

Despite the large energy-saving potential of conservation voltage reduction (CVR) and the availability of CVR funding since the 1990s, only a few Northwest utilities are currently participating. This session will provide an entry-level description of CVR and the large opportunity it represents, as well as an overview of one of the major barriers to effective CVR implementation: the requirement for distribution engineering and operations departments to understand and support CVR. This is especially critical, as 90% of CVR savings occur from retail loads (i.e., the customer premise).

🗨️ Speakers



Mattias Järvegren

Utility Services Supervisor
Clallam County PUD



Tony Koch

Mechanical Engineer
Bonneville Power Administration

Today's Advanced Variable-Speed Heat Pumps: What Can We Expect?

🕒 10:30 AM - 11:45 AM, May 2

Bonneville Power Administration (BPA) is actively field testing the efficiency of residential High Performance High Capacity (HPHC) heat pumps for whole-home heating and cooling to determine the cold and hot weather performance as well as capacity demand value for this class of heat pumps. BPA is testing this equipment across a multi-state territory and studying both new and existing ducted and ductless systems. Each participating home is receiving a home energy analysis and detailed data collection metering. This presentation will 1) Present early field data collection and analysis insights, 2) Discuss the Home Characterization Energy Audits, including a brief overview of work with Glacier Electric and the Blackfoot Tribe, and 3) Explain the value of generating this data, which can be used to influence tax credits, EPA specifications, and manufactures to integrate features or capabilities to meet the needs of the Northwest.

🗣️ Speakers



Christopher Dymond

Senior Product Manager
NEEA



John Bush

President
OTS Energy



Erin Connor

Energy Efficiency Specialist
Keel Energy



Ryan Miles

Engineer
BPA

11:45 AM

Lunch

🕒 11:45 AM - 1:00 PM, May 2

1:00 PM

Community-Engaged Energy Efficiency Campaigns

🕒 1:00 PM - 2:15 PM, May 2

This session introduces an innovative strategy to gain energy efficiency improvements and savings in rural, underserved areas. Many rural, lower-income communities and their commercial sectors in southern Oregon have been economically depressed for decades. While much of Oregon recovered from the 2008–2009 recession, many of these communities fell further behind and have suffered additional disproportionate setbacks from pandemic closures. To reach these customers in rural southern Oregon, Energy Trust of Oregon is building on existing relationships to identify and partner with community groups and community leaders to form community-specific outreach approaches. To increase message efficacy, community representatives are typically empowered to direct the energy efficiency offer outreach efforts and tailor them to their communities.

🗣️ Speakers



Anna Kim

Senior Utility Analyst,
Oregon Public Utility Commission



Siletselwe Dlamini

Program Manager and Ray Fellow
Energy Trust of Oregon



Lindsey Jones

Executive Director
Illinois Valley Community Development Organization (IVCDO)



Karen Chase

Outreach Manager
Energy Trust of Oregon

The Role of Efficiency in Decarbonization

🕒 1:00 PM - 2:15 PM, May 2

Fully decarbonizing the U.S. energy system to meet climate goals will require aggressive emissions reductions across energy sectors and end uses; however, prevailing policies tend to focus on decarbonizing the energy supply in parallel with end-use electrification.

This panel will begin with a discussion of recent research that assesses multiple pathways to reduce carbon dioxide emissions to mid-century levels for U.S. residential and commercial buildings. This discussion will include 1) a recent Lawrence Berkeley National Laboratory (LBNL) analysis finding that a portfolio of efficiency, load flexibility and electrification of building end uses—alongside rapid grid decarbonization—can reduce 2050 buildings emissions by more than 90% vs. 2005 levels; 2) the Northwest Power and Conservation Council's (the Council's) 2021 Power Plan industrial decarbonization analysis, which found that approximately 64 percent of the current industrial fossil fuel use could feasibly be converted to electricity over the course of 20 years; and 3) a presentation from a utility that uses robust efficiency implementation as part of its decarbonization strategy.

🗣️ Speakers



Alexi Miller

New Buildings Institute



Joe Fernandi

Director, Customer Energy Solutions
Seattle City Light



Massoud Jourabchi

Manager Economic Analysis
Northwest Power and Conservation Council



Aven Satre Meloy

Computational Research Scientist/Engineer
Lawrence Berkeley National Laboratory

Annual Energy Savings and Beyond: Capacity Characteristics of Industrial Energy Efficiency Measures

🕒 1:00 PM - 2:15 PM, May 2

Changes in the region's supply resources have placed a premium on understanding the timing of energy savings. Utility resource planners continue to refine selection methodologies to identify the least-cost, lowest-risk strategies to meet future requirements through efficiency programs. At the same time, utilities' end-use customers are becoming more sophisticated in their understanding of energy and demand pricing, and seek to maximize the benefits of avoided cost from their investments.

Bonneville Power Administration's (BPA's) Energy Smart Industrial (ESI) program examined the time-differentiated characteristics of several measures in industrial systems, including process-chilled water, ammonia refrigeration and agricultural storage fans. This analysis was performed from the different perspectives of the end-use customer, the serving retail utility, and BPA's energy efficiency planning organization. This session explores 1) the analysis methods applied by ESI; 2) the practical implications for the different stakeholders; 3) the adequacy of existing planning tools (e.g., ProCost) in accounting for time-dependent savings; and 4) how programs and planners can actively share information from the ongoing measurement and verification work.

Inflation Reduction Act and Heat Pump Rebates

🕒 1:00 PM - 2:15 PM, May 2

The Inflation Reduction Act is the largest heat pump rebate in history. This panel will discuss the opportunity for HVAC distributors—who serve thousands of contractors in the Northwest—to develop an online process for contractors to enter claims. This online process would streamline contractor reimbursement from the state energy offices and power utilities and allow HVAC contractors to capture all relevant information needed for rebates. Further, this approach would be supported by distributor sales networks who can provide additional rebate submission education to contractors.

2:30 PM

Energy-Burdened Communities: Identification and Beyond

🕒 2:30 PM - 3:45 PM, May 2

Since the Clean Energy Transformation Act was signed into law in 2019, Washington utilities have worked with their equity advisory groups to identify the most energy-burdened communities. This panel will review utility efforts to use census-tracked data to identify these communities and explore the next steps in strategy development.

When Opportunity Knocks: Commercial Community Engagement Drives Results

🕒 2:30 PM - 3:45 PM, May 2

Bonneville Power Administration (BPA) and Trade Ally Network NW created the Opportunity Knocks campaign to help public utilities communicate the message of energy efficiency by connecting with hard-to-reach local businesses. Richland Energy Services and Clatskanie PUD were early participants, with campaign goals to position their utilities as small business partners, engage local installation contractors to develop new projects, and help business owners make their facilities more efficient. The campaign included direct customer outreach, in-person walkthroughs focusing on identification of commercial HVAC and lighting opportunities, and trade ally engagement before and after each event to prime them for potential projects. This panel will break down the Opportunity Knocks planning effort and campaign results to help other small utilities understand how a similar effort can benefit their communities.

🗣️ **Speakers**



Greg Harr
Program Manager
Trade Ally Network NW / Evergreen Consulting Group



Mike Hughes
Field Services Manager
Trade Ally Network NW / Evergreen Consulting Group



Chris Smith
Field Engineer
Trade Ally Network NW / Energy350



Dawn Senger
Energy Efficiency Coordinator
City of Richland, WA



Eric Mullendore
Commercial & Industrial Sector Lead
Bonneville Power Administration

New Unit Energy Savings Measures for the Commercial Sector

🕒 2:30 PM - 3:45 PM, May 2

Bonneville Power Administration (BPA) will introduce the latest commercial sector unit energy savings (UES) measures developed for the BPA Implementation Manual, including Heat Recovery Ventilation, New Construction Variable Refrigerant Flow, Efficient Pumps for HVAC, and Variable Frequency Drives for HVAC Pumps.

Unlocking Demand Flexibility: Accounting for Energy Efficiency/Demand Response Interactions in Power System and Program Planning

🕒 2:30 PM - 3:45 PM, May 2

As the energy grid becomes more reliant on variable, renewable and distributed energy resources (DERs), it becomes increasingly important to account for resource interactivity, including between energy efficiency, demand response (DR), and DERs, as well as outcomes for demand flexibility. Accounting for this interactivity and improving valuation methods will lead to better planning estimates of resource potential, innovative program designs, and pathways to unlock deeper demand flexibility.

In this session, we will explore the ways flexibility is considered in power system planning and program applications, including specific applications where energy planning is beginning to evolve around the focus of flexible-load resources. Topics will include: 1) How demand flexibility and the interactive effects of energy efficiency and other DR/DERs are appearing (and not appearing) in power system and program planning; 2) Current frameworks that consider characterization of distinct types of interactions between energy efficiency and DR, and how they impact available flexible loads; 3) Accounting for equity in resource and program planning as it relates to pathways for increased flexibility and measure interactivity; and 4) Methods for valuation of demand flexibility.

4:00 PM

Networking reception — brought to you by Evergreen Consulting Group

🕒 4:00 PM - 6:00 PM, May 2

Wed, May 03, 2023

8:00 AM

Breakfast

🕒 8:00 AM - 9:00 AM, May 3

9:00 AM

Keynote: Ashley Armstrong, Senior Advisor for the Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy

🕒 9:00 AM - 10:15 AM, May 3

🗣️ **Speaker**



Ashley Armstrong

Senior Advisor

Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy

10:30 AM

Bracing for Capacity Constraints Outside the Cozy Hydro Blanket

🕒 10:30 AM - 11:45 AM, May 3

Wrapped in the hydro system's cozy blanket, Northwest utilities have largely avoided the capacity constraints experienced in many areas of the country. With the very real prospect of significant electrification brought by both state policies and electric vehicles, Northwest utilities must face, understand and mitigate future capacity constraints. This panel will feature a disciplinary cross section of energy industry perspectives on capacity and electrification issues, along with potential solutions. Key topics will include electrification impacts in Seattle, capacity valuation of demand response and conservation, and solutions for mitigating capacity constraints, including finding the right heat pump, extreme weather solutions, and demand-response options.

Federal Standards: Important Rulemakings Now and in the Future

🕒 10:30 AM - 11:45 AM, May 3

The U.S. Department of Energy (DOE) establishes energy efficiency standards for more than 60 appliances and products that collectively account for 90% of energy consumption in homes, 60% of consumption in buildings, and 30% of industrial energy consumption. The DOE follows a four-phase process when reviewing existing standards and developing new ones—a process that the Northwest has long participated in. This session will review the region's historic wins, current rulemakings that will impact the region, and what we expect to see from DOE over the next couple of years.

Drought and the Food Supply Chain: How Energy Efficiency Can Help Agriculture Growers Cope with Water Supply Issues

🕒 10:30 AM - 11:45 AM, May 3

The Northwest is experiencing an unprecedented drought, particularly in eastern Washington, eastern Oregon, and Idaho. Already negatively impacting the region's ability to produce food, this drought is expected to continue. Although energy efficiency cannot solve the ongoing drought conditions, it does have the potential to enable growers to continue food production at reasonable levels while using less water. The panelists will discuss regional drought trends, the water/energy nexus, impacts to our food supply chain, barriers that agriculture producers face when making improvements to their irrigation infrastructure, agriculture-specific energy audits as an energy efficiency enabling tool, and available and future agriculture energy and water efficiency solutions for agriculture producers.

No bids Required: Flat-Rate Offer for Hybrid Water Heater Installations

🕒 10:30 AM - 11:45 AM, May 3

No bids required? A flat-rate offer for hybrid water heater installations made this possible.

A joint collaboration by Tacoma Power, Great Northwest Installations, GenPac, A.O. Smith, Northwest Energy Efficiency Alliance (NEEA), and Comfort Ready Homes, this promotion offered a hybrid water heater and installation at a flat rate to simplify the process for customers. Leveraging the collaborative's expertise, established relationships, available partner funding, and Tacoma Power's three financing options, the collaborative realized a flat-rate dollar amount to cover the unit and installation cost. This panel will discuss how this nine-month promotion expanded and enhanced Tacoma Power's existing heat pump water heater program offers, the lessons learned and the results—both expected and unexpected.

🔊 Speakers



Crystal Nispuruk
Conservation Sales Manager
General Pacific



Steve Brotton
Owner
Great Northwest Installations



Jenae Elliot
Communication and Marketing Analyst
Tacoma Public Utilities



Emily Rosenbloom
Senior Program Manager
NEEA

11:45 AM

Lunch roundtables

🕒 11:45 AM - 1:00 PM, May 3

1:00 PM

What Needs to Be Broken to Fix Everything and Save the World

🕒 1:00 PM - 2:15 PM, May 3

Current energy efficiency programs are not helping us meet our climate targets. Utility and regional power planning is disconnected from the realities of the market and policy, and the rules intended to support energy efficiency feel like they are hampering it instead.

As we double the size of our electrical grid in approximately 20 years, we will need more energy efficiency, along with demand response, energy storage and onsite renewable energy generation—all customer-side resources that don't fit neatly into our existing avoided-cost and cost-effective energy efficiency frameworks. This panel will discuss how we can meet this moment by breaking current paradigms.

🔊 Speakers



Poppy Storm
Founder and Director of Innovation
2050 Institute



Gilbert Archuleta
Director of Customer Energy Management
Puget Sound Energy



Joe Fernandi
Director, Customer Energy Solutions
Seattle City Light



Amy Wheelless
Senior Policy Associate
Northwest Energy



Kerry Meade
Executive Director
NEEC & The Smart Buildings Center

The Power in a Security Blanket: Dual Fuel Heating Systems

🕒 1:00 PM - 2:15 PM, May 3

A dual fuel system is pairing up an electric heat pump with a gas furnace and strategically takes turns on using gas or electricity to provide heat in a central ducted heating system. This session provides insights into trends and understandings of dual fuel heat pump programs from the manufacturer perspective. We will share some modeling on switchover temperatures in the NW and recent market research.

Marketing Campaigns to Reach Small Businesses

🕒 1:00 PM - 2:15 PM, May 3

Small business owners often don't have time for energy efficiency, and even when they have time, they don't have the money. Energy efficiency isn't their business, it's our business. This panel will discuss a marketing campaign developed to demonstrate how Energy Trust of Oregon cares about small businesses and to communicate the tools and resources available to help businesses thrive. The campaign was carefully designed to build trust with customers who don't know about Energy Trust and don't think about efficiency.

This campaign included the creation of a one-stop resource for all small businesses, with a focus on reaching businesses in communities of color, rural and low-income areas, and sectors most impacted by COVID-19. The campaign further focused on 1) providing a resource for customers to explore options that could make their business operate more efficiently and save money, and 2) telling customers' stories from their perspectives and 3) cultivating a diverse creative team to reach a wider audience.

Tribal Nations and Northwest COUs: Building Relationships and Technical Capacity

🕒 1:00 PM - 2:15 PM, May 3

While the zero-emission vehicle (ZEV) transportation transition is accelerating in urban areas, the region risks leaving behind rural residents, who often drive more miles, spend a larger share of their household budgets on transportation, and contribute more GHG per capita than their urban counterparts. Among the most disadvantaged rural residents with lower incomes and higher burdens are Native Americans living on tribal reservations and in surrounding communities.

Our panelists are working to assure that the benefits of ZEV transportation investments flow equitably to Native people in Idaho, Montana, Oregon and Washington. Community-directed engagement and outreach with tribal communities coupled with partnerships and expert technical assistance with their rural utilities will build capacity to take full advantage of the ZEV transition.

The discussion will address where to begin and strategies to overcome barriers to build effective relationships with tribal communities. The panel will further discuss ways to eliminate barriers to tribal ZEV access and how to build tribal and rural utility technical capacity.

2:30 PM

Exploring Co-Funding Opportunities for Energy Efficiency Acquisition

🕒 2:30 PM - 3:45 PM, May 3

This session will highlight the business case for exploring supplemental funding for acquiring energy efficiency savings, particularly given the cost-effectiveness challenges in our rapidly changing energy environment. The session will include presenters who have successfully integrated new funding resources, with discussion of their approach and best practices in vetting the options, pursuing meaningful partnerships, and integrating the additional funds into their program offerings to achieve additional savings that serve a broader range of customers. The session will further discuss multiple sources of supplemental funding, including governmental (federal and state), private and nonprofit opportunities, and the challenges and benefits of each source.

🗨️ Speakers



Alec J. Shebiel
Government Relations Manager
Umatilla Electric Cooperative



Elaine Prause
Senior Associate
Regulatory Assistance Project



Mark Wyman
Senior Manager—Innovation and Development
Energy Trust of Oregon



Tina Jayaweera, Ph.D.
Power Planning Resources Manager
Northwest Power and Conservation Council

Northwest State Policy Roundup

🕒 2:30 PM - 3:45 PM, May 3

Learn where Idaho, Montana, Oregon and Washington are headed from a policy perspective, with a particular focus on funding from the Infrastructure Investment and Jobs Act and the Inflation Reduction Act.

Buildings of the Future

🕒 2:30 PM - 3:45 PM, May 3

After being retrofitted with a zero global warming potential (GWP) CO2 heat pump water heater, a Seattle multifamily building with electric-resistance water heating reduced its capacity for domestic water heating by 97%. This panel will discuss this retrofit and the rich opportunity this technology represents for multifamily buildings across the city, the state and the entire Northwest.

Demand Flexibility in the Northwest

🕒 2:30 PM - 3:45 PM, May 3

This panel will discuss recent trends and deployments of demand flexibility in the Northwest and nationally, including the growing need for demand flexibility, its value proposition, and proof-points to address system constraints, enable integration of distributed energy resources, and address resiliency challenges. In addition to discussing the general and specific value opportunities, the panel will discuss ongoing field demonstrations in the Northwest, including two Department of Energy Connected Communities projects from Portland General Electric (PGE) and Edo, as well as additional national and international activity.

🗨️ Speakers



Hayden M Reeve
Senior Technical Advisor
PNNL



Marc Costa
Director of Policy and Planning
The Energy Coalition



Easan Drury
Edo Energy



Tim Treadwell
Portland General Electric

