NORTHWEST HYDROELECTRIC ASSOCIATION

2017 ANNUAL CONFERENCE

Hydropower: The Cornerstone of Clean Energy

FEBRUARY 22–24, 2017
Portland Marriott Downtown Waterfront
Portland, Oregon

Register soon for maximum savings!
To register, please visit our website:
www.nwhydro.org
Dynamic market conditions. Unique environmental concerns. Unrelenting operational and management challenges. Can advanced technologies and innovative approaches help you navigate today’s hydro landscape?

The NWHA Annual Conference is a one-of-a-kind opportunity to examine regional energy issues from the hydro perspective and explore how other professionals are dealing with them. Join the area’s leading practitioners to gain industry-specific insights and understanding of what’s working best in the Northwest hydropower community.

Register online today at www.nwhydro.org

Welcome
A Special Thank You!
Northwest Hydroelectric Association (NWHA) would like to recognize the following sponsor companies. We thank you for your support!

Note: Additional sponsorships will be included in the on-site program and conference signage if received by January 10, 2017.

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Wednesday, Feb. 22

7:00 a.m.
Registration Opens
Continental Breakfast in Exhibit Area

8:00–8:20 a.m.
WELCOME
Steve Padula, McMillen Jacobs Associates
President, Northwest Hydroelectric Association

8:20–8:40 a.m.
KEYNOTER

8:40–10:00 a.m.
Straight Talk—Where does hydro fit into the nation’s renewable energy mix?
The hydropower industry knows how valuable our resource is, but this message is often lost on those outside the industry’s circle. This panel will explore some key perspectives regarding hydropower and how our technology compares with other resources. As NWHA and other industry organizations are working to promote hydropower’s message and benefits, hear how utilities, policymakers and the public view different renewable energy resources and where hydro fits into the nation’s energy picture.

Moderator:
Michael Manwaring, MWH Global

Panelists:
William A. Hazelip, National Grid USA
William Holmes, K & L Gates
Lisa Grow, Idaho Power Company
David Danner, Washington Utility & Communication Council

10:00–10:30 a.m.
Break in the Exhibit Area

10:30 a.m.–12:00 p.m.
An Operator’s View of Hydro on the Grid
Providing an operational perspective on how hydro is used to help manage energy on the grid, this session will identify and highlight the many positive aspects of hydro and how it is unique in its ability to help grid operation. Many hydro plants have seen changes in the dispatch of their plants in response to changes in markets and the new energy mix; this has caused some changes in the way hydro is expected to respond. The session will provide an operator’s perspective on these new operational requirements.

Moderator:
Scott Flake, Scott Flake Consulting

Panelists:
Evan Sorrell, Puget Sound Energy
Jim Gill, Pacific Gas & Electric
Travis Keller, Sacramento Municipal Utility District
John Schaffroth, PacifiCorp
12:00 p.m.

**Lunch**

NWHA Annual Membership Meeting
Presentation of the Pamela E. Klatt Award
“Hiring for Hydro” Program

1:30–3:00 p.m.

**Strategic People Management: Tips on Weathering the Silver Tsunami**

All across the nation utilities are struggling to find skilled, highly trained employees and recruits to replace a landslide of baby-boomer retirees that will be sailing into the sunset in the foreseeable future. This panel will explore the challenges associated with strategic workforce planning, and will look at what's working, what's not working, and success stories and creative ideas.

**Moderator:**
Annie Killburg, Kearns & West

**Panelists:**
Brenna Vaughn, Hydro Research Foundation
Pat McCarty, Tacoma Power
Lena Kostopulos, Eugene Water & Electric Board
Mark Andersen, California Department of Water Resources

3:00–3:30 p.m.

**Break in the Exhibit Area**

3:30–5:00 p.m.

**Advances in New Waterpower Technologies**

New wave energy, tidal energy and in-stream turbine technologies are advancing through the research, planning, development and operational phases throughout the Northwest. Hear our region’s leading project developers, engineers and environmental research experts discuss real-world marine and hydrokinetic (MHK) projects and how the industry is overcoming technical and regulatory challenges and moving projects forward.

**Moderator:**
Cherise Gaffney, Stoel Rives

**Panelists:**
Dan Hellin, Northwest National Marine Renewable Energy Center, Oregon State University
Gia Schneider, Natel Energy, Inc.
Ben Maurer, Northwest National Marine Renewable Energy Center, University of Washington
Andrea Copping, Pacific Northwest National Laboratory

5:00 p.m.

**Adjourn/Social in the Exhibit Area**

Register online today at www.nwhydro.org
7:15 a.m.
Registration Opens
Continental Breakfast in Exhibit Area

8:00–8:30 a.m.
WELCOME
Steve Padula, NWHA President
KEYNOTER
Steve Wright, General Manager, Chelan PUD
Overview of the recently completed study on hydropower values conducted by the Pacific Northwest Utilities Conference Committee (PNUCC)

8:30–10:00 a.m.
Security – Real Threats and Hydro’s Response
This session will provide a broad perspective on physical and cyber threats to the energy infrastructure. The session will pertain specifically to hydro, including FERC’s perspective on implementation of the FERC Security initiative. The session will conclude with two licensee perspectives on practical strategies for implementing security measures and balancing public access and security.

Moderator:
Mac Mikkelsen, Avista
Panelists:
FERC’s Role in Security Regulation
   Ed Perez, Federal Energy Regulatory Commission, Portland Regional Office
Electronic Security
   John Yale, Chelan PUD
Development of Public Information: Safety and Security
   Meg Richardson, Pacific Gas & Electric Company
Automated Controls and Cyber Security
   Dave Brown, Cyber Security Branch, US Army Corps of Engineers

10:00–10:30 a.m.
Break in the Exhibit Area

10:30 a.m.–12:00 p.m.
New Hydro Development Now and in the Future
New hydroelectric projects are being planned and constructed across the U.S. and Canada. These include original FERC licenses for projects located on free-flowing waterways, hydro-retrofits to existing dams and pumped storage. Projects located on existing federal facilities managed by the Army Corps of Engineers (“Corps”) or the Bureau of Reclamation require additional approvals. In this session you will learn how hydro developers navigate their projects through the current regulatory process; incentives used to finance projects; shifting jurisdictional issues and processes between Reclamation, Corps and FERC; and the future process for obtaining federal regulatory approvals (with FERC as the central clearinghouse for all such approvals).
12:00 p.m.

Lunch in the Exhibit Area

1:30–3:00 p.m.

**A Climate Change in Asset Management**

This session is intended to capture the key concepts and information resulting from the hydropower industry Asset Management Summit hosted by the Bonneville Power Administration in October 2016. The speakers will also provide context and background for the Summit, along with the perspectives on implementing asset management best practices from utilities in the Northwest and around the world.

*Moderator:*
Mark Jones, HDR, Inc.

*Panelists:*
William Leady, Bonneville Power Administration
Steve Miles, U.S. Army Corps of Engineers
David Zayas, National Hydropower Association
Janel Ulrich, Chelan PUD

3:00–3:30 p.m.

**Break in the Exhibit Area**

3:30–5:00 p.m.

**Compliance: Hot Topics, Big Challenges, Creative Solutions**

All FERC licenses include a variety of measures that were developed with the best intentions to protect natural and cultural resources. But implementing these measures can be a different matter. Time and events outside the licensee’s control can modify resource conditions. Regulations and best available science can change. And yet, licensees must still comply with their license conditions and with other federal, state and local regulations. This panel will include four case studies on current license compliance topics that presented significant implementation challenges and creative processes that were used to address them.

*Moderator:*
Jon Jourdonnais, NorthWestern Energy

*Panelists:*
Who agreed to this downstream fish passage standard?
Tim Shibahara, Portland General Electric

License Implementation: Navigating the maze of federal, state and local permitting
Briana Weatherly, PacifiCorp

Complying with Historic Preservation License Requirements: New Uses for Old Buildings
Rebecca Ossa, Seattle City Light

Snake River Stewardship Program and Water Quality Compliance
Ralph Myers, Idaho Power Company

5:00 p.m.

Adjourn/Social in the Exhibit Area
7:15 a.m.
**Continental Breakfast in Exhibit Area**

8:30–10:00 a.m.
**Legal and Policy Impacts of a New Administration**
The transition to a new administration will bring policy changes that have important legal and practical impacts for the waterpower industry. Panelists will discuss likely impacts to the hydropower industry from the new administration’s energy and climate change policies as well as impacts on tax credits and funding opportunities and implementation of endangered species, mitigation and other environmental laws. The panel will focus in particular on the new administration’s priorities and how its policies will impact hydropower in the Northwest, including FCRPS proceedings.

**Moderator:**
Barbara Craig, Stoel Rives, LLC

**Panelists:**
- Tim Welch, Water Power Technologies Office, U.S. Department of Energy
- Michael Tehan, National Marine Fisheries Service
- Jeff Leahey, National Hydropower Association
- Jason Morgan, Stoel Rives

10:00–10:30 a.m.
**Break in the Exhibit Area**

10:30 a.m.–12:00 p.m.
**“Fishy Business” – Timely Investigations in the Northwest**
Just as the Northwest is at the epicenter of hydroelectric generation, we also have some of the biggest challenges managing our fish species so that we can continue to reliably generate electricity. And while the “Fishy Business” facing a particular project will differ based on its location and configuration, exchanging ideas and experiences will help us identify approaches to dealing with the issues we face implementing our FERC licenses. Our diverse panel will discuss four areas of ongoing investigation that are helping shape how these issues will be addressed around the region.

**Moderator:**
John Esler, Portland General Electric

**Panelists:**
- *Methylated Mercury in the Food Chain – How reservoirs can concentrate this toxin*
  - Dr. Dave Krabbenhoft, United States Geological Service
- *Putting the Pieces Together: Idaho Power’s White Sturgeon Program on the Snake River*
  - Ken Lepla, Idaho Power Company
- *Battle for the Ages – Managing Multiple ESA Protected Fish Species on the Deschutes River*
  - Megan Hill, Portland General Electric
- *Shattering Long-held Beliefs of How Rivers Function – Myths of Hydrology that Effect Dam Owners*
  - Gordon Grant, Pacific Northwest Research Center, US Forest Service

12:00 p.m.
**Adjourn**

1:00 p.m.–5:00 p.m.
**Pumped Storage Workshop**
Make Your Room Reservations Directly!
The Portland Marriott Downtown Waterfront hotel is offering special NWHA room rates of $174 as well as a limited number of rooms for government entities at $151 (rate subject to change). Reservations made after January 30, 2017, are subject to higher rates and availability.

Call (1) 800 228-9290 to make your room reservations directly, or go to www.nwhydro.org and click the Annual Conference link.

Portland Marriott Downtown Waterfront
1401 SW Naito Parkway, Portland, Oregon 97201
Phone: (1) 503-226-7600   Fax: (1) 503-221-1789
Learn more about resources available from these NWHA member companies who are also among the region's leading technology and service providers.
Conference Registration
Registration for the NWHA Annual Conference can be done online by visiting www.nwhydro.org.

Registration Fees:

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<tr>
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Should you have any questions regarding accessing the online registration system, please contact Amoreena at (503) 290-3024 or amoreena@nwhydro.org.
If you have questions regarding exhibits, speakers or other conference details, please contact Jan at (503) 545-9420 or jan@nwhydro.org.
Scholarship Honors Industry Colleague

NWHA has established the JULIE A. KEIL WOMEN IN HYDRO SCHOLARSHIP FUND at U.S. Bank in honor of Julie’s long-term commitment to the industry.

Julie worked at Portland General Electric for over 25 years and was a mentor and industry leader. Many of the utilities and companies nationwide have been able to benefit from Julie’s leadership, her insight and her ability to work with agencies toward mutual goals. Your company can contribute to the scholarship fund and receive a tax credit as an additional benefit. The fund also accepts individual donations.

You can honor Julie with a donation by mailing a check made out to the JAK Scholarship Fund to NWHA, P.O. Box 2517, Clackamas, Oregon 97015 (or we can provide an invoice or wire routing information).

Industry Recognition Award

2017 Pamela E. Klatt Award

NWHA members nominate potential candidates for this award honoring Pam Klatt, in memory of her strong advocacy in promoting hydropower during her long-standing support of NWHA. The award recognizes individuals, like Pam, who have made significant contributions to the hydropower industry in the Northwest. For more information, visit www.nwhydro.org/events-committees/award/.

Nominations must be received by January 10, 2017. The Awards Committee will advise the selected nominee prior to the annual conference, where the award will be presented on February 22, 2017.
Generating Hydropower’s Future

This year the Hydro Research Foundation joins with the Northwest Hydroelectric Association on Wednesday, February 22nd as part of the inaugural Hiring for Hydro (H4H) event. The event will be held at the Marriott Downtown Waterfront Hotel, Lower Floor, in Portland, from 10:00 a.m. to 5:30 p.m.

H4H is a recruiting and educational event designed to attract and recruit bright, capable new electrical workforce entrants, including: those interested in electronics, controls, industrial technology, electricians, electrician apprentices, meter and relay technicians, communications technicians, SCADA engineers, journeymen, energy systems engineering, utility resources, and transmission hydropower in the Pacific Northwest Region. At this event, pre-screened students, educators, hydro companies and their recruiters will meet for an action-packed day.

Participating Schools:

- American River College
- Centralia College
- Clackamas Community College
- Eastern Washington University
- Idaho State University
- Oregon Institute of Technology
- Oregon State University-Cascades
- Portland Community College
- Washington State University-Vancouver

Visit www.HydroFoundation.org to become a program partner, reserve an exhibitor table, or support the lunch. Space is limited, so registrations will be accepted on a first-come, first-served basis. Please note there is also a special NWHA member rate available.
Continental Breakfast, Lunch, Breaks and Socials will be in the Exhibit Area.

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