Energy Solutions

2017 PNWER Annual Summit Portland, Oregon

Monday July 24th 2:30-5:30

Co- Chairs

The Pacific Northwest Economic Region



Rep. Deborah Boone Representative

Oregon Legislative Assembly

Representative Deborah Boone is serving her seventh term in the Oregon House. She was appointed in August 2004 to serve the remainder of the term for House District 32 following Elaine Hopson's resignation. Deborah was elected by the citizens of House District 32 in November 2004, and continues to serve as their representative. Following the Japan Tsunami in 2011, Deborah successfully

introduced legislation to create the Oregon Resilience Plan, recognized by the Obama Administration, and receiving international acclaim, this effort led to an Oregon Resiliency Task Force, a Resilience Officer in the Oregon Governor's office, as well as the Cascadia Playbook for emergency response in the event of a massive earthquake and tsunami. Deborah worked for 16 years as a legislative assistant to seven individual legislators, with 8 of those years in House District 32 before being appointed to an unexpired term of Rep. Elaine Hopson.



Paul Manson President & CEO

DC Grid Development Corporation

Since 1988, Paul Manson has held executive management positions with several development companies in the natural resource industries, and currently serves as CEO of Vancouver-based DC Grid Development Corporation. Paul is the former President of Sea Breeze Power Corp. and founder of Sea Breeze Energy Inc., a wind development firm that he co-founded in 2001. Sea Breeze Energy Inc. became the

first company in British Columbia to pursue wind energy as a commercial opportunity, and became the first company in British Columbia to achieve a full environmental permit for a wind farm. Paul also serves as chairman of the Clean Technology Community Gateway, a federally incorporated non-profit corporation dedicated to assisting off-grid communities develop strategies for adopting more energy efficient housing options and transitioning to locally available renewable energy resources. Additionally, Paul is a member of the BC Central Coast Ocean Advisory Committee, and an advisor to the Vancouver Island Sustainable Technology Association.

Marine Renewable Energy Panel



Jason Busch
Executive Director

Oregon Wave Energy Trust

Jason Busch is Executive Director of Oregon Wave Energy Trust (OWET) and the Pacific Ocean Energy Trust (POET). Both organizations are nonprofits that support the responsible development of marine energy in Oregon and West Coast, respectively. Mr. Busch is also a co-chair of the Marine Energy Council, the

national trade group for the marine hydrokinetic energy sector. Mr. Busch is actively involved in both business and community organizations. He is on the Energy Trust of Oregon's Renewable Energy Advisory Committee, Oregon Department of Land Conservation and Development Territorial Sea Plan Rulemaking Project Committee, the Northwest National Marine Renewable Energy Center Mobile Ocean Test Berth Advisory Committee, and the Department of State Lands Rulemaking Advisory Committee. He has multiple publications, including most recently a chapter in *Climate Change Impacts on Ocean and Coastal Law*, published by Oxford University Press. Prior to joining Oregon Wave Energy Trust, Mr. Busch was Principal at Sustainable Legal Solutions LLC, where he provided legal services specializing in renewable energy company start-ups and project development. Previously, he was an attorney for Ater Wynne and Stoel Rives in Portland, Oregon. Mr. Busch holds a B.A. in Political Science from Texas A&M University and a M.A. in Philosophy from the University of Southern Mississippi. He received a Doctor of Jurisprudence degree in 2006 from the University of Oregon School of Law, graduating with honors and admitted to the Order of the Coif.



Rebecca O'Neil
Program Manager- DOE EERE Renewable Energy Portfolio

Pacific Northwest National Laboratory

Ms. Rebecca O'Neil is a program manager for Pacific Northwest National Laboratory, serving as the lab relationship manager for the US DOE EERE Renewable Energy portfolio and conducting research related to energy storage, electricity market design, sustainable hydropower and marine energy development. She joined PNNL in 2015 from the Oregon Department of Energy,

where she represented the agency on water power development, the renewable portfolio standard, and a multimillion-dollar portfolio of federal grants ranging from agricultural efficiency to woodstove replacement. Before her state service, she managed the multifamily energy efficiency program for a contractor of Energy Trust of Oregon and for years represented a coalition of river conservation and recreation organizations in federal hydropower dam licensing. She serves on multiple organizational boards and advisory groups related to renewable energy. Unrelated to energy, Rebecca has served as an AmeriCorps-VISTA teaching childhood literacy in rural Kentucky. As a Wagoner Scholar, she conducted Honors work in Cape Town, South Africa, producing a thesis on the role of literacy in manumission. She is a civilian advisory graduate of the National Security Seminar at the U.S. Army War College in Carlisle, Pennsylvania. She earned a B.A. from Rice University in Houston.



Aaron Porter
Coastal Engineer

Mott MacDonald

Aaron Porter, PE is a coastal engineer with more than seven years of experience in ports and coastal engineering. He is a project manager at Mott MacDonald, a global consulting firm, and is located at the Edmonds, WA office. His experience includes supporting port and energy clients in the public and private sectors, both in the U.S. and abroad. Recent project work includes assessment of marine infrastructure to support development of offshore wind and marine hydrokinetics

on the U.S Pacific West Coast, and application of numerical wave and current modeling in the Puget Sound and Columbia River. More generally, his experience includes waterway design, marine renewables, and the design, rehabilitation, and construction of beaches and coastal structures. Aaron also has project experience in dredging and sedimentation analysis, marine navigation feasibility studies, and sea-level rise assessments.



Rick Williams
Director- Columbia Region

Leidos Energy

Rick Williams is the Founder and Principal of Oregon Applied Research, LLC. He is a career mariner with has 35 years of experience in systems engineering, system integration, ocean engineering, and program management. He consults to industry and government clients on complex, multi-disciplinary projects in a range of roles including Chief Technology Officer, Senior Program Manager, and Chief Engineer. His experience includes construction, marine operations, ocean engineering, and

manufacturing. Certifications include Project Management Professional (PMP) and New Product Development Professional (NPDP). Rick is a retired US Navy Submarine Force Captain and a Fellow of the Explorers Club. He holds a Bachelor's degree in Construction Engineering Management, an MBA and is a graduate of the US Naval Nuclear Power Program (Command) and the Defense Systems Management College Acquisition Professional Program (Major Command). Rick was a founding board member of the Oregon Wave Energy Trust (OWET). He completed the Graduate Certificate in Energy Policy & Management at Portland State University in June 2016 and was appointed as a Senior Fellow in the PSU Center for Public Service. His current focus is disaster resilient power and marine energy. Rick was elected as a Fellow of the Explorers Club for his leadership of the Deep Submergence Vehicle Sea Cliff 20,000 dive expedition in the Middle America Trench in 1985. He later led two expeditions to the North Pole in command of nuclear fast attack submarine USS Spadefish.

Remote Energy Panel



John Glassmire
Director of Energy Engineering

HOMER Energy

John Glassmire manages the consulting, training, and support programs at HOMER Energy. Trained as a mechanical/electrical engineer, John has extensive experience in the modeling and design of both distributed and traditional energy supply systems. He has led and worked on a wide-variety of energy research and consulting projects including cost-to-society environmental and economic

impacts of clean energy technologies for grid planning, integrated resource planning for energy infrastructure, expost financial analysis of demand management programs, and monitoring and evaluation frameworks for energy efficiency and distributed energy programs. For over a decade, he has performed cost modeling and design optimization for energy systems ranging from small isolated systems, to isolated Arctic diesel grids, to interconnected microgrids, to Pacific and Caribbean islands. He has led training workshops on integrating renewables into electrical grids for hundreds of clients worldwide. BSME (Rice), MSME (Northwestern).



George Roe
Research Professor

Alaska Center for Energy and Power - University of Alaska Fairbanks

George Roe is a member of the research faculty at the University of Alaska in Fairbanks, affiliated with the Alaska Center for Energy and Power (ACEP). His work focuses on adaptation and integration of energy grid technologies, working in conjunction with industry, utilities, federal agencies and communities. He is a co-investigator and member of the Alaska Center for Microgrid Technologies Commercialization leadership team, and is the program manager at the

University of Alaska in Fairbanks for the Arctic Remote Energy Networks Academy (ARENA). Prior to joining UAF in 2013, George served in various engineering and management roles at Boeing for 35 years in research and development of aerospace-related energy subsystem technologies. George holds Bachelor and Master of Science degrees in Mechanical Engineering from the University of Washington.



Hon. Wally Schumann
Minister of Industry, Tourism, & Investment and Minister of Infrastructure

Government of the Northwest Territories

Wally Schumann was first elected to the 18th Legislative Assembly of the Northwest Territories in November 2015 representing the constituency of Hay River South. Mr. Schumann was born in Fort Smith and has lived in Hay River for the past 30 years. Trained as a Red Seal Certified Auto body Journeyperson, Mr.

Schumann founded Poison Graphics, an auto body repair facility, which has become the largest sign manufacturing business in the NWT. Prior to entering territorial politics, Mr. Schumann previously served as President and Vice-president of the Hay River Métis Government Council. During his time on Council, Mr. Schumann led a large-scale consultation to develop a community wellness contribution funding agreement with the GNWT. Mr. Schumann was the director for the Hay River Chamber of Commerce, a member of the NWT Chamber of Mines Aboriginal Participation Committee and a Director for the NWT Manufacturer's Association. Mr. Schumann also volunteered at Diamond Jenness High School dedicating time to mentor our future leaders by participating in cultural activities and attending weekly student council meetings. In his spare time, Mr. Schumann likes to go jet boating and spend time at the family cottage with his wife.



Jud Virden
Associate Laboratory Director- Energy & Environment
Pacific Northwest National Laboratory

Jud Virden is Associate Laboratory Director for the Energy and Environment Directorate at Pacific Northwest National Laboratory in Richland, Wash. He leads 1,000 scientists, engineers, and staff who are delivering science and technology solutions for the nation's complex energy and environmental challenges — including advancing energy storage technologies, modernizing the power grid, integrating

renewable energy, advancing energy efficiency in all sectors, developing biofuels, ensuring sustainable hydropower, and resolving complex issues in nuclear science. With a focus on accelerating the deployment of technology to market, Jud helps shape regional, national and international public-private partnerships. His diverse industry and academic leadership includes the American Council for an Energy Efficient Economy, CleanTech Alliance of Washington, Oregon Innovation Council, University of Washington College of Engineering, University of Michigan Energy Institute, and Georgia Tech Strategic Energy Institute. He was elected in 2014 to the Washington State Academy of Sciences. Jud was inducted in 2017 as a Fellow in the American Association for the Advancement of Science. He joined PNNL in 1991 as a researcher and has held leadership roles of increasing responsibility and complexity, including deputy associate laboratory director, energy market sector director, and chief science and technology officer. Jud earned a bachelor's degree and a doctorate in chemical engineering from the University of Washington.