PROJECT PEER REVIEW

U.S. DEPARTMENT OF ENERGY
WIND ENERGY TECHNOLOGIES OFFICE
WATER POWER TECHNOLOGIES OFFICE

PROGRAM GUIDE

ENERGY | Energy Effi i
le Energy

DIRECTOR'S LETTER

Dear Peer Review Attendees,

On behalf of the U.S. Department of Energy's Wind Energy Technologies Office (WETO) and Water Power Technologies Office (WPTO), we would like to welcome you to this year's Peer Review. This combined review of DOE's Wind Energy Technologies and Water Power Technologies portfolios will be a dynamic event filled with thought-provoking presentations and discussions, as well as networking opportunities.

The peer review is vital to DOE's continued efforts to accelerate deployment of innovative energy technologies through improved performance, lowered costs, and reduced market barriers. Strengthening our use of the nation's abundant energy resources will help diversify the U.S. energy portfolio, create jobs, ensure domestic energy supply, and provide cost-competitive electricity to consumers across the country.

This year's review features over 170 presentations spanning six tracks and 20 technology areas, with a combined value of over $250 million. The work to be highlighted represents the combined efforts of government agencies, national laboratories, industry, and academia. The Wind Energy Technologies and Water Power Technologies Offices strive for the highest levels of accountability and uphold a shared commitment to act as responsible stewards of taxpayer dollars. We rigorously steer our projects to produce results that achieve relevant, cost-effective goals for our nation.

The peer review process is a crucial opportunity for external stakeholders to thoroughly evaluate our technical approaches, progress, and relevance, as well as the overall merit of projects supported by the Offices. The reviewers participating in this year's event are some of the most knowledgeable members of the wind energy and water power communities. Their feedback will help strengthen our nation's portfolio by providing the Offices with the input necessary to make informed decisions about our research.

We are committed to supporting secure, domestic sources of wind energy and water power that can serve as key components of the nation's energy future. Discussion and feedback generated by this review will be essential in ensuring a vibrant and relevant program, and in helping identify opportunities for responsible and cost-effective deployment of wind energy and water power technologies.

We express deep gratitude to the presenters who will share their activities and results, and to our distinguished panel of reviewers and chairs for their critical evaluation and commitment to improve and strengthen DOE's portfolio and vision.

Sincerely,

Alejandro Moreno
Director, Water Power Technologies Office

Jose Zayas
Director, Wind Energy Technologies Office

CONTENTS

TUESDAY GENERAL SESSION AGENDA

Tuesday, February 14				
Start Time	**Presentation Title**	**Room**	**Presenter**	**Presenter Org**
8:00 AM	Joint Breakfast with Wind and Water Attendees	Commonwealth Ballroom		
8:45 AM	Facilitator Welcome	Commonwealth Ballroom	Alex Lemke	U.S. Department of Energy
9:00 AM	Wind Director Welcome	Commonwealth Ballroom	Jose Zayas	Wind Energy Technologies Office
9:25 AM	Water Director Welcome	Commonwealth Ballroom	Alejandro Moreno	Water Power Technologies Office
12:30 PM	Lunch Keynote	Commonwealth Ballroom	Guest Speaker	
5:30 PM	Poster Session	Foyer		

U.S. DEPARTMENT OF ENERGY SPEAKERS

Jose Zayas
jose.zayas@ee.doe.gov | 202-287-5201

José Zayas is the director of the U.S. Department of Energy's Wind Energy Technologies Office. In this role, José manages efforts to improve performance, lower costs, and accelerate deployment of wind and water power technologies, which can play a significant role in America's clean energy future. In working with DOE's national laboratories, academia, and industry, the program funds research, development, and deployment of wind and water power systems through competitively selected, cost-shared projects with businesses, federal, state, and other stakeholder groups. Prior to his arrival at DOE, José was the senior manager of the Renewable Energy Technologies group at Sandia National Laboratories, where his responsibilities included establishing strategy and priorities, defining technical and programmatic roles, business development, and performing management assurance for the renewable energy-related activities of the laboratory. After joining Sandia in 1996, he spent the first ten years of his career supporting the national mission of the Lab's wind energy portfolio as a senior member of the technical staff. After transitioning to program manager in 2006, José engaged and supported a variety of national initiatives to promote the expansion of clean energy technologies for the nation. José holds a Bachelor of Science in Mechanical Engineering from the University of New Mexico and a Master of Science in Mechanical and Aeronautical Engineering from the University of California at Davis.

Alejandro Moreno
alejandro.moreno@ee.doe.gov | 202-287-6692

Alejandro Moreno is the director of the U.S. Department of Energy's Water Power Technologies Office, where he leads DOE's efforts to support cost-effective, environmentally responsible electricity from hydropower and marine energy technologies. Alejandro developed the pioneering U.S. government research and development program for marine energy at DOE, as well as the first nationwide assessments of the potential for new hydropower in the United States. Between stints at DOE, he served in the energy groups of the World Bank and International Finance Corporation, where he designed and led regulatory reform programs to spur investment in clean energy. He holds a Master of Arts in international economics and energy policy from the Johns Hopkins School of Advanced International Studies and a Bachelor of Arts from Stanford University.

Jim Ahlgrimm - DOE
jim.ahlgrimm@ee.doe.gov | 202-586-9806

Jim Ahlgrimm started his career in energy as a nuclear power plant supervisor, serving onboard a U.S. Navy submarine. Jim has been working with the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy since 2002, with technology management responsibilities in both the wind and water power programs. Most recently, Jim served as the acting director of the newly formed Water Power Technologies Office. Jim has a bachelor of science degree in aerospace engineering from the United States Naval Academy, a Master of Business Administration from the University of Maryland, and a master of science degree in national resource strategy from the Industrial College of the Armed Forces.

Hoyt Battey
hoyt.battey@ee.doe.gov | 202-586-0143

Hoyt Battey is the program manager in the U.S. Department of Energy's Water Power Technologies Office. Hoyt is responsible for research to understand and reduce deployment barriers, which include addressing concerns over potential environmental impacts of new technologies, regulatory and policy issues, and workforce development, and increasing access to objective information to promote public acceptance. Hoyt originally joined DOE in 2009 as a Presidential Management Fellow, and, before that, worked for the environmental commodities brokerage firm Evolution Markets. Hoyt holds a master's degree in environmental science and policy from the Earth Institute at Columbia University.

Jocelyn Brown-Saracino
jocelyn.brown-saracino@ee.doe.gov | 202-287-6097

Jocelyn Brown-Saracino manages the environmental research portfolios for the U.S. Department of Energy's Wind Energy Technologies Office. In this role, Jocelyn crafts the strategic direction of the environmental research portfolio and supervises projects aimed at measuring, mitigating, and sharing information on the environmental impacts of land-based wind and offshore wind. Jocelyn holds degrees in marine science from the University of New England and biological sciences from Smith College.

Charlton Clark
charlton.clark@ee.doe.gov | 202-586-8040

Charlton Clark is the program manager for grid integration in the U.S. Department of Energy's Wind Energy Technologies Office. In this role, Charlton manages efforts to improve the deployment of wind energy and pumped storage hydropower into the electricity system and to support the adoption of successful integration techniques by utilities. He also oversees work to broaden understanding of how the electricity system can be designed and operated to accommodate large amounts of wind power, and how pumped storage hydropower can support increasing needs for power system flexibility. Prior to his arrival at DOE, Charlton was a staff witness at the Federal Energy Regulatory Commission (FERC). While working at FERC, Charlton testified on a variety of engineering-related issues in cases before the Commission, including on topics such as generator availability metrics, issues surrounding reactive power, transmission facility upgrades, and other issues. Charlton also participated in the successful negotiation of dozens of cases covering a variety of topics. Charlton holds bachelor's and master's degrees in electrical engineering from New Mexico State University (NMSU), as well as a graduate minor in utility regulatory economics from the Center for Public Utilities at NMSU.

Joel Cline
joel.cline@ee.doe.gov | 202-287-6966

Joel Cline is the resource characterization team lead within the U.S. Department of Energy's Wind Energy Technologies Office. Joel is an operational forecaster with emphasis in fluid dynamics, as well as a tropical meteorologist with extensive national-level program management experience. Joel has worked at a national center, local forecast office, and regional headquarters all at the National Weather Service, at National Weather Service and National Oceanic and Atmospheric Administration headquarters, and DOE headquarters. He has been selected for specialized forecasts such as that for the 1999 World Games of the Special Olympics, the 2002 Winter Olympic and Paralympic Games, the 2001 World Cup, and wildfire and ship grounding onsite forecasting. Joel's operational background helped to direct research and development to a clear and objective goal with metrics to measure success in an integrated project portfolio. He was also selected for the exclusive American Meteorological Society Summer Policy Colloquium on Capitol Hill to learn about scientific policy development in working with Congress. He has earned a Project Management Professional certification and held it for four years. Joel received his Master of Science in meteorology and physical oceanography at the Rosenstiel School of Marine and Atmospheric Sciences at the University of Miami and his Bachelor of Science in meteorology and computer science from North Carolina State University. Additionally, he was awarded an honorary Ph.D. from Texas Tech University in October 2014.

U.S. DEPARTMENT OF ENERGY SPEAKERS

Rajesh Dham
rajesh.dham@ee.doe.gov | 202-287-6675

Rajesh Dham is a general engineer in the U.S. Department of Energy's Water Power Technologies Office. Rajesh works in the Hydropower Program and the Marine and Hydrokinetics Program, and he manages the Small Business Innovation Research portfolio for the Office. Prior to his arrival at DOE, Rajesh worked at AECOM for about 13 years, where his responsibilities included managing and working on projects related to hydropower development and planning, as well as development of water resources projects, including detailed designs and construction support. Before joining AECOM, he worked for the Central Water Commission in India on the development of water resources and hydropower projects. Rajesh holds a Bachelor of Science in civil engineering from the Punjab University in India, a Master of Science in civil (structural) engineering from the University of Delhi, and a Post Graduate Diploma in hydraulic engineering from the International Institute for Hydraulic Engineering and Environmental Sciences in Delft, the Netherlands.

Mike Derby
Michael.Derby@ee.doe.gov | 202-586-6830

Michael Derby is the head of research, development, demonstration and testing (RDD&T) for the U.S. Department of Energy's Wind Energy Technologies Office. Michael directs the RDD&T portfolio at DOE's national laboratories to address critical technological barriers to wind plant performance, reliability, and maintenance. In this role, Michael provides strategic guidance for the wind program, with a focus on long-term innovation, overseeing the selection of research projects to insure that they have the potential to advance wind plant technology for improved reliability and performance of the national wind energy infrastructure. He also guides the development of new and unique testing capabilities necessary to validate and demonstrate key technologies. Michael has been with DOE since 2009. Michael received his Bachelor of Science in aerospace engineering sciences from the University of Colorado and previously worked in the design and testing of fixed wing and rotary wing aircraft as well as space flight hardware at NASA Ames Research Center.

Alana Duerr
alana.duerr@ee.doe.gov | 202-287-6953

Dr. Alana Duerr is the offshore wind lead at the U.S. Department of Energy's Wind Energy Technologies Office. Alana has supported DOE's offshore wind research and development efforts in various capacities since 2013. She joined the program as a NOAA Sea Grant John A. Knauss Marine Policy Fellow, and, following her fellowship, she supported the program as a contractor from 2014 through 2016. In late 2016, Alana was hired as the Offshore Wind Lead. In this new role, Alana will be leading the offshore wind technology R&D efforts, as well as working with her colleagues within and external to DOE to coordinate interdisciplinary efforts to facilitate the development of the offshore wind industry in the United States. Alana received her Ph.D. in ocean engineering from Florida Atlantic University, and her Bachelor of Science in naval architecture and marine engineering from Webb Institute.

Samantha Eaves
samantha.eaves@ee.doe.gov | 202-586-2112

Samantha Eaves is a Marine Energy Environmental Scientist with Allegheny Science and Technology, working in support of the U.S. Department of Energy's Water Power Technologies Office. She manages the environmental portfolio for the Marine and Hydrokinetics Program. Samantha received her M.S. and Ph.D. in marine science from the College of William & Mary, Virginia Institute of Marine Science.

Patrick Gilman
Patrick.gilman@ee.doe.gov | 720-356-1420

Patrick Gilman is the modeling and analysis program manager for the U.S. Department of Energy's Wind Energy Technologies Office. In this position, Patrick leads a number of market research, economic modeling and other analysis activities to help understand wind's place in our energy mix today and in the future. Patrick is a graduate of Whitman College and holds a Master of Arts degree in international affairs and international economics from the Johns Hopkins University School of Advanced International Studies.

Alison LaBonte
alison.LaBonte@ee.doe.gov | 202-287-1350

Alison LaBonte is the marine and hydrokinetic technology program manager in the U.S. Department of Energy's Water Power Technologies Office. As the program manager, Alison is responsible for the development and execution of the nation's strategy for advancing marine renewable technologies to be viable, cost-competitive contributors to the clean energy economy. Alison came to Washington, D.C. in 2009 as an American Association for the Advancement of Science (AAAS) fellow, and spent her fellowship term at the White House Office of Science and Technology Policy and the DOE Geothermal Technologies Program. Before her AAAS fellowship, Alison applied her technical expertise integrating scientific instrumentation with Canada's NEPTUNE offshore cabled observatory (Postdoctoral Fellowship: University of Victoria), and designing, prototyping, and deploying new seafloor sensors (engineering internship: Monterey Bay Aquarium Research Institute). Alison's degrees are in oceanography (PhD: Scripps Institution of Oceanography), and mathematics (BS: University of California, Los Angeles).

Alexsandra Lemke
Alexsandra.lemke@ee.doe.gov | 720-648-4381

Alexsandra Lemke is a senior advisor of external affairs for the U.S. Department of Energy's Wind Energy Technologies Office and its Water Power Technologies Office. Alex is responsible for increasing the overall effectiveness and impact of the Wind Energy and Water Power Technologies Offices through research, development, and deployment of strategic programming activities that guide and support cross-cutting communications; stakeholder engagement; workforce, legislative, international, national laboratory collaboration; and multiple technology-to-market activities. Prior to Alex joining the Energy Department, she was a senior business development and communications strategist with more than 20 years of experience and significant accomplishments within the energy and publishing industry's foremost companies, including the National Renewable Energy Laboratory, Crain Communications, Energy Central, and Media News Group. Alex's accomplishments stem from effective strategic planning, managing organizational change, and leading the full gamut of business development operations, while building partnerships and driving profitable high-level communications products and executive events. Alex holds two Bachelor of Arts degrees, in broadcast journalism and mass communications and in human communications, from the University of Northern Colorado.

U.S. DEPARTMENT OF ENERGY SPEAKERS

Megan McCluer
Megan.Mccluer@ee.doe.gov | 202-586-7736

Megan McCluer is a senior advisor in the U.S. Department of Energy's Wind Energy Technologies Office, focusing on manufacturing, reliability, and testing. Megan began her career at NASA Ames Research Center in California, where she worked for 12 years as an Aerospace Engineer in the Rotorcraft Aeromechanics Group. Megan then served four years as the project manager for the U.S. Air Force's CV-22 Flight Test Program at Edwards Air Force Base. After volunteering with the Federal Energy Management Agency for disaster relief following Hurricanes Katrina and Rita, Megan moved to private industry and became the senior engineering program manager at Clipper Windpower, LLC. In September 2008, she was selected to become the program manager for the Wind and Hydropower Technologies Program at DOE and managed over $150M in annual appropriated funding for research and development of wind and water power projects. In January 2012, Megan went on a 4-year assignment to the Department of Defense (DoD), first supporting the Air Force Energy Office and then the Army's Energy Initiative Task Force. In these roles, Megan was responsible for writing and implementing new DoD energy policy, oversight of large-scale renewable energy projects, and leveraging private sector financing to deploy projects on military installations nationwide. Megan has an Associate of Science in civil engineering from Franklin Institute of Boston, a Bachelor of Science in aerospace engineering from San Jose State University, and a master of science in aerospace engineering from the University of Maryland, College Park.

Tim Ramsey
Tim.Ramsey@ee.doe.gov | 240-562-1758

Tim Ramsey has been with the U.S. Department of Energy since 2005 and currently serves as the lead technical project officer for the Water Power Technologies Office. Prior to joining the federal team in 2009, Tim worked for Navarro Research and Engineering, a multi-program support service contractor for DOE. Tim's previous experience also includes work as a tech development engineer for Mead Papers. Tim holds a Bachelor of Science in Chemical Engineering from Ohio University. Away from work, Tim can be found doing just about anything outdoors with his wife and two children.

Tim Welch
Timothy.Welch@EE.Doe.Gov | 202-586-7055

Tim Welch is currently the manager of the Hydropower Program within the U.S. Department of Energy's Water Power Technologies Office. Tim has been a part of the hydropower community for more than 30 years. Tim joined DOE in 2014 after 25 years at the Federal Energy Regulatory Commission, working in hydropower licensing.

NOTES

U.S. DEPARTMENT OF ENERGY CONTACTS

Wind Energy Technologies Office Contacts

Jose Zayas: Director
jose.zayas@ee.doe.gov 202-287-5201

Jim Ahlgrimm: Technology Manager—Wind
jim.ahlgrimm@ee.doe.gov 202-586-9806

Shane Beichner: Operations Supervisor
shane.beichner@ee.doe.gov 202-287-6239

Jocelyn Brown-Saracino: Environmental Research Manager—Wind, and Acting Lead—Wind Market Acceleration and Deployment
jocelyn.brown-saracino@ee.doe.gov 240-562-1362

Charlton Clark: Program Manager—Grid Integration
charlton.clark@ee.doe.gov 202-586-8040

Joel Cline: Team Lead—Resource Characterization
joel.cline@ee.doe.gov 202-287-6966

Michael Derby: Program Manager—Wind Technologies
michael.derby@ee.doe.gov 202-586-6830

Alana Duerr: Team Lead—Offshore Wind
alana.duerr@ee.doe.gov 202-287-6953

Jian Fu: Senior Engineer—Grid Integration
jian.fu@ee.doe.gov 202-586-9136

Patrick Gilman: Program Manager—Lead for Modeling and Analysis and Distributed Wind
patrick.gilman@ee.doe.gov 720-356-1420

Michael Hahn: Technical Project Officer
michael.hahn@ee.doe.gov 720-356-1551

Elizabeth Hartman: Communications Specialist
liz.hartman@ee.doe.gov 202-586-2376

Alexsandra Lemke: Senior Advisor External Affairs
alexsandra.lemke@ee.doe.gov 720-648-4381

Megan McCluer: Senior Advisor—Manufacturing, Reliability, and Testing
megan.mccluer@ee.doe.gov 202-586-7736

Gary Nowakowski: Lead Technical Project Officer
gary.nowakowski@ee.doe.gov 720-356-1732

Sara Paredes: Operations Manager—Wind
sara.paredes@ee.doe.gov 202-586-7569

Bradley Ring: Technical Project Officer
bradley.ring@ee.doe.gov 240-562-1768

Tomiko Williams-Edwards: Budget Analyst
tomiko.williams-edwards@ee.doe.gov 202-586-2828

Margaret Yancey: Stakeholder Engagement and Outreach Program Specialist
maggie.yancey@ee.doe.gov 202-586-4536

Water Power Technologies Office Contacts

Alejandro Moreno: Director
alejandro.moreno@ee.doe.gov 202-287-6692

Hoyt Battey: Program Manager—Market Acceleration and Deployment
hoyt.battey@ee.doe.gov 202-586-0143

Steven Dewitt: Technology Manager—MHK
steven.dewitt@ee.doe.gov 202-287-6955

Rajesh Dham: Technology Manager—Water Power
Rajesh.Dham@ee.doe.Gov 202-287-6675

Matthew Grosso: Operations Supervisor
matthew.grosso@ee.doe.gov 202-287-5350

Gregg Gruskin: Budget Analyst
gregg.gruskin@ee.doe.Gov 202-586-4957

Alison LaBonte: Program Manager—MHK
alison.labonte@ee.doe.gov 202-287-1350

Erik Mauer: Technical Project Officer
erik.mauer@ee.doe.gov 720-356-1262

William McShane: Technology Manager—MHK
william.mcshane@ee.doe.gov 571-215-6511

Lauren Moraski: Technology Manager—MHK
lauren.moraski@ee.doe.gov 202-287-6746

Daniel Rabon: Technology Manager—Hydropower
daniel.rabon@ee.doe.Gov 202-586-1545

Tim Ramsey: Lead Technical Project Officer
tim.ramsey@ee.doe.gov 720-356-1758

Yana Shininger: Technical Project Officer
yana.shininger@ee.doe.gov 240-562-1376

Corey Vezina: Technical Project Officer
corey.vezina@ee.doe.gov 240-562-1382

Tim Welch: Program Manager—Hydropower
timothy.welch@ee.doe.Gov 202-586-7055

WIND AGENDA - BY TRACK

Tuesday, February 14					
Start Time	**Presentation Title**	**Room**	**Session**	**Presenter**	**Presenter Org**
8:00 AM	Joint Breakfast with Wind and Water Attendees	Commonwealth Ballroom			
8:45 AM	Facilitator Welcome	Commonwealth		Alex Lemke	U.S. DOE
9:00 AM	Wind Director Welcome	Commonwealth		Jose Zayas	U.S. DOE
9:25 AM	Water Director Welcome	Commonwealth		Alejandro Moreno	U.S. DOE
9:55 AM	Program Lead Presentation	Cavalier C		Jocelyn Brown-Saracino	U.S. DOE
10:10 AM	Chairperson Welcome and Intro to Panel	Cavalier C		Stu Webster	Chair
10:25 AM	Overview of Analysis and Modeling	Cavalier C	Analysis	Patrick Gilman	U.S. DOE
10:40 AM	Cost of Energy, Policy Impact Analysis, and Market Report	Cavalier C	Analysis	Ryan Wiser	Lawrence Berkeley National Laboratory (LBNL)
11:05 AM	Overview of Stakeholder Engagement	Cavalier C	Stakeholders	Jocelyn Brown-Saracino	U.S. DOE
11:20 AM	Public Acceptance Baseline Analysis	Cavalier C	Stakeholders	Ben Hoen	LBNL
11:45 AM	WindExchange and Regional Resource Centers	Cavalier C	Stakeholders	Ian Baring-Gould	National Renewable Energy Laboratory (NREL)
12:15 PM	Reviewer Note Taking				
12:30 PM	LUNCH KEYNOTE	Commonwealth Ballroom		Guest Speaker	
1:30 PM	Recap – Stakeholder Engagement	Cavalier C	Stakeholders	Jocelyn Brown-Saracino	U.S. DOE

1:35 PM	Collegiate Wind Competition (CWC)	Cavalier C	Stakeholders	Suzanne Tegen	NREL
2:00 PM	Wind for Schools	Cavalier C	Stakeholders	Mark Jacobson	NREL
2:25 PM	Overview of Grid Systems Planning and Operation	Cavalier C	Grid	Charlton Clark	U.S. DOE
2:40 PM	Wind Integration Studies (ERGIS and WWSIS 3)	Cavalier C	Grid	Aaron Bloom	NREL
3:20 PM	Wind Generator Modeling	Cavalier C	Grid	Ben Karlson	Sandia National Laboratories (SNL)
3:40 PM	Stochastic Tool Evaluation	Cavalier C	Grid	Audun Botterud	Argonne National Laboratory (ANL)
4:00 PM	BREAK	Foyer	Grid		
4:15 PM	Recap – Grid Systems Planning and Operation	Cavalier C	Grid	Charlton Clark	U.S. DOE
4:20 PM	Distributed Wind Integration	Cavalier C	Grid	Bri-Mathias Hodge	NREL
4:40 PM	Grid Integration Support, UVIG, IEEE, NERC, IEA Task 25	Cavalier C	Grid	Dave Corbus	NREL
5:00 PM	Concurrent Cooling	Cavalier C	Grid	Jake Gentle	Idaho National Laboratory (INL)
5:20 PM	BREAK	Foyer			
5:30 PM	POSTER SESSION	Foyer			

MARKET ACCELERATION AND DEPLOYMENT

WIND AGENDA - BY TRACK

Wednesday, February 15

Start Time	Presentation Title	Room	Session	Presenter	Presenter Org
8:00 AM	Joint Breakfast with Wind and Water Attendees	Commonwealth Ballroom			
8:45 AM	Daily Recap	Commonwealth Ballroom		Alex Lemke	U.S. DOE
9:05 AM	Recap – Grid Systems Planning and Operation	Cavalier C	Grid	Charlton Clark	U.S. DOE
9:10 AM	Connecting the National Wind Test Center to the Energy Systems Integration Facility	Cavalier C	Grid	Dave Corbus	NREL
9:35 AM	Analysis Using PMU Data and Dynamic Analysis	Cavalier C	Grid	Eduard Muljadi	NREL
10:00 AM	Active Power Controls	Cavalier C	Grid	Yingchen Zhang	NREL
10:25 AM	BREAK	Foyer			
10:40 AM	Overview of Siting, Radar, and Environmental	Cavalier C	Siting	Jocelyn Brown-Saracino	U.S. DOE
10:55 AM	SNL Wind-Turbine RCS Mitigation	Cavalier C	Siting	Ben Karlson	SNL
11:20 AM	MIT Lincoln Labs Radar Mitigation R&D	Cavalier C	Siting	Jason Biddle	MIT Lincoln Laboratory
11:45 AM	Wind Environmental Collaborative Research and Support	Cavalier C	Siting	Karin Sinclair	NREL
12:10 PM	BREAK	Foyer			
12:30 PM	LUNCH KEYNOTE	Commonwealth Ballroom		Guest Speaker	
1:30 PM	Recap – Siting, Radar, and Environmental	Cavalier C	Siting	Jocelyn Brown-Saracino	U.S. DOE

1:35 PM	Texturizing Wind Turbine Towers to Reduce Bat Mortality	Cavalier C	Siting	Victoria Bennett	Texas Christian University
2:00 PM	A Biomimetic Ultrasonic Whistle for Use as a Bat Deterrent on Wind Turbines	Cavalier C	Siting	Paul Sievert	University of Massachusetts Amherst
2:25 PM	Rotor-Mounted Bat Impact Mitigation System	Cavalier C	Siting	Myron Miller	Frontier Wind LLC
2:50 PM	Ultrasonic Bat Deterrent Technology	Cavalier C	Siting	Michael Booth	General Electric
3:15 PM	Evaluating the Effectiveness of Ultrasonic Acoustic Deterrents in Reducing Bat Fatalities at Wind Energy Facilities	Cavalier C	Siting	Cris Hein	Bat Conservation International
3:40 PM	BREAK	Foyer			
3:55 PM	Recap – Siting, Radar, and Environmental	Cavalier C	Siting	Jocelyn Brown-Saracino	U.S. DOE
4:00 PM	OSW Environmental Data Aggregation, Analysis and Dissemination	Cavalier C	Siting	Andrea Copping	Pacific Northwest National Laboratory (PNNL)
4:20 PM	Stereo-Optic High Definition Imaging: A New Technology to Understand Bird and Bat Avoidance of Wind Turbines	Cavalier C	Siting	Evan Adams	Biodiversity Research Institute
4:40 PM	Avian Remote Sensing	Cavalier C	Siting	Shari Matzner	PNNL
5:00 PM	Closing Thoughts-Chair	Cavalier C		Stu Webster	Chair / Independent Consultant
5:30 PM	Closing Thoughts-Director	Cavalier C		Jose Zayas	U.S. DOE

MARKET ACCELERATION AND DEPLOYMENT

WIND AGENDA - BY TRACK

Thursday, February 16					
Start Time	**Presentation Title**	**Room**	**Session**	**Presenter**	**Presenter Org**
8:00 AM	Joint Breakfast with Wind and Water Attendees	Commonwealth Ballroom			
8:45 AM	Daily Recap	Commonwealth Ballroom		Alex Lemke	U.S. DOE
9:05 AM	Market Acceleration and Deployment Panel Debrief (closed session)	Cavalier C		Stu Webster	Chair / Independent Consultant
10:05 AM	Reviewer Note Taking Time	Mezzanine 1			
12:30 PM	LUNCH KEYNOTE	Commonwealth Ballroom		Guest Speaker	
1:30 PM	Reviewer Note Taking Time	Mezzanine 1			

MARKET ACCELERATION AND DEPLOYMENT

NOTES

WIND AGENDA - BY TRACK

Tuesday, February 14

Start Time	Presentation Title	Room	Session	Presenter	Presenter Org
8:00 AM	Joint Breakfast with Wind and Water Attendees	Commonwealth Ballroom			
8:45 AM	Facilitator Welcome	Commonwealth Ballroom		Alex Lemke	U.S. DOE
9:00 AM	Wind Director Welcome	Commonwealth Ballroom		Jose Zayas	U.S. DOE
9:25 AM	Water Director Welcome	Commonwealth Ballroom		Alejandro Moreno	U.S. DOE
9:55 AM	Program Lead Presentation	Mezzanine 3		Mike Derby	U.S. DOE
10:10 AM	Chairperson Welcome and Intro to Panel	Mezzanine 3		Sandy Butterfield	Chair / Boulder Wind Consulting
10:20 AM	Overview of Innovation, Manufacturing, Reliability, and Testing	Mezzanine 3	Innovation	Megan McCluer	U.S. DOE
10:35 AM	Additive Manufacturing in Wind Turbine Components and Tooling	Mezzanine 3	Innovation	Brian Post	Oak Ridge National Laboratory (ORNL)
11:10 AM	Development of On-Site Tapered Spiral Welding for Large Turbine Towers	Mezzanine 3	Innovation	Eric Smith	Keystone Tower Systems
11:35 AM	Hexcrete Tower for Harvesting Wind Energy at Taller Hub Heights	Mezzanine 3	Innovation	Sri Sritharan	Iowa State University
12:00 PM	Reviewer Note Taking	Mezzanine 3			
12:30 PM	LUNCH KEYNOTE	Commonwealth Ballroom		Guest Speaker	
1:30 PM	Recap – Innovation, Manufacturing, Reliability, and Testing	Mezzanine 3	Innovation	Megan McCluer	U.S. DOE

1:35 PM	Testing Facilities and Capabilities at SNL	Mezzanine 3	Innovation	Jon White	SNL
2:05 PM	Testing Facilities and Capabilities at NWTC	Mezzanine 3	Innovation	Dave Simms	NREL
2:50 PM	Innovative Blade Test Methodology	Mezzanine 3	Innovation	Scott Hughes	NREL
3:10 PM	BREAK	Foyer	Innovation		
3:25 PM	Recap – Innovation, Manufacturing, Reliability, and Testing	Mezzanine 3	Innovation	Megan McCluer	U.S. DOE
3:30 PM	Rotor Reliability (Collaboratives, Monitoring, and O&M)	Mezzanine 3	Innovation	Josh Paquette	SNL
3:50 PM	Drivetrain Reliability (Collaboratives, Monitoring, and O&M)	Mezzanine 3	Innovation	Jonathan Keller	NREL
4:10 PM	Innovative Drivetrain Concepts FOA Phase II: Next Generation Drivetrain	Mezzanine 3	Innovation	Jonathan Keller	NREL
4:30 PM	Online Intelligent Prognostic Health Monitoring	Mezzanine 3	Innovation	Wei Qiao	University of Nebraska–Lincoln
4:50 PM	Reviewer Note Taking	Mezzanine 3			
5:30 PM	POSTER SESSION	Foyer			

RESOURCE CHARACTERIZATION AND TECHNOLOGY RESEARCH, DEVELOPMENT, AND TESTING

WIND AGENDA - BY TRACK

Wednesday, February 15

Start Time	Presentation Title	Room	Session	Presenter	Presenter Org
8:00 AM	Joint Breakfast with Wind and Water Attendees	Commonwealth Ballroom			
8:45 AM	Daily Recap	Commonwealth Ballroom		Alex Lemke	U.S. DOE
9:05 AM	Recap – Innovation, Manufacturing, Reliability, and Testing	Mezzanine 3	Innovation	Megan McCluer	U.S. DOE
9:10 AM	Wind Standards Development	Mezzanine 3	Innovation	Jeroen VanDam	NREL
9:35 AM	Advanced High Torque Density Magnetically Geared Generator	Mezzanine 3	Innovation	Jonathan Bird	University of North Carolina at Charlotte
10:00 AM	The Incubation of Next-Generation Radar Technologies to Lower the Cost of Wind Energy	Mezzanine 3	Innovation	John Schroeder	Texas Tech University
10:25 AM	Overview of Atmosphere to Electrons, High-Performance Computing, Resource Characterization, Flow Field Analysis, and Testing	Mezzanine 3	Atmosphere to Electrons	Joel Cline	U.S. DOE
10:40 AM	PRUF: Performance Risk, Uncertainty, and Finance	Mezzanine 3	Atmosphere to Electrons	Jason Fields	NREL
11:05 AM	High-Fidelity Modeling	Mezzanine 3	Atmosphere to Electrons	Mike Sprague	NREL
11:30 AM	BREAK	Foyer			
11:40 AM	Wake Dynamics Measurement, Testing, and Validation	Mezzanine 3	Atmosphere to Electrons	Brian Naughton	SNL
12:05 PM	Wind Plant Flow Control	Mezzanine 3	Atmosphere to Electrons	Alan Wright	NREL
12:30 PM	LUNCH KEYNOTE	Commonwealth Ballroom		Guest Speaker	
1:30 PM	ISDA: Integrated Systems Design and Analysis	Mezzanine 3	Atmosphere to Electrons	Katherine Dykes	NREL

1:50 PM	Recap – Atmosphere to Electrons, High-Performance Computing, Resource Characterization, Flow Field Analysis, and Testing	Mezzanine 3	Atmosphere to Electrons	Joel Cline	U.S. DOE
1:55 PM	MMC: Model Development and Validation	Mezzanine 3	Atmosphere to Electrons	Sue Haupt	PNNL
2:15 PM	WFIP II: Mesoscale Physics and Inflow	Mezzanine 3	Atmosphere to Electrons	Will Shaw	PNNL
2:25 PM	WFIP II: Field Testing	Mezzanine 3	Atmosphere to Electrons	Jim Wilczak	PNNL
2:35 PM	WFIP II: Modeling	Mezzanine 3	Atmosphere to Electrons	Jim McCaa	Vaisala
2:45 PM	WFIP II: Q&A	Mezzanine 3	Atmosphere to Electrons	Will Shaw	PNNL
3:00 PM	BREAK	Foyer			
3:15 PM	Recap – Atmosphere to Electrons, High-Performance Computing, Resource Characterization, Flow Field Analysis, and Testing	Mezzanine 3	Atmosphere to Electrons	Joel Cline	U.S. DOE
3:20 PM	DAP: Data Archive and Portal	Mezzanine 3	Atmosphere to Electrons	Chitra Sivaraman	PNNL
3:40 PM	Overview of Distributed Wind Research, Development, and Testing	Mezzanine 3	Distributed Wind	Patrick Gilman	U.S. DOE
3:55 PM	Distributed Wind Research, Development, and Testing	Mezzanine 3	Distributed Wind	Ian Baring-Gould	NREL
4:15 PM	Competitive Improvement Project	Mezzanine 3	Distributed Wind	Ian Baring-Gould	NREL

RESOURCE CHARACTERIZATION AND TECHNOLOGY RESEARCH, DEVELOPMENT, AND TESTING

WIND AGENDA - BY TRACK

Thursday, February 16

Start Time	Presentation Title	Room	Session	Presenter	Presenter Org
8:00 AM	Joint Breakfast with Wind and Water Attendees	Commonwealth Ballroom			
8:45 AM	Daily Recap	Commonwealth Ballroom		Alex Lemke	U.S. DOE
9:05 AM	Overview of Offshore Wind Unique Research, Development, and Testing	Mezzanine 3	Offshore Wind	Alana Duerr	U.S. DOE
9:25 AM	Modeling and Validation for Offshore Wind	Mezzanine 3	Offshore Wind	Amy Robertson	NREL
9:50 AM	Wave Impacts on Fixed Offshore Wind Foundations	Mezzanine 3	Offshore Wind	Ralph Nichols	SRNL
10:15 AM	Sediment Transport Impacts on Offshore Wind Projects	Mezzanine 3	Offshore Wind	Jesse Roberts	SNL
10:40 AM	BREAK	Foyer			
10:55 AM	Recap – Offshore Wind Unique Research, Development, and Testing	Mezzanine 3	Offshore Wind	Alana Duerr	U.S. DOE
11:00 AM	Instrumentation Planning for the Offshore Wind Advanced Technology Demonstration Projects	Mezzanine 3	Offshore Wind	Walt Musial	NREL
11:20 AM	Structural Health and Prognostic Management for Offshore Wind Projects	Mezzanine 3	Offshore Wind	Todd Griffith	SNL
11:40 AM	DOE Offshore Wind Lidar Buoy Deployment Program	Mezzanine 3	Offshore Wind	Will Shaw	PNNL
12:05 PM	National Offshore Wind Strategy Supporting Analysis	Mezzanine 3	Offshore Wind	Walt Musial	NREL
12:30 PM	LUNCH KEYNOTE	Commonwealth Ballroom		Guest Speaker	

1:30 PM	Recap – Offshore Wind Unique Research, Development, and Testing	Mezzanine 3	Offshore Wind	Alana Duerr	U.S. DOE
1:40 PM	Turbine Advanced Controls for Offshore Wind Floating Applications	Mezzanine 3	Offshore Wind	Dhiraj Arora	General Electric
2:00 PM	The University of Maine's New England Aqua Ventus I Program	Mezzanine 3	Offshore Wind	Habib Dagher	University of Maine
2:20 PM	Hywind Maine Project	Mezzanine 3	Offshore Wind	Andrea Nina Eugster	Statoil
2:45 PM	WindFloat Pacific Project	Mezzanine 3	Offshore Wind	Kevin Banister	Principle Power, Inc.
3:10 PM	BREAK	Foyer			
3:25 PM	Recap – Overview of Offshore Wind Unique Research, Development, and Testing	Mezzanine 3	Offshore Wind	Alana Duerr	U.S. DOE
3:30 PM	Fishermen's Atlantic City Wind Farm	Mezzanine 3	Offshore Wind	Chris Wissemann	Fishermen's Energy
3:55 PM	Project Icebreaker	Mezzanine 3	Offshore Wind	Dave Karpinski	Lake Erie Energy Development Corporation
4:20 PM	Closing Thoughts-Chair	Mezzanine 3		Sandy Butterfield	Chair / Boulder Wind Consulting
4:35 PM	Closing Thoughts-Director	Mezzanine 3		Jose Zayas	U.S. DOE

RESOURCE CHARACTERIZATION AND TECHNOLOGY RESEARCH, DEVELOPMENT, AND TESTING

WIND ENERGY CHAIRS

Sandy Butterfield

Chair

Sandy Butterfield has been an innovator and leader in the field of wind energy his entire career. Prior to founding Boulder Wind Consulting, Sandy co-founded Boulder Wind Power, a venture funded startup focused on developing an innovative megawatt scale direct drive generator. Prior to that, he spent over 24 years at the National Renewable Energy Laboratory (NREL), most recently as chief engineer at NREL's National Wind Test Center and leader of the Gearbox Reliability Collaborative. His work at NREL included aerodynamics research, testing, design reviews, and contract management, he served as manager of the applied research program and leader of the certification / standards program. He led Boulder Wind Power through its formative stages as CEO, helping to raise $48 million, forming a world class team and stimulating customer interest in BWP's direct drive technology. Sandy was a wind energy entrepreneur prior to NREL. In 1980, he co-founded ESI, a wind turbine manufacturing company where he was vice president of engineering responsible for all aspects of design and manufacturing. Sandy was chairman of IEC TC88 Technical Committee, responsible for international wind turbine standards, from 2009–2015. He is currently chair of the IECRE Wind System Certification (www.IECRE.Org). He has authored or co-authored more than 100 papers. Sandy graduated from the University of Massachusetts with a master's degree in mechanical engineering in 1977, where he studied under Bill Heronemous, famous for his floating offshore wind farm proposals in the early 1970s.

Stu Webster

Chair

Stu Webster was the director of permitting and environmental affairs and oversaw regulatory and environmental compliance of development and construction of Avangrid's (formally Iberdrola Renewables, LLC) wind and solar pipeline and an operating fleet of over 5,000 MWs of wind and solar facilities. Prior to Avangrid, Stu was vice president of corporate relations for the American Wind Wildlife Institute (AWWI), preceded by Clipper Windpower Development, where he was the permitting and environmental manager from 2006 to 2009. During his nine years in renewable energy, Stu has served in various leadership roles such as co-vice chair of the American Wind Energy Association (AWEA) Siting Committee and as a director on the AWWI Board. Stu has actively engaged in a variety of discussions concerning wind, radar, and other military and weather assets of concern since 2006, representing industry interests at the agency level, Congressional testimony, and supporting policy development with AWEA, various environmental non-governmental organizations, and related government agencies. Prior to the wind energy industry, Mr. Webster spent 15 years as an air quality scientist and consultant. Stu has a bachelor's degree in environmental studies from the University of California, Santa Barbara, and master's degree from the Bren School of Environmental Science and Management, Santa Barbara, CA. Stu is currently building homes designed by his wife's business, Lewallen Build, LLC, in their hometown of Portland, Oregon.

WIND ENERGY REVIEWERS

John Anderson
Peer Reviewer

John Anderson is senior policy advisor for the Environmental and Land Use and Public Policy practice groups of the law firm Nossaman, LLP. In this capacity, John provides strategic advice to clients on environmental, energy, and natural resource issues before local, state, and federal regulatory and legislative bodies, and guides clients in addressing permitting and policy issues associated with the development of energy and other large-scale infrastructure projects.

He has long been involved in some of the key siting and environmental compliance challenges facing the wind energy industry, including issues related to the Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, and Endangered Species Act. Prior to joining Nossaman, for more than six years, John served as the senior director of permitting policy and environmental affairs for the American Wind Energy Association. In this role, he led the industry in addressing policy issues associated with wildlife, sound/health impacts, property values, visual and cultural resources, public lands, civil and military aviation, and radar system impacts as they relate to the siting and operation of wind farms in the landscape. Prior to that, John was Eastern regional manager of Environmental Affairs for BP Alternative Energy, where he was the senior environmental permitting and regulatory policy advisor responsible for the permitting of new wind and solar energy development projects in the Eastern half of the United States, as well as management of post-construction environmental compliance matters at BP's operating wind facilities across the United States. He holds a B.S. in environmental science and resource management and a minor in environmental law from the University of Rhode Island, and has over two decades of professional experience in the areas of energy policy, environmental planning, permitting and licensing, regulatory analysis and policy development.

Catherine Bowes
Peer Reviewer

Catherine Bowes is National Wildlife Federation's (NWF's) senior manager for Climate & Energy. She leads NWF's Campaign for Atlantic Offshore Wind Power—a key priority of the organization's strategy to confront climate change. In addition to directing NWF's campaign activities, Catherine leads a coalition of national, regional, and state advocates along the coast working to advance offshore wind power. Catherine brings NWF's message of strong support for responsibly developed offshore wind power to state and federal officials, conferences and events, and the media. She serves on the Massachusetts Habitat Working Group, a forum appointed to advise the Commonwealth on offshore wind development issues, and actively participates in other relevant forums across the region. Catherine joined NWF in 2003 and has held several positions during her tenure, including serving as a senior climate policy representative on Capitol Hill from 2009–2010 and managing several clean energy campaigns throughout the Northeast. The latter includes a multi-year effort to secure state policies to reduce mercury pollution. Prior to joining NWF's staff, she spent six years at Conservation Law Foundation, where she focused on building support for advocacy to protect New England's natural resources and promote solutions to the region's energy and environmental challenges. She holds a bachelor's degree in political science from Washington University in St. Louis and a master's degree in environmental policy from Bard College.

Craig Christenson
Peer Reviewer

Craig Christenson is president and chief executive officer of Turbine Technology Partners (TTP) provides independent engineering consulting services to the wind industry. TTP customers include wind power plant owner/operators, developers and wind turbine original equipment manufacturers. Prior to co-founding Turbine Technology Partners in 2013, Craig held the position of senior vice-president of engineering for Clipper Windpower. At Clipper, Craig was responsible for building a team of 100+ engineers to support the production launch and evolution of the Clipper 2.5MW Liberty Turbine platform. Prior to Clipper, he was the vice-president of engineering and chief engineer for GE's wind turbine product line. During his tenure at GE Energy, Craig's technology team leadership enabled the rapid growth of GE Energy's wind business unit to become one of the world's leading wind turbine suppliers through the introduction of GE's advanced 1.5 MW and 2.5 multi-MW product lines. Throughout his career, Craig has been responsible for the design and certification of multiple utility-scale wind turbines and has excellent knowledge of turbine design and analysis, supply chain logistics, and manufacturing, as well as wind power plant performance monitoring and optimization. Mr. Christenson has received a U.S. Department of Energy R&D Partnership Award for his contribution to the advancement of wind power technology. He received his BSME degree from University of California at Santa Barbara and holds several U.S. patents.

WIND ENERGY REVIEWERS

Jody Dillon
Peer Reviewer

Jody Dillon is a senior researcher at the Electricity Researcher Centre at University College Dublin, where his research interests are developing electricity system models to study the variability and uncertainty impacts of renewable generation on power systems. Jody is also an independent consultant carrying out energy system modelling and policy support projects for clients in the energy industry in Ireland and internationally. He represents Ireland on International Energy Agency (IEA) Wind Task 25 on the design and operation of power systems with large amounts of wind power. Prior to working at University College Dublin, Jody worked for 14 years at EirGrid as a Consultant Engineer studying the operational impacts of wind power on the Irish grid. Jody managed the TSO Facilitation of Renewables Studies, which laid the groundwork for the current DS3 Program at EirGrid, aiming to facilitate 40% renewable generation by 2020. Previous to this, Jody was involved in harmonizing planning processes for SONI and EirGrid in preparation for the establishment of the all-island energy market. Jody was also responsible for modelling the all Island power system and for carrying out the cost-benefit analysis of an all-island electricity market. Jody also lead EirGrid's involvement in numerous international collaborations, such as the IEA's Task 25 on the Design and Operation of Power Systems with Large Amounts of Wind Power, the European Wind Integration Study, and the Anemos wind forecasting project. Jody is a graduate of University College Dublin, where he earned his Bachelor of Engineering and Master of Engineering Science degrees.

Dan Dolan
Peer Reviewer

Dan Dolan is a principal engineer at Moffatt and Nichol based in Walnut Creek, California, and manages the firm's Renewable Energy business sector and branch Structural Engineering operations. Dan has 36 years of experience in structural design and analysis focused on ocean structures. His work has emphasized the development of innovative concepts for the construction of structures in challenging marine sites and the assessment of existing marine structures subject to extreme conditions such as hurricanes and earthquakes. His project experience includes the design and assessment of conventional and deepwater structures in regions around the world including Southeast Asia, Australia, New Zealand, West Coast of Africa, North Sea, Gulf of Mexico, Caspian Sea, Gulf of Suez, Beaufort Sea, Bearing Sea, Cook Inlet of Alaska, and California Santa Barbara Channel. During the last 15 years, Dan has performed a substantial amount of work in the offshore renewable energy sector. This experience includes front end engineering and design, preliminary design and concept development studies for private clients, and R&D studies for government regulators and national laboratories in the definition of design and analysis methodologies and standards for offshore wind systems. His participation with standards includes chairing the American Wind Energy Association (AWEA)/National Renewable Energy Laboratory Structural Reliability sub-committee that was responsible for the Structural Reliability requirements in the Offshore Recommended Practice issued by AWEA in 2012.

Hannele Holttinen
Peer Reviewer

Hannele Holttinen is principal research scientist in the wind integration group at VTT Technical Research Centre of Finland. She has worked for VTT for more than 20 years in different fields of wind energy research, including resource assessment and measurements, production, and failure statistics, as well as offshore and arctic wind power feasibility. Since 2000, her main interest is the impact of wind and PV on power systems and electricity markets. She acts as Operating Agent of the International Energy Agency's international collaboration on power system operation with large amounts of wind power (IEA WIND Task 25) and has done so since 2006. She chaired the IEA Implementing Agreement on Wind Energy in 2011–12; is a member of the European Technology and Innovation Platform Wind platform through European Energy Research Alliance cooperation; was active in European Union Wind Energy Platform TPWIND 2007–14, leading the grid integration group and in the Steering Committee; and was in the steering committee of Nordic TFI (Top-Level Research Initiative) program for wind in 2009–14. She obtained her MSc. in 1991 and her Ph.D. in 2004 from Helsinki Technical University.

Michael Kelly
Peer Reviewer
Mistral Renewable Energy

William Mahoney
Peer Reviewer

William Mahoney is the deputy director of the Research Applications Laboratory at the National Center for Atmospheric Research (NCAR), in Boulder, Colorado. He has been involved in research at NCAR for more than 30 years and has directed research, development, and technology transfer programs in aviation, surface transportation, social sciences, agriculture, performance assessment, intelligent forecast systems, wildland fire prediction, and wind energy prediction. William received his master of science degree in atmospheric science from the University of Wyoming in 1983 and his bachelor of science degree in aeronautics from Miami University of Ohio in 1981. He has written or co-authored more than 50 papers and frequently presents NCAR's work at national and international conferences and seminars. William is also the Commissioner of the American Meteorological Society's Commission (AMS) on the Weather, Water, and Climate Enterprise, and is an AMS Fellow.

Stephanie McClellan
Peer Reviewer

Stephanie McClellan leads the Special Initiative on Offshore Wind (SIOW) at the University of Delaware. The SIOW is a philanthropy-funded program that supports the advancement of offshore wind as part of a comprehensive solution to the most pressing energy problems facing the United States. McClellan founded the SIOW with the backing of the Rockefeller Brothers Fund, which recognized her as a proven leader in the offshore wind sector. Stephanie developed her expertise in cutting-edge federal/state offshore wind issues, policy, and advocacy in both the private and public sectors. Prior to launching the SIOW, she served as director of strategic initiatives and outreach for the Google-backed Atlantic Wind Connection. She assumed this position after her immersion in the field as the policy director for Governor Jack A. Markell of Delaware, the first state in the United States to have a power purchase agreement between the state's utilities and an offshore wind developer. In both positions, Stephanie was in close contact with the majority of offshore wind developers, policy makers in multiple offshore wind states, and the vast network of state and national offshore wind advocates. She holds a doctorate in public policy and a master's degree in community and economic development.

Bonnie Ram
Peer Reviewer

Bonnie Ram is a senior researcher and associate director of the Center for Carbon-free Power Integration at the University of Delaware. Ram also served as a guest senior researcher at the Danish Technical University – Wind Energy Department, where her responsibility was to stimulate new thinking in social science and environmental research (2014–16). During that time, she led a new task for the European Energy Research Alliance to broaden this technology network into the social sciences and participated in the Wind2050 Project that focused on near shore wind energy case studies. For 20 years, she served as a program leader and corporate official at two national consulting firms, managing over $10 million in annual revenues and projects. She has co-authored a number of major award-winning and highly recognized federal government reports, including the first U.S. Department of Energy (DOE) national vision document on wind energy, "20% Wind by 2030" (2008), the first DOE national offshore wind strategy (2011), and the national offshore wind report (2010) for the National Renewable Energy Laboratory (NREL). In 2003, she helped organize the first science committee and facilitated the Bat and Wind Energy Cooperative that set the groundwork for a decade of innovative biological research (with NREL and DOE). In 2010, she initiated her own consulting firm, Ram Power, LLC, which provides strategic advice for non-profit organizations and universities relating to renewable energy transitions. Ram's current research focuses on pathways for accelerating and sustaining renewable energy transitions in consideration of ecosystem risks and benefits, strategies for informing the publics and potential host communities, and advocating for multidisciplinary education for wind engineers and physical scientists. Her written work appears in a number of peer-reviewed journals, including Risk Analysis, Wind Engineering, and Daedalus. Ram's project work over the years has spanned a range of multidisciplinary topics including, energy use in developing nations, national nuclear waste management, compliance with National Environmental Policy Act (and other environmental) regulations, and lifecycles of energy systems. She has a B.A. degree in geography and international development and an M.A. degree in environmental policy and science, both from Clark University in Worcester, MA.

WIND ENERGY REVIEWERS

Heather Rhoads-Weaver
Peer Reviewer

Heather Rhoads-Weaver is founder and principal consultant of eFormative Options, and specializes in policy and market analysis, funding development, and stakeholder communications. She managed development of the U.S. Commerce National Institute for Standards and Technology-funded Sustainable Manufacturing, Advanced Research and Technology (SMART) Wind Roadmap, the U.S. DOE/Pacific Northwest National Laboratory-funded Distributed Wind Policy Comparison Tool, and has led contracts with the Clean Energy States Alliance on behalf of the National Association of Regulatory Utility Commissioners, California Wind Energy Association, Minnesota Renewable Energy Society, Small Wind Certification Council, Windustry, TWN Wind Power on behalf of the Duckwater Shosone Tribe, University of California-Davis, Energy Trust of Oregon, Washington Local Energy Alliance, Coastal Community Action Program, Canadian Wind Energy Association, Pembina Institute, 21 Acres, WEST, Chinook Wind, GBA, ICF, Navigant, and Primus Wind Power. She has also co-authored numerous reports, including the 2003 Renewable Energy Atlas of the West, and designed and managed dozens of projects funded by the U.S. Department of Agriculture, U.S. Department of Health and Human Services, U.S. Fish and Wildlife Service, Natural Resources Canada, California Energy Commission, New York State Energy Research and Development Authority, Minnesota Department of Commerce, Bonneville Environmental Foundation, Energy Foundation, Bullitt Foundation, Winrock International, and others. Heather was named the 2014 Distributed Wind Energy Association (DWEA) Person of the Year, Windustry's 2013 Distinguished Service in Community Wind awardee, Women of Wind Energy's 2012 Mentor of the Year, and the U.S. DOE/National Renewable Energy Laboratory 2006 Small Wind Advocate of the Year. She has served as secretary for DWEA's Board of Directors, co-chair of DWEA's State Policy Committee, and on the board of Solar Washington and I-RENEW. She also served as AWEA's first Small Wind Advocate, founder of NW Sustainable Energy for Economic Development, project manager for Global Energy Concepts (now DNV GL), and staff for the NW Energy Coalition, National Wind Coordinating Committee, and Iowa Citizen's Action Network. She holds an M.S. from the University of Northern Iowa and a B.A. from Wesleyan University.

Henrik Stiesdal
Peer Reviewer

Henrik Stiesdal joined Bonus Energy, later Siemens Wind Power, in 1987. In 1988, he was appointed technical manager, and, in 2000, chief technology officer. He retired at the end of 2014. During his 40 years in the wind industry, Henrik has worked with all aspects of wind turbine technology, including fundamental research, turbine design, sales, manufacturing, project implementation, service and quality management. Post-retirement activities include floating wind turbines, energy storage, carbon-negative fuels, Lidars, and avian deterrent technologies.

Scott Winneguth
Peer Reviewer

After spending 20 years working in the commercial aviation industry, Scott Winneguth started his renewable energy career in 1996 as the manufacturing manager at Zond Energy Systems, building the Z-40 550kW and Z-48 750kW wind turbines. He participated in the technology transfer of the Tacke 1.5MW turbine from Germany to the United States under the Enron 1.5 nameplate. When GE bought the remains of Enron Wind, Scott transitioned into the Field Service Engineering group, resolving operational issues for GE's U.S. fleet of 1.5MW machines. Eager to experience renewable energy from the perspective of an owner/operator, Scott joined PPM Energy in 2007 as director of wind plant engineering, overseeing the technical aspects of PPM's growing and diverse fleet of wind turbines. Today, under Iberdrola ownership, Avangrid Renewables, Scott manages the technical operational aspects of Iberdrola's 6GW-plus of U.S. wind and solar assets. Scott graduated from California State University, Long Beach, circa the Carter 25 wind turbine prototype installation.

NOTES

WATER AGENDA - BY TRACK

Tuesday, February 14

Start Time	Presentation Title	Room	Session	Presenter	Presenter Org
8:00 AM	Joint Breakfast with Wind and Water Attendees	Commonwealth Ballroom			
8:45 AM	Facilitator Welcome	Commonwealth		Alex Lemke	U.S. DOE
9:00 AM	Wind Director Welcome	Commonwealth		Jose Zayas	U.S. DOE
9:25 AM	Water Director Welcome	Commonwealth		Alejandro Moreno	U.S. DOE
9:55 AM	Program Lead Presentation	Cavalier A		Tim Welch	U.S. DOE
10:15 AM	Chairperson Welcome and Intro to Panel	Cavalier A		Herbie Johnson	Chair / Southern Company
10:30 AM	Overview of Growth	Cavalier A	Growth	Tim Welch	U.S. DOE
10:45 AM	Modular Pumped Storage Hydropower Feasibility and Economic Analysis	Cavalier A	Growth	Boualem Hadjerioua	Oak Ridge National Laboratory (ORNL)
11:10 AM	Standard Modular Hydropower (SMH)	Cavalier A	Growth	Brennan Smith	ORNL
11:35 AM	Workforce, Education, and Training Needs Assessment for U.S. Hydropower	Cavalier A	Growth	Jay Paidipati	Navigant Consulting, Inc.
12:00 PM	Hydro Research Foundation University Research Awards Program	Cavalier A	Growth	Brenna Vaughn	Hydro Research Foundation
12:30 PM	LUNCH KEYNOTE	Commonwealth Ballroom		Guest Speaker	
1:30 PM	The 45 Mile Hydroelectric Project	Cavalier A	Growth	Jim Gordon	Earth by Design Inc.

1:55 PM	SLH100 Demonstration Project at Monroe Hydro	Cavalier A	Growth	Abe Schneider	Natel Energy, Inc.
2:20 PM	Demonstration of Variable Speed Permanent Magnet Generator at Small, Low-Head Hydro Site	Cavalier A	Growth	David Brown Kinloch	Weisenberger Mills, Inc
2:45 PM	Demonstration of a New Low-Head Hydropower Unit	Cavalier A	Growth	Wayne Krouse	Hydro Green Energy, LLC
3:10 PM	South Fork Powerhouse Project	Cavalier A	Growth	David Hanson	Sacramento Municipal Utility District
3:35 PM	Harnessing the Hydroelectric Potential of Engineered Drops	Cavalier A	Growth	Jerry Straalsund	Percheron Power, LLC
4:00 PM	BREAK	Foyer			
4:15 PM	Cellular Cofferdam for Hydropower Use	Cavalier A	Growth	Marte Gutierrez	Trustees of the Colorado School of Mines
4:40 PM	Cement Changes and Solutions to the Industry	Cavalier A	Growth	Todd Sirotiak	North Dakota State University
5:05 PM	Optimized Composite Prototype for Archimedes Turbine Manufacture	Cavalier A	Growth	Jerry Straalsund	Percheron Power, LLC
5:30 PM	The Design and Development of a Composite Hydropower Turbine Runner	Cavalier A	Growth	Pat Hipp	Composite Technology Development, Inc.
5:30 PM	POSTER SESSION	Foyer			

WATER AGENDA - BY TRACK

Wednesday, February 15

Start Time	Presentation Title	Room	Session	Presenter	Presenter Org
8:00 AM	Joint Breakfast with Wind and Water Attendees	Commonwealth Ballroom			
8:45 AM	Daily Recap	Commonwealth Ballroom		Alex Lemke	U.S. DOE
9:05 AM	Recap – Growth	Cavalier A	Growth	Tim Welch	U.S. DOE
9:10 AM	Modular Low-Head Hydropower System	Cavalier A	Growth	David Duquette	Littoral Power Systems, Inc.
9:35 AM	French Modular Impoundment	Cavalier A	Growth	Bill French	French Development Enterprises, LLC
10:00 AM	Cost-Optimization Modular Helical Rotor Turbine-Generator System for Small Hydro Power Plants	Cavalier A	Growth	David Yee	Eaton Corporation
10:25 AM	Rapidly Deployable Advanced Integrated Low Head Hydropower Turbine Prototype	Cavalier A	Growth	Arnie Fontaine	Pennsylvania State University
10:50 AM	BREAK	Foyer			
11:05 AM	Magnetic Gears for Hydropower Drivetrains	Cavalier A	Growth	Emily Morris	Emrgy, Inc.
11:30 AM	Overview of Optimization	Cavalier A	Optimization	Tim Welch	U.S. DOE
11:40 AM	Hydropower Manufacturing and Supply Chain Analysis	Cavalier A	Optimization	Jason Cotrell	National Renewable Energy Laboratory (NREL)
12:05 PM	National Hydropower Asset Assessment Program (NHAAP)	Cavalier A	Optimization	Shih-Chieh Kao	ORNL
12:30 PM	LUNCH KEYNOTE	Commonwealth Ballroom		Guest Speaker	

1:30 PM	U.S. Hydropower Market and Trends Report	Cavalier A	Optimization	Rocio Uria Martinez	ORNL
1:55 PM	Cost Data Collection and Modeling for Hydropower	Cavalier A	Optimization	Patrick O'Connor	ORNL
2:20 PM	Hydropower Asset Management Research	Cavalier A	Optimization	Brennan Smith	ORNL
2:45 PM	Low-Head, Short-Intake Flow Measurement Research	Cavalier A	Optimization	Marshall Richmond	Pacific Northwest National Laboratory (PNNL)
3:10 PM	Basin Scale Opportunity Assessment Initiative	Cavalier A	Optimization	Kyle Larson	PNNL
3:35 PM	BREAK	Foyer			
3:55 PM	Hydropower Regulatory and Permitting Information Desktop (RAPID) Toolkit	Cavalier A	Optimization	Aaron Levine	NREL
4:20 PM	Facilitating Regulatory Process Improvements (Federal Interagency Collaborative)	Cavalier A	Optimization	Shelaine Curd	ORNL
4:45 PM	PSH Transient Simulation Modeling	Cavalier A	Optimization	Eduard Muljadi	NREL

WATER AGENDA - BY TRACK

Thursday, February 16					
Start Time	**Presentation Title**	**Room**	**Session**	**Presenter**	**Presenter Org**
8:00 AM	Joint Breakfast with Wind and Water Attendees	Commonwealth Ballroom			
8:45 AM	Daily Recap	Commonwealth Ballroom		Alex Lemke	U.S. DOE
9:05 AM	Recap – Optimization	Cavalier A	Optimization	Tim Welch	U.S. DOE
9:10 AM	Iowa Hill Pumped-storage Project Investigations	Cavalier A	Optimization	David Hanson	Sacramento Municipal Utility District
9:35 AM	Integrated Hydropower and Storage Systems Operation for Enhanced Grid Services	Cavalier A	Optimization	Rob Hovsapian	Idaho National Laboratory
10:25 AM	BREAK	Foyer			
10:35 AM	Overview of Sustainability	Cavalier A	Sustainability	Hoyt Battey	U.S. DOE
10:50 AM	Monitoring Technology Development for Sensitive Species (Juvenile Eel / Lamprey Tag Development)	Cavalier A	Sustainability	Daniel Deng	PNNL
11:15 AM	Environmental Performance Analysis and Testing Campaign for New Technologies	Cavalier A	Sustainability	Alison Colotelo	PNNL
11:40 AM	Environmental Metrics for Hydropower	Cavalier A	Sustainability	Shelaine Curd	ORNL
12:05 PM	Water Quality Modeling Improvements at Columbia and Cumberland River Basins	Cavalier A	Sustainability	Boualem Hadjerioua	ORNL
12:30 PM	LUNCH KEYNOTE	Commonwealth Ballroom		Guest Speaker	

1:30 PM	Biologically-Based Design and Evaluation of Hydro-Turbines (BioDE)	Cavalier A	Sustainability	Gary Johnson	PNNL
2:20 PM	Report to Congress-Potential Climate Change Impacts on Federal Hydropower	Cavalier A	Sustainability	Shih-Chieh Kao	ORNL
2:45 PM	CERC-WET Topic 3: Improving Sustainable Hydropower Design and Operations	Cavalier A	Sustainability	Soroosh Sorooshian	University of California, Irvine
3:10 PM	Informing Hydropower Investment and Operational Decisions Under Changing Hydrologic Conditions	Cavalier A	Sustainability	Mark Wigmosta	PNNL
3:35 PM	HydroNEXT NPD and PSH FOA	Cavalier A		Tim Welch	U.S. DOE
4:00 PM	Closing Thoughts-Chair	Cavalier A		Herbie Johnson	Chair / Southern Company
4:15 PM	Closing Thoughts-Director	Cavalier A		Alejandro Moreno	U.S. DOE
4:30 PM	Panel Debrief - Hydro (closed session)	Cavalier A		Herbie Johnson	Chair / Southern Company

WATER AGENDA - BY TRACK

Tuesday, February 14

Start Time	Presentation Title	Room	Session	Presenter	Presenter Org
8:00 AM	Joint Breakfast with Wind and Water Attendees	Commonwealth Ballroom			
8:45 AM	Facilitator Welcome	Commonwealth		Alex Lemke	U.S. DOE
9:00 AM	Wind Director Welcome	Commonwealth		Jose Zayas	U.S. DOE
9:25 AM	Water Director Welcome	Commonwealth		Alejandro Moreno	U.S. DOE
9:55 AM	Program Lead Presentation	Stars		Alison LaBonte	U.S. DOE
10:10 AM	Chairperson Welcome and Intro to Panel	Stars		Cameron Fisher	Chair / 48 North Solutions
10:30 AM	Overview of Site and Resource Characterization	Cavalier B	Site and Resource	Joel Cline	U.S. DOE
10:40 AM	National Wave Energy Resource Refinement Using 30-year Hindcast	Cavalier B	Site and Resource	George Scott	NREL
11:05 AM	Wave Resource Model Integration	Cavalier B	Site and Resource	Zhaoqing Yang	PNNL
11:30 AM	Model Validation and Site Characterization for Early Deployment Marine and Hydrokinetic Energy Sites and Establishment of Wave Classification Scheme	Cavalier B	Site and Resource	Levi Kilcher	NREL
11:55 AM	Wave Environmental Characterization at Wave Test Sites	Cavalier B	Site and Resource	Vincent Neary	Sandia National Laboratories (SNL)
12:30 PM	LUNCH KEYNOTE	Commonwealth Ballroom		Guest Speaker	

1:30 PM	DoD Marine and Hydrokinetic Energy Deployment Opportunity Identification	Cavalier B	Site and Resource	Robi Robichaud	NREL
1:55 PM	Marine and Hydrokinetic Energy Metocean Data-use, Sources, and Instrumentation	Cavalier B	Site and Resource	Senu Sirnivas	NREL
2:20 PM	Overview of Environmental Research	Cavalier B	Environmental	Hoyt Battey	U.S. DOE
2:30 PM	Improvements to Hydrodynamic and Acoustic Models for Environmental Prediction	Cavalier B	Environmental	Jesse Roberts	SNL
3:05 PM	Evaluating Potential for Impacts from Seal Collisions with Tidal Turbines	Cavalier B	Environmental	Andrea Copping	PNNL
3:30 PM	Acoustics Exposure Experimentation for Sensitive Fish Species	Cavalier B	Environmental	Mark Bevelhimer	ORNL
3:55 PM	BREAK	Foyer			
4:10 PM	Interactions of Aquatic Animals with the ORPC OCGen in Cobscook Bay, Maine	Cavalier B	Environmental	Gayle Zydlewski	University of Maine
4:30 PM	Informing a Tidal Turbine Strike Probability Model through Characterization of Fish Behavioral Response using Multibeam Sonar Output	Cavalier B	Environmental	Mark Bevelhimer	ORNL
4:55 PM	Current Ability to Assess Impacts of Electro Magnetic Fields Associated with Marine and Hydrokinetic Energy Technologies on Marine Fishes in Hawaii	Cavalier B	Environmental	Jeremy Claisse	Vantuna Research Group
5:15 PM	Evaluating the Potential for Marine and Hydrokinetic Devices to Act as Artificial Reefs or Fish Aggregating Devices	Cavalier B	Environmental	Sharon Kramer	H.T. Harvey and Associates
5:30 PM	POSTER SESSION	Foyer			

MARINE AND HYDROKINETIC ENERGY 2A: ENVIRONMENTAL RESEARCH, RESOURCE CHARACTERIZATION, AND ANALYSIS

WATER AGENDA - BY TRACK

Wednesday, February 15

Start Time	Presentation Title	Room	Session	Presenter	Presenter Org
8:00 AM	Joint Breakfast with Wind and Water Attendees	Commonwealth Ballroom			
8:45 AM	Daily Recap	Commonwealth Ballroom		Alex Lemke	U.S. DOE
9:05 AM	Recap – Environmental Research	Cavalier B	Environmental	Hoyt Battey	U.S. DOE
9:15 AM	Effects of EMF Emissions from Cables and Junction Boxes on Marine Species	Cavalier B	Environmental	Manhar Dhanak	Florida Atlantic University
9:40 AM	Assessment of Potential Impact of Electromagnetic Fields from Undersea Cable on Migratory Fish Behavior PR-146	Cavalier B	Environmental	Ximena Vergara	Electric Power Research Institute, Inc.
10:05 AM	Marine Mammal Behavioral Response to Marine Energy Converter Sound	Cavalier B	Environmental	Brian Polagye	University of Washington
10:30 AM	Annex IV and Tethys: International Environmental Data Sharing Initiative	Cavalier B	Environmental	Andrea Copping	PNNL
10:55 AM	BREAK	Foyer			
11:05 AM	Marine and Hydrokinetic Energy Regulator Trainings	Cavalier B	Environmental	Ian Baring Gould	NREL
11:30 AM	Overview of Environmental Monitoring Instrumentation Research	Cavalier B	Environmental	Samantha Eaves	U.S. DOE
11:40 AM	Automatic Optical Detection and Classification of Marine Animals around Marine and Hydrokinetic Energy Converters using Machine Vision	Cavalier B	Environmental	Steven Brunton	University of Washington
12:05 PM	Nekton Interaction Monitoring System	Cavalier B	Environmental	Kenneth Ham	PNNL

12:30 PM	LUNCH KEYNOTE	Commonwealth Ballroom		Guest Speaker	
1:30 PM	Unobtrusive Multi-static Serial LiDAR Imager (UMSLI) for Wide-area Surveillance and Identification of Marine Life at Marine and Hydrokinetic Energy Installations	Cavalier B	Environmental	Gabriel Alsenas	Florida Atlantic University Board of Trustees
1:50 PM	An Intelligent Adaptable Monitoring Package for Marine Renewable Energy	Cavalier B	Environmental	Brian Polagye	University of Washington
2:15 PM	Triton Initiative	Cavalier B	Environmental	Genevra Harker-Klimes	PNNL
2:40 PM	FY16 FOA Awards: Innovation, Testing and Validation of Marine and Hydrokinetic Energy Environmental Monitoring Instrumentation	Cavalier B	Environmental	Samantha Eaves	U.S. DOE
3:05 PM	Overview of Market and Industry Development, Analysis, and Data Dissemination	Cavalier B	Market, and Industry Development, Analysis, and Data Dissemination	Alison LaBonte	U.S. DOE
3:15 PM	Marine and Hydrokinetic Energy Manufacturing and Supply Chain Needs Assessment	Cavalier B	Market, and Industry Development, Analysis, and Data Dissemination	Jason Cotrell	NREL
3:40 PM	Marine and Hydrokinetic Energy Risk Management Framework	Cavalier B	Market, and Industry Development, Analysis, and Data Dissemination	Jochem Weber	NREL
4:05 PM	BREAK	Foyer			
4:20 PM	Marine and Hydrokinetic Energy Levelized Cost of Energy (LCOE) Analysis	Cavalier B	Market, and Industry Development, Analysis, and Data Dissemination	Scott Jenne	NREL
4:45 PM	Marine and Hydrokinetic Energy Data Repository and Instrumentation Database	Cavalier B	Market, and Industry Development, Analysis, and Data Dissemination	Rick Driscoll	NREL
5:10 PM	Closing Thoughts	Cavalier B		Hoyt Battey	U.S. DOE

MARINE AND HYDROKINETIC ENERGY 2A: ENVIRONMENTAL RESEARCH, RESOURCE CHARACTERIZATION, AND ANALYSIS

WATER AGENDA - BY TRACK

Tuesday, February 14

Start Time	Presentation Title	Room	Session	Presenter	Presenter Org
8:00 AM	Joint Breakfast with Wind and Water Attendees	Commonwealth Ballroom			
8:45 AM	Facilitator Welcome	Commonwealth		Alex Lemke	U.S. DOE
9:00 AM	Wind Director Welcome	Commonwealth		Jose Zayas	U.S. DOE
9:25 AM	Water Director Welcome	Commonwealth		Alejandro Moreno	U.S. DOE
9:55 AM	Program Lead Presentation	Stars		Alison LaBonte	U.S. DOE
10:10 AM	Chairperson Welcome and Intro to Panel	Stars		Cameron Fisher	Chair / 48 North Solutions
10:30 AM	Overview of Controls Technology	Stars	Components	William McShane	U.S. DOE
10:40 AM	Passive Control for WECs (NASA CDOF)	Stars	Components	Vincent Neary	SNL
11:05 AM	Optimal Control of a Surge-Mode WEC in Random Waves	Stars	Components	William Staby	Resolute Marine Energy, Inc.
11:30 AM	Advanced Controls for the Multi-Pod Centipod WEC device	Stars	Components	Allan McCall	Dehlsen Associates, LLC
11:55 AM	Controls Optimization of Three Different WEC Devices	Stars	Components	Mirko Previsic	ReVision Consulting, LLC
12:30 PM	LUNCH KEYNOTE	Commonwealth Ballroom		Guest Speaker	
1:30 PM	Advanced Energy Harvesting Control Schemes for Marine Renewable Energy Devices	Stars	Components	Jarlath McEntee	Ocean Renewable Power Company, LLC
1:55 PM	Advanced WEC Controls	Stars	Components	Ryan Coe	SNL

2:20 PM	Assimilation of Wave Imaging Radar Observations for Real-Time Wave-by-Wave Forecasting	Stars	Components	Merrick Haller	Oregon State University
2:45 PM	Overview of Systems	Stars	Systems	Alison LaBonte	U.S. DOE
2:55 PM	Wave Energy Converter Modeling	Stars	Systems	Yi-Hsiang Yu	NREL
3:20 PM	DTOcean (Optimal Design Tools for Ocean Energy)	Stars	Systems	Jesse Roberts	SNL
3:45 PM	BREAK	Foyer			
4:00 PM	Marine and Hydrokinetic Energy Industry Support	Stars	Systems	Al LiVecchi	NREL
4:25 PM	Marine and Hydrokinetic Energy Advanced Materials Program	Stars	Systems	Bernadette Hernandez-Sanchez	SNL
4:50 PM	Administration of the Wave Energy Converter (WEC) Prize	Stars	Systems	Wesley Scharmen	Ricardo, Inc.
5:15 PM	Wave Energy Prize: Testing and Data Analysis	Stars	Systems	Rick Driscoll	NREL
5:30 PM	POSTER SESSION	Foyer			

MARINE AND HYDROKINETIC ENERGY 2B: TECHNOLOGY RESEARCH AND DEVELOPMENT

WATER AGENDA - BY TRACK

Wednesday, February 15

Start Time	Presentation Title	Room	Session	Presenter	Presenter Org
8:00 AM	Joint Breakfast with Wind and Water Attendees	Commonwealth Ballroom			
8:45 AM	Daily Recap	Commonwealth Ballroom		Alex Lemke	U.S. DOE
9:05 AM	Overview of Components	Stars	Components	Alison LaBonte	U.S. DOE
9:15 AM	Direct Drive Wave Energy Buoy	Stars	Components	Ken Rhinefrank	Columbia Power Technologies, Inc.
9:40 AM	Wave Energy Converter Structural Optimization Through Engineering and Experimental Analysis	Stars	Components	Ken Rhinefrank	Columbia Power Technologies
10:00 AM	Optimization of Hull Shape and Structural Design for OE Buoy	Stars	Components	Mirko Previsic	Ocean Energy USA LLC
10:25 AM	Net Shape Fabricated Low Cost Marine and Hydrokinetic Energy Pass-Through-The-Hub Turbine Blades with Integrated Health Management Technology	Stars	Components	Kevin Koudela	The Applied Research Laboratory (ARL) - The Pennsylvania State University
10:50 AM	BREAK	Foyer			
11:00 AM	Build and Test of a Novel, Commercial-Scale Wave Energy Direct-Drive Rotary Power Take-off Under Realistic Open-Ocean Conditions	Stars	Components	Ken Rhinefrank	Columbia Power Technologies, Inc.
11:25 AM	Advanced Direct-Drive Generator for Improved Availability of Oscillating Wave Surge Converter Power Generation Systems	Stars	Components	V.R. Ramanan	ABB, Inc.
11:50 AM	HydroAir Power Take Off System	Stars	Components	George Laird	Dresser-Rand, A Siemens Business
12:10 PM	Power Take-off System for Marine Renewable Devices	Stars	Components	Jarlath McEntee	Ocean Renewable Power Company, LLC

12:30 PM	LUNCH KEYNOTE	Commonwealth Ballroom		Guest Speaker	
1:30 PM	Advanced Technology Integration and Demonstration (FY16 FOA 1418 Topic Area 1 Awards Overview)	Stars	Components	Alison LaBonte	U.S. DOE
1:50 PM	Efficient and Reliable Power Take-Off for Ocean Wave Energy Harvesting	Stars	Components	Lei Zuo	Virginia Polytechnic Institute and State University
2:15 PM	System Agnostic Switched Reluctance Linear Generator for WECs	Stars	Components	Alan McCall	Dehlsen Associates, LLC
2:40 PM	BREAK	Foyer			
2:55 PM	Overview of Survivability	Stars	Survivability	William McShane	U.S. DOE
3:05 PM	Improved Survivability and Lower Cost in Submerged Wave Energy Device	Stars	Survivability	Mike Morrow	M3 Wave LLC
3:30 PM	Numerical Modeling and Experimental Validation of Extreme Conditions Response for the Centipod WEC	Stars	Survivability	Alan McCall	Dehlsen Associates, LLC
3:55 PM	Survivability Enhancement of a Multi-Mode Point Absorber	Stars	Survivability	Tim Mundon	Oscilla Power, Inc.
4:20 PM	BREAK	Foyer			
4:35 PM	Recap - System Innovation Session	Stars	Systems	William McShane	U.S. DOE
4:45 PM	Structured Innovation	Stars	Systems	Jochem Weber	NREL
5:10 PM	Closing Thoughts - Program Manager	Stars		Alison LaBonte	U.S. DOE

MARINE AND HYDROKINETIC ENERGY 2B: TECHNOLOGY RESEARCH AND DEVELOPMENT

WATER AGENDA - BY TRACK

Thursday, February 16

Start Time	Presentation Title	Room	Session	Presenter	Presenter Org
8:00 AM	Joint Breakfast with Wind and Water Attendees	Commonwealth Ballroom			
8:45 AM	Daily Recap	Commonwealth Ballroom		Alex Lemke	U.S. DOE
9:05 AM	Program Manager Track Intro and Overview of Demonstrations	Stars	Demo	Alison LaBonte Tim Ramsey	U.S. DOE
9:30 AM	Wave Energy Test - New Zealand Multi-Mode Technology Demonstration at the US Navy's Wave Energy Test Site	Stars	Demo	Steven Kopf	Northwest Energy Innovations
9:55 AM	Azura™ Demonstration at the Navy's Wave Energy Test Site	Stars	Demo	Steven Kopf	Northwest Energy Innovations
10:20 AM	Demonstration of the Ocean Energy (OE) Buoy at US Navy's Wave Energy Test Site	Stars	Demo	Tony Lewis	Ocean Energy USA LLC
10:45 AM	BREAK	Foyer			
10:55 AM	Current Energy Harnessing Using Synergistic Kinematics of Schools of Fish-Shaped Bodies	Stars	Demo	Michael Bernitsas	Vortex Hydro Energy, LLC
11:20 AM	Reduction of System Cost Characteristics Through Innovative Solutions to Installation, Operations, and Maintenance	Stars	Demo	Ken Rhinefrank	Columbia Power Technologies
11:45 AM	Next Generation Marine and Hydrokinetic Energy River Power System, Optimized for Performance, Durability and Survivability	Stars	Demo	AlexAnna Salmon	Igiugig Village Council
12:10 PM	Integrated Development and Comprehensive IO&M Testing at RITE of a KHPS TriFrame Mount	Stars	Demo	Dean Corren	Verdant Power Inc.

12:30 PM	LUNCH KEYNOTE	Commonwealth Ballroom		Guest Speaker	
1:30 PM	Overview of Infrastructure	Stars	Infrastructure	Steven DeWitt	U.S. DOE
1:40 PM	Standards Development, IEC TC 114, IEA-OES Annual Contribution	Stars	Sensors and Measurement	Walt Musial	NREL
2:05 PM	Tidal Device Field Measurement Campaign (FMC)	Stars	Sensors and Measurement	Vincent Neary	SNL
2:30 PM	Modular Ocean Instrumentation System (MOIS)	Stars	Sensors and Measurement	Eric Nelson	NREL
3:00 PM	Pacific-Marine Energy Center South Energy Test Site (PMEC-SETS)	Stars	Infrastructure	Belinda Batten	Oregon State University
3:25 PM	California Wave Energy Test Center (CalWave)	Stars	Infrastructure	Sam Blakeslee	Cal Poly Corporation
3:50 PM	Advanced Laboratory and Field Arrays (ALFA)	Stars	Infrastructure	Belinda Batten	Oregon State University
4:20 PM	BREAK	Foyer			
5:00 PM	Closing Thoughts-Chair	Stars		Cameron Fisher	Chair / 48 North Solutions
5:15 PM	Closing Thoughts-Director	Stars		Alejandro Moreno	U.S. DOE

MARINE AND HYDROKINETIC ENERGY 2C: DEMONSTRATIONS AND INFRASTRUCTURE

WATER POWER CHAIRS

Cameron Fisher

Chair

With 18 years of experience, Cameron Fisher manages aquatic ecological studies, has extensive experience preparing National Environmental Policy Act (NEPA) documents, leads consultations to identify risk and mitigating potential impacts to Endangered Species Act-listed species, and coordinates environmental permitting efforts. Based in Seattle, ashington, Cameron has supported numerous traditional and renewable offshore energy projects throughout the United States. Previously, Cameron was the marine biology lead for an assessment to develop methods, protocol, and measurements for quantifying electromagnetic fields at wave energy project sites in Oregon. As part of Columbia Power Technologies efforts to develop a full-scale wave energy device, Cameron supported deployment of a seventh-scale device in Puget Sound, Washington, by preparing the required NEPA documentation, overseeing the environmental permitting, and provided coordination to ensure compliance with Section 7 of the Endangered Species Act. He is currently supporting the University of Washington Applied Physics Laboratory's investigation into the capabilities of marine and hydrokinetic (MHK) resources and integration of environment monitoring of MHK converter deployments, as part of the Naval Facilities Engineering Command's MHK Energy Advancement Initiative to advance technologies for converting the energy in waves, currents, and wind into electricity at U.S. naval facilities. In 2011, he was a member of, and then in 2014 a chair of, the DOE Water Power Peer Review Committee that reviewed the DOE Wind and Water Power Program's portfolio of MHK technology development and market acceleration projects. Cameron holds a B.S. in zoology and a M.S. in marine science, both from the University of Auckland, New Zealand.

Herbie Johnson

Chair

Herbie Johnson began his career with Alabama Power Company's Reservoir Management group in 1994. He is currently serving as Southern Company Generation's Hydro General Manager, overseeing 32 hydroelectric plants rated at more than 2,600 MWs. Prior to this, he was Lake Resources Manager for Georgia Power Company's Land Department. Other experiences include Southern Company Generation, Engineering and Construction Services, overseeing construction of three combined cycle power plants, plant superintendent of Thurlow Hydroelectric Plant and hydro compliance specialist for Alabama Power Company. Prior to joining Southern Company, Herbie served six years in the Air Force and the Alabama Air National Guard, achieving the rank of Staff Sergeant as an Avionics technician on the F-16 aircraft. He graduated with a bachelor's degree in civil engineering from Auburn University.

WATER POWER REVIEWERS

Mary Boatman
MHK Peer Reviewer

Dr. Mary C. Boatman serves as the science coordinator for the Office of Renewable Energy Programs within the Bureau of Ocean Energy Management (BOEM). She has worked at BOEM at both the regional office in New Orleans and in the Headquarters office in Herndon, Virginia, on both offshore oil and gas and renewable energy issues. Mary's area of expertise is chemical oceanography, but she has worked in a multi-disciplinary capacity for many years through the Environmental Studies Program at BOEM. From 2010 to 2012, she was on detail to the National Ocean Council to assist in the implementation of the National Ocean Policy for the Stewardship of the Ocean, Our Coasts, and the Great Lakes. She continues this work through participation in the regional ocean planning process. She holds a Ph.D. in chemical oceanography from Texas A&M University.

Elaine Buck
MHK Peer Reviewer

Elaine Buck was seconded to the European Marine Energy Centre (EMEC) in August 2014 from the Offshore Renewable Energy Catapult, as the technical business development manager. She has since joined EMEC full-time as technical manager responsible for managing the project team, which works across EMEC to deliver wave and tidal developer testing, including enabling technology R&D projects. Elaine provides support to the operations director and, from her technical perspective, initiates testing programs to build on EMEC's experience in real-sea testing for the wave and tidal sector. In her time at EMEC, she has worked and delivered on key European-funded projects and actively works alongside developers in supporting them in their technology development programs. Elaine is also responsible for monitoring emerging technologies and assessing their potential for development into new assets and services at EMEC. The Centre has become a focal point for the emerging marine renewables industry as Orkney has become home to some of the most innovative marine energy technologies currently in development. Prior to joining EMEC, Elaine was a renewable energy consultant and previously was in the oil and gas exploration sector with Schlumberger for 17 years. She worked internationally in North America, South America, Mexico and Asia. She completed her MSc. in renewable energy from Heriot Watt University and has a BSc. in marine sciences from Texas A&M University Galveston.

Elizabeth R. Butler
MHK Peer Reviewer

Elizabeth Butler is an attorney with over 35 years of experience in the creation of the legislative and regulatory framework and the transactional and financial tools needed to foster the development of innovative research and development enterprises that drive economic growth, with a focus on the clean energy development sector. In her U.S. practice, she serves as legal counsel to both public and private sector clients. In the public sector, she served as chief counsel to the Governor of Maine and as State of Maine Assistant Attorney General. Her private sector practice includes representation of clients in a broad range of transactional and litigation matters, including the policy, legislative, and regulatory issues controlling development of renewable energy and other marine sector projects. She serves as general counsel to the Maine Technology Institute, a public-private partnership funding technology commercialization, and to start-up companies with innovative technologies, including marine renewable energy and wind power projects. In her international practice, Ms. Butler currently focuses on acceleration of renewable energy and energy efficiency sectors in the United States Agency for International Development Caribbean Clean Energy Program, and previously worked as outside general counsel to the Millennium Challenge Corporation, and on energy and water sector projects funded by the World Bank and the United States Agency for International Development in Bosnia and Herzegovina, Bulgaria, Haiti, Kenya, Liberia, Moldova, Nigeria, and Rwanda. Ms. Butler is an honorary director of the Gulf of Maine Research Institute, a non-profit that combines science, education, and community outreach to catalyze solutions to the complex challenges of ocean stewardship and economic growth in the Gulf of Maine bioregion.

WATER POWER REVIEWERS

Peter Donalek
MHK Peer Reviewer

Peter Donalek is an electric power system engineer with a large U.S. consulting and design engineering firm and a registered Professional Engineer in Illinois. His career as an electric power system engineer began at Sargent & Lundy and continued with the Harza Engineering Company, now part of Stantec Consulting Services Inc. As an electric power system planner and engineer, he has specific and relevant experience related to pumped storage hydropower projects as well as hydro-dominated systems. His experience includes ten pumped storage projects; including the world's largest, Bath County in Virginia, and one of the smallest, the two-unit 40-MW Lake Hodges project in California. For his most recent assignment as a member on the Argonne National Laboratory team for the DOE Wind and Water Power Program's "Modeling and Analysis of Value of Advanced Pumped Storage Hydropower in the United States,", he was a technical reviewer of Section 3, "Advanced PSH Model Development" and lead author for Section 2 and Appendix A, "Technology Characteristics". Another relevant assignment that involved adjustable speed pumped storage is the, "Technical Analysis of Pumped Storage and Integration with Wind Power in the Pacific Northwest," prepared for U.S. Army Corps of Engineers and Bonneville Power Administration; P. Donalek – Primary Author for Adjustable Speed Pumped Storage and Transmission; August 2009. In 1995, he was a principal investigator for the Electric Power Research Institute Report, "TR-105542: Application of Adjustable Speed Machines in Conventional and Pumped-Storage Hydro Projects." Peter is a fellow Member of the IEEE and the Power Energy Society (PES) as well as a member of CIGRE International Council on Electric System. He is a member of the IEEE PES System Dynamic Performance Committee and is chairman of its Advanced Pumped Storage Modeling task force. He has a M.A. in mathematics from the University of Toledo (Ohio); an M.S./M.Sc. in electrical engineering from the University of Pennsylvania, Moore School of Electrical Engineering; and a B.S. in electrical engineering from the University of Illinois (Urbana – Champaign).

Dana Hall
Hydropower Peer Reviewer

Dana Hall is the deputy director of the Low Impact Hydropower Institute (LIHI), a non-profit 501(c)(3) organization dedicated to reducing the impacts of hydropower generation through the certification of low impact hydropower. Dana has served as deputy director since 2013, and previously served as secretary of the Governing Board of LIHI from 2009 to 2015. Dana's work at LIHI focuses on administration of the certification program as well as business and corporate operations. Prior to joining LIHI full time, Ms. Hall formed her own law practice in clean energy policy and transactions, and is licensed as an attorney in New York and New Jersey. Dana has consulted on a broad range of energy policy projects, including for the City of New York, and taught energy policy classes at The Cooper Union School of Continuing Education, Green Building Design Program for four years. Dana was formerly the energy policy coordinator at the Pace Energy and Climate Center, where she managed and contributed to a range of projects related to renewable energy, distribution resource planning, standby rates, demand response, and energy efficiency, particularly affecting the solar, combined heat and power, hydroelectric generation and building industries. Dana has a J.D. from Pace University School of Law (2008), an M.A. in environmental conservation education from New York University (2000), and a B.A. in music from The Ohio State University.

Henry Jeffrey
MHK Peer Reviewe

Henry Jeffrey is a specialist in marine energy roadmaps, action plans, and strategies. He is responsible for dissemination and internationalization within the UK Supergen Marine program. He holds the position of strategy and internationalization officer for Wave Energy Scotland and chairs the European Energy Research Alliance marine program. Additionally, he is the only academic member of the Energy Technologies Institute and Renewable UK Marine Strategy Groups. Henry represents the UK on the International Energy Agency (IEA) implementing agreement for ocean energy IEA–OES (IEA–Ocean Energy Systems). His international collaboration on the production of marine roadmaps and research strategies, includes Canada, the United States, Chile, and Mexico. Henry is also the leader of several European marine energy projects including DTOcean, which will develop design tools for arrays of wave and tidal devices.

Michael Kerr
Hydropower Peer Reviewer

Michael Kerr is the founder and chief executive officer of New England Hydropower Company, based in Beverly, Massachusetts. NEHC was formed to address the underdeveloped potential for small-scale hydropower on existing non-powered dams in the United States. The company designs, licenses, develops, owns, and operates small-scale hydropower facilities focusing on the use of the Archimedes Screw Generator (ASG), the first of which has been successfully implemented on the Hanover Pond Dam in Meriden, Connecticut. It has been licensed under the Federal Energy Regulatory Commission's 10 MW Exemption in a run-of-river setting alongside an existing fish passage, with the ASG providing safe downstream passage for fish. The next two sites are under development in Rhode Island, and a further backlog of high-potential sites will be developed over the next five years. Michael's leadership has guided the company since inception in 2012; he envisioned what could be done with the small-scale hydro opportunity. Michael has leveraged his experience with venture-backed technology companies for the clean tech, software, and industrial product markets to develop the company's business model. His extensive research into low-impact hydro in the UK has demonstrated its application to the New England region. Michael spent his early career with Shell Oil in London. He has since worked in Europe, the United States, and Latin America for United Technologies Corporation, Wang Global, and Getronics. He has served in many capacities, ranging from divisional chief financial officer to president, to these and other smaller enterprises. Michael holds a B.A. in business from Thames Valley University (London) and is a Chartered Management Accountant.

Michael Pulskamp
Hydropower Peer Reviewer

Michael Pulskamp received a Bachelor of Arts degree in history from the University of South Carolina, and a Master of Public Administration from the University of Colorado. Michael has over eighteen years of experience in the energy industry; the first nine years with Platts (a global provider of energy market information), and the past nine with Reclamation. Michael is currently Reclamation's renewable energy program manager and focuses on renewable hydropower development at Reclamation sites, as well as Reclamation efficiency and sustainability initiatives. In this role, he has led Reclamation's effort to encourage hydropower development through the creation of hydropower resource assessments to identify development potential, has worked closely with DOE on grant opportunities to demonstrate new innovative low head hydropower designs at Reclamation sites, and has worked to standardize and streamline the Lease of Power Privilege process that is used to allow development of non-federal hydropower projects at Reclamation facilities.

WATER POWER REVIEWERS

John Seebach
Hydropower Peer Reviewer

John Seebach has more than 14 years of experience of freshwater and public lands conservation experience. Since 2015, he has served as the board chair of the Low Impact Hydropower Institute, a non-profit 501(c)(3) organization dedicated to reducing the impacts of hydropower generation through the certification of hydropower projects that have avoided or reduced their environmental impacts pursuant to the Low Impact Hydropower Institute's criteria. Previously, John served as the vice president for River Basin Conservation at American Rivers, the director of American Rivers' Hydropower Reform Initiative, the chair of the Hydropower Reform Coalition, and staff of the Hydropower Reform Coalition. In these capacities, he worked collaboratively with conservation groups, industry, state and federal agencies, Tribes, Congress, and others to advance policy initiatives intended to improve the environmental performance of the U.S. hydropower fleet. He is based in Washington, D.C., and holds a bachelor's degree from Davidson College in Davidson, N.C., and a master's degree from the University of Kentucky.

Doug Spaulding
Hydropower Peer Reviewer

Douglas Spaulding currently holds the position of president of Nelson Energy, a Minneapolis-based developer, and also serves as an independent consultant for dam safety and construction issues on a variety of dam and hydroelectric projects. Over the past 15 years, Nelson Energy has managed the development of 138 MW of hydroelectric projects at existing dams. These include the 10-MW Lower St. Anthony Falls Project located in Minneapolis, Minnesota, which went on-line in 2011, and the 36-MW Red Rock hydroelectric Project which is currently under construction. In addition, Douglas is currently managing the licensing and development of 92 MW of hydroelectric capacity at three projects on the Red River in Louisiana. He previously worked at the U.S. Army Corps of Engineers and currently serves on several Federal Energy Regulatory Commission boards of consultants. He also has provided independent peer review for a number of large Corps projects. Douglas received an MSCEE degree from Purdue University, with a specialty and geology and geotechnical engineering.

Philip Vitale
MHK Peer Reviewer

Dr. Philip Vitale is the director of ocean engineering for the Naval Facilities Engineering Command (NAVFAC). The NAVFAC ocean engineers serve as the Navy's facilities experts for engineering, maintaining, and installing ocean, littoral, and underwater systems; for protecting Navy and U.S. Department of Defense seafloor cables; and for designing and certifying shore-based hyperbaric facilities. Prior to his present position, he served in the Ocean Construction Division of the Naval Facilities Engineering Service Center. While there he was the program manager of the Underwater Inspection Program and the Magnetic Silencing Facility Program. Before joining NAVFAC, Phil was a research coastal engineer with the Coastal Engineering Research Center of the Army Corps of Engineers. Phil received his bachelor's degree from Stevens Institute Technology in Hoboken, NJ, and his master's and doctorate degrees from the George Washington University in Washington, DC. He is a registered Professional Engineer in the Commonwealth of Virginia.

Larry Weber

Hydropower Peer Reviewer

Larry Weber is Edwin B. Green Chair in Hydraulics in the Department of Civil and Environmental Engineering at Iowa State University (ISU) and director of IIHR – Hydroscience & Engineering. His leadership of that world-renowned institute has advanced it to greater prominence, doubling its number of graduate students and tripling its grant- and contract-supported research. Larry's personal research has served the hydropower industry for more than 20 years, through laboratory analysis and advanced computational methods to simulate hydrodynamic conditions near hydropower facilities, including modeling of temperature, total dissolved gases, and fish behavioral response. In 2009, Larry co-founded the Iowa Flood Center, which has provided superb services to the state to help Iowans prepare for flooding events more effectively. The center has taken on a national profile, sharing valuable knowledge with communities and institutions across the country. In 2013, Larry led a collaborative effort with the Iowa Legislature, Iowa State University and the University of Northern Iowa to form the Iowa Nutrient Research Center (administered by ISU), a Regents Center focused on developing science-based approaches to understanding point source and non-point source nutrients discharges in Iowa. Recently, Weber led a collaborative process that brought the Iowa Geological Survey to IIHR, expanding its role in better understanding the state's precious groundwater resources. Weber serves the state on the Iowa Water Resources Coordinating Council and routinely provides guidance on water science and policy related matters to the legislature and various state/federal agencies. Through Larry's leadership, IIHR has broadened its research, outreach, and educational programs to cover groundwater to surface water flows, water quantity, and water quality issues, by studying conditions ranging from drought to flood and everything in between.

Jason Wood

MHK Peer Reviewer

Jason Wood manages the SMRU Consulting North America offices (United States and Canada). He has over 15 years of experience studying acoustic ecology and behavior in airborne, substrate (i.e. seismic), and waterborne communication. Following his Ph.D. at the University of California-Davis, he held post-doctoral fellowships at Stanford University in the geophysics and otolaryngology departments. Following this, he taught an undergraduate field-based bioacoustics course through the University of Washington's Friday Harbor Laboratories for Beam Reach and is currently an affiliate assistant professor in the Department of Psychology at the University of Washington. He also led the research department at The Whale Museum in Friday Harbor. For the past decade, his work has focused on marine mammals and the potential impacts of anthropogenic sounds on these animals. These studies have involved the development of complex study designs and the implementation of acoustic, statistical, and spatial analysis, and modeling.

Kevin Ross Young

Hydropower Peer Reviewer

Kevin Young, president of Young Energy Services, leads an innovative company that specializes in the environmental review and permitting of renewable energy projects including hydro, solar, and wind. He has more than 30 years of experience in the siting, permitting, and licensing of energy-related projects throughout the United States and Canada, and is entrusted with the review of energy projects around the world. Kevin is a former senior vice president and partner at a major U.S. consulting company. As head of their Energy Services Division, he was instrumental in developing the Energy Division and growing it into a multi-million-dollar business. For 12 years, he managed an engineering and environmental support contract with the Federal Energy Regulatory Commission (FERC): Office of Energy Projects. Kevin is an expert in the licensing of conventional hydro, pumped storage, and hydrokinetic projects that require licensing by the FERC. In addition, he is an expert in other aspects of FERC hydro regulation, such as the development and review of Shoreline Management Plans, Recreation Management Plans, and the development of applications and environmental assessments associated with non-project use of project lands. Kevin has had extensive involvement in agency consultation, public interaction, liaison with project engineers, and has been involved with international utilities and lending agencies.

FREQUENTLY ASKED QUESTIONS

Q. Is WiFi available?

A. Yes, wireless internet is available complimentary in the hotel lobby as part of the hotel's offerings. Attendee WiFi is not available in the meeting space.

Q. Will a list of attendees be provided?

A. Yes, a list of attendees is included in our mobile app. See below for instructions.

Q. Will plenary session presentations be made available to attendees?

A. Yes, limited presentations will be available on the U.S. DOE Wind Technologies Office and Water Power Technologies Office websites three weeks following the review.

Q. How do I download and use the Peer Review mobile app?

A. APP Details:

The APP is available for both Android and iOS platforms, go to your device's App store and search for "EventRebels ER Mobile". Or click on the links below to open in your device's App store:

Install ERMobile on your Android device: http://bit.ly/2jIj9bW

Install ERMobile on your iOS device: http://apple.co/2jbBlKy

Login Details:

Once you have downloaded the app, you will be prompted to sign into your account with the email address used to register for this event and your Registrant ID found in your confirmation letter. See registration staff at desk if you need your Registrant ID.

Q. How can I obtain another copy of my registration receipt?

A. Please see a staff member at the registration desk and they can assist you with that.

Q. I would like to convey my feedback on the Peer Review. Do I have an opportunity to do so?

A. Yes, we have a Peer Review questionnaire and encourage you to fill it out using our event mobile app or through the email you will receive at the end of the review.

Q. I am looking for local restaurant dinner options? Is there someone who can give recommendations?

A. Yes, please see a staff member at the registration desk and they can assist you with that.

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy