

Marine Energy Program Peer Review Agenda July 18–22, 2022

Marine Energy Program Opening Plenary

DAY 1 MONDAY, JULY 18, 2022				
Start (ET)	End (ET)	Presentation Topic	Organization	Speaker
10:00 AM	10:30 AM	WPTO Overview	WPTO	Jennifer Garson
10:30 AM	10:45 AM	Peer Review Introduction	WPTO	Ali Hewett
10:45 AM	11:30 AM	Marine Energy Program Overview	WPTO	Tim Ramsey
11:30 AM	11:40 AM	BREAK		
11:40 AM	12:20 PM	Powering the Blue Economy Overview	WPTO	Tessa Greco
12:20 PM	12:50 PM	Marine Energy STEM and Workforce Development	NREL	Arielle Cardinal
12:50 PM		ADJOURN AND MOVE TO ACTIVITY AREA BREAKOUTS (Days 2 –4)		

Activity Area Breakout Sessions

WPTO's Marine Energy Program Activity Areas Color-Coded Key

Foundational R&D
Technology specific System Design and Validation
Reducing Barriers to Testing
Data Access, Analytics, and Workforce Development

Foundational R&D Review Session

DAY 2 TUESDAY, JULY 19, 2022				
Start (ET)	End (ET)	Presentation Topic	Organization	Speaker
10:00 AM	10:40 AM	Foundational R&D Activity Area Overview	WPTO	William McShane
10:40 AM	11:10 AM	Demonstration of an Advanced Multi-Mode Point Absorber for Wave Energy Conversion	Oscilla Power, Inc.	Tim Mundon
11:10 AM	11:35 AM	Seawater Compatible Rotary Pump for Wave Energy Conversion	Resolute Marine Energy, Inc.	Marcus Gay
11:35 AM	11:45 AM	BREAK		
11:45 AM	12:10 PM	Design of High-Deflection Foils for MHK Applications	Ocean Renewable Power Company, LLC	Jarlath McEntee
12:10 PM	12:35 PM	Performance Testing of An Integrated Magnetic Power Take-Off	Portland State University	Jonathan Bird
12:35 PM	1:25 PM	LUNCH		
1:25 PM	1:50 PM	Holistic Control Embedded Power Take Off (PTO) Development	CalWave Power Technologies Inc.	Thomas Boerner, Marcus Lehmann, Dan Petcovic
1:50 PM	2:15 PM	Reviewer Debrief	Reviewers	

DAY 3 WEDNESDAY, JULY 20, 2022				
Start (ET)	End (ET)	Presentation Topic	Organization	Speaker
10:00 AM	10:25 AM	Fatigue and Structural Load Analysis and Control for Variable Geometry Wave Energy Converters	NREL	Nathan Tom
10:25 AM	10:50 AM	Next Generation WEC PTO Co-Design	SNL	Ryan Coe
10:50 AM	11:15 AM	Wave Energy Converter Modeling	NREL, SNL	Dave Ogden, Kelley Ruehl
11:15 AM	11:25 AM	BREAK		
11:25 AM	11:50 AM	WEC Array Power Management and Output Simulation Tool	NREL, PNNL	Toan Thanh Tran

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11:50 AM	12:15 PM	WEC Design Optimization	SNL	Ryan Coe
12:15 PM	1:00 PM	LUNCH		
1:00 PM	1:25 PM	Wave Energy Converter Interlink Umbilical Cables Design Requirements, Best Practices and Recommended Design Improvements	PNNL	Leo Fifield
1:25 PM	1:50 PM	Model Validation and Site Characterization for Early Deployment MHK Sites and Establishment of Wave Classification Scheme	NREL, PNNL, SNL	Levi Kilcher, Vincent Neary, Zhaoqing Yang
1:50 PM	2:15 PM	Reviewer Debrief	Reviewers	

Technology-specific System Design and Validation Review Session

DAY 2 TUESDAY, JULY 19, 2022				
Start (ET)	End (ET)	Presentation Topic	Organization	Speaker
10:00 AM	10:40 AM	Technology-Specific System Design and Validation Activity Area Overview	WPTO	Elaine Buck
10:40 AM	11:10 AM	Reduction of System Cost Characteristics Through Innovative Solutions to Installation, Operations, And Maintenance	Columbia Power Technologies, Inc.	Michael Ondusko
11:10 AM	11:35 AM	Open Water Testing of a Scaled Next Generation Point Absorber Wave Energy Device with Phase Control	Aquaharmonics, Inc.	Alex Haggmuller
11:35 AM	11:45 AM	BREAK		
11:45 AM	12:10 PM	Water Horse Hydroelectric Harvester Development	University of Alaska Fairbanks	Jeremy Kasper
12:10 PM	12:35 PM	Performance Optimization and System Demonstration of a Multi-Mode Point Absorber	Oscilla Power, Inc.	Tim Mundon
12:35 PM	1:25 PM	LUNCH		
1:25 PM	1:50 PM	Cycloidal Wave Energy Converter	Atargis Energy Corporation	Stefan Siegel
1:50 PM	2:15 PM	Design, Build and Test of Novel, Remote, Low-Power Wave Energy Converter for Non-Grid Applications	Columbia Power Technologies, Inc.	Erik Hammagren
2:15 PM	2:40 PM	Hawaii Wave Surge Energy Converter (HAWSEC)	University of Hawaii Systems	Patrick Cross
2:40 PM	3:05 PM	Reviewer Debrief	Reviewers	
DAY 3 WEDNESDAY, JULY 20, 2022				
Start (ET)	End (ET)	Presentation Topic	Organization	Speaker
10:00 AM	10:25 AM	Xct System for Harvesting In-Current Hydrokinetic Energy from Low-Velocity Sites	Littoral Power Systems Inc.	David Duquette

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10:25 AM	10:50 AM	An Innovative SR-WEC for a Market-Disruptive LCOE	Texas A&M Engineering Experiment Station	HeonYong Kang
10:50 AM	11:15 AM	Device Design and Robust Periodic Motion Control of an Ocean Kite System for Hydrokinetic Energy Harvesting	North Carolina State University	Chris Vermillion
11:15 AM	11:25 AM	BREAK		
11:25 AM	11:50 AM	Low-Flow Marine Hydrokinetic Turbine for Small Autonomous Unmanned Mobile Recharge Stations	Florida Atlantic University	Manhar Dhanak
11:50 AM	12:15 PM	Modular Rivgen	Ocean Renewable Power Company, Inc.	Ryan Tyler
12:15 PM	1:00 PM	LUNCH		
1:00 PM	1:25 PM	Advancing CalWave's WEC Design for PacWave	CalWave Power Technologies Inc.	Thomas Boerner
1:25 PM	1:50 PM	Floating Oscillating Surge Wave Energy Converter Using Controllable Efficient Power Takeoff System	Stevens Institute of Technology (Inc)	Muhammad R. Hajj
1:50 PM	2:15 PM	MARMOK- Oscillating Water Column (OWC)	Idom, Inc.	Borja de Miguel Para
2:15 PM	2:40 PM	Optimization, Design, And Commercialization Planning of Next-Generation Stingray H3 Wave Energy Converter	Columbia Power Technologies, Inc.	Pukha Lenee-Bluhm
2:40 PM	3:05 PM	Reviewer Debrief	Reviewers	

DAY 4 THURSDAY, JULY 21, 2022

Start (ET)	End (ET)	Presentation Topic	Organization	Speaker
10:00 AM	10:40 AM	Waves to Water: Desalination Prize	NREL, WPTO	Scott Jenne, Simon Gore
10:40 AM	11:20 AM	Ocean Observing Prize	NREL, PNNL, WPTO	Jenny Wiecele, Carrie Schmaus
11:20 AM	11:30 AM	BREAK		
11:30 AM	11:55 AM	Wave-SPARC – Structured Innovation	NREL, SNL	Jochem Weber
11:55 AM	12:20 PM	Distributed Embedded Energy Converter Technologies DEEC-TEC	NREL	Blake Boren
12:20 PM	1:05 PM	LUNCH		

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1:05 PM	1:30 PM	Significant Cost Reduction Potential for Wave Energy Conversion Devices with Variable Geometry Modules	NREL	Nathan Tom
1:30 PM	1:55 PM	Verdant/NREL Research Measurement Campaign	NREL	Robynne Murray
1:55 PM	2:25 PM	Reviewer Debrief	Reviewers	

Reducing Barriers to Testing Review Session

DAY 3 WEDNESDAY, JULY 20, 2022				
Start (ET)	End (ET)	Presentation Topic	Organization	Speaker
10:00 AM	10:40 AM	Reducing Barriers to Testing Activity Area Overview	WPTO	Lauren Ruedy
10:40 AM	11:20 AM	Triton Initiative	PNNL	Joe Haxel, Garrett Staines
11:20 AM	11:30 AM	BREAK		
11:30 AM	11:55 AM	Rapidly Deployable Acoustic Monitoring and Localization System Based on A Low-Cost Wave Buoy Platform	Integral Consulting Inc.	Kaustubha Raghukumar
11:55 AM	12:20 PM	Long-Range Target Detection and Classification System for Environmental Monitoring at MHK Sites	Biosonics, Inc.	Tim Acker
12:20 PM	1:00 PM	LUNCH		
1:00 PM	1:25 PM	Improvements to Hydrodynamic and Acoustic Models for Environmental Prediction	SNL	Jesse Roberts
1:25 PM	1:50 PM	National Lab and University Collaboration for MHK Instrumentation and Data Processing Tools	NREL, PNNL, SNL	Rebecca Fao
1:50 PM	2:15 PM	Network Director for The Testing Expertise and Access for Marine Energy Research (TEAMER) Program	Pacific Ocean Energy Trust	Matt Sanders
2:15 PM	2:40 PM	Reviewer Debrief	Reviewers	
DAY 4 THURSDAY, JULY 21, 2022				
Start (ET)	Start (ET)	Start (ET)	Start (ET)	Start (ET)
10:00 AM	10:25 AM	Enabling Cost Effective Electricity from Ocean Waves: PacWave	Oregon State University	Burke Hales
10:25 AM	10:50 AM	National Marine Renewable Energy Center Infrastructure Upgrades	University of Washington	Brian Polagye

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10:50 AM	11:15 AM	Current Turbines Mobile Testing Vessel	Idom, Inc.	Alvaro Garcia
11:15 AM	11:45 AM	Reviewer Debrief	Reviewers	

Data Access, Analytics, and Workforce Development Review Session

DAY 4 THURSDAY, JULY 21, 2022				
Start (ET)	End (ET)	Presentation Topic	Organization	Speaker
10:00 AM	10:25 AM	Marine Energy Data Access, Analytics, and Workforce Development Overview	WPTO	Allison Johnson
10:25 AM	10:50 AM	MHK Data Products and User Community Development (PRIMRE)	PNNL, NREL, SNL	Andrea Copping, Cesar Castillo, Jon Weers
10:50 AM	11:15 AM	International Environmental Data Sharing Initiative (Annex IV Project & Tethys Database)	PNNL	Andrea Copping
11:15 AM	11:25 AM	BREAK		
11:25 AM	11:50 AM	Improving The Efficiency and Effectiveness for MHK Permitting: A Toolkit and Engagement for Success	Kearns & West, Inc.	Zach Barr
11:50 AM	12:15 PM	Grid Value Proposition of MHK	PNNL, NREL	Dhruv Bhatnagar, Levi Kilcher
12:15 PM	12:45 PM	Reviewer Debrief	Reviewers	

Reviewer Debrief with WPTO *closed door*

DAY 5 FRIDAY, JULY 22, 2022			
Start (ET)	End (ET)	Presentation Topic	Organization
10:00 AM	11:00 AM	Foundational R&D Reviewer Debrief with WPTO	Reviewers and WPTO
11:00 AM	12:00 PM	Technology-Specific System Design and Testing Reviewer Debrief with WPTO	Reviewers and WPTO
12:00 PM	12:45 PM	BREAK	
12:45 PM	1:45 PM	Reducing Barriers to Testing Reviewer Debrief with WPTO	Reviewers and WPTO
1:45 PM	2:15 PM	Data Access, Analytics, and Workforce Development Reviewer Debrief with WPTO	Reviewers and WPTO