

BOEM Offshore Renewable Energy Workshop
Hawaii Imin International Conference Center – Keoni Auditorium

1777 East West Road
Honolulu, HI 96848

August 13-14, 2013

Sponsor: Bureau of Ocean Energy Management
Training Coordinator: National Renewable Energy Laboratory

Day 1 – August 13

Offshore Wind Focus

August 13th Call-in number: 877-951-7311 Participant passcode: 2620984

URL: <https://www.mymeetings.com/nc/join.php?i=PW6246467&p=2620984&t=c>

Registration and Coffee		8:00am
Opening Session – Offshore Wind	Walt Musial - NREL	8:30am
<ul style="list-style-type: none"> • Welcome and Opening Remarks • BOEM Introductory Remarks • Meeting Goals and Objectives (NREL) 		
BOEM’s Offshore Renewable Energy Program	Jean Thurston - BOEM	8:45am
<ul style="list-style-type: none"> • BOEM OCS Renewable Energy Program Overview <ul style="list-style-type: none"> – Energy Policy Act of 2005 – OCS Renewable Energy Regulatory Framework (30 CFR 585) – BOEM Hawaii OCS Renewable Energy Task Force – Outlook for OCS Renewable Energy Activities 		
DOE - Offshore Wind and Marine Hydrokinetics (MHK) Overview	Tim Ramsey - DOE	9:15am
<ul style="list-style-type: none"> • DOE National Offshore Renewable Energy Strategies • Review of DOE Projects and Programs 		
BREAK		9:45am
Wind Technology Overview	Ian Baring Gould – NREL	10:00am
<ul style="list-style-type: none"> • Energy in the Wind • How to Judge a Good Wind Resource Potential • Wind Turbine 101 – How do wind turbines work? 		
Offshore Wind Overview	Walt Musial - NREL	10:30am
<ul style="list-style-type: none"> • What do Offshore Wind Turbines Look Like? • Industry Status • Modern multi-MW offshore wind turbines • Floating Wind Turbines <ul style="list-style-type: none"> – Why go floating? Possible benefits – Resource potential in deep water 		

- Industry status
- Support Structure Types (TLP, Semi, Spar)
- Moorings and Anchors

Question and Answer

Offshore Wind Power Plants Wakes and Arrays

Walt Musial –NREL

11:15am

- Effects of wind turbine wakes
- Wind resource assessment and area delineation

Project Development Phases

- Standards and Compliance
- Phases of Offshore Wind Plant Development

Discussion - Question and Answers

Lunch on your own (1 .5 Hour) 12:00pm

Offshore Wind and MHK Electrical Systems

Ian Baring Gould - NREL

1:30pm

- Plant layouts / electrical collector systems and substations
- Transmission to shore / export cables
- Interconnection with land-based substation
- How does the power grid handle wind resource variability?

Hawaii Renewable Energy

Ian Baring-Gould - NREL

2:00pm

- Mark Glick –Department of Business, Economic Development & Tourism (DBEDT)
 - Hawaii Clean Energy Initiative
- Art Seki – Hawaii Electric Company (HECO)
 - HECO’s Ocean Energy Activities
- Leon Roose – University of Hawaii (TBD)
 - Grid Integration studies
 - Inter-Island Cable Project

Discussion - Question and Answer

Break 3:00pm

Hawaii Wind Technology and Deployment Panel

Walt Musial - NREL

3:30pm

- Cameron Black – Hawaii State Energy Office
- Maria Alsig– Siemens
- Jay Edgar – Glostten Associates
- Warren Bollmeier – Hawaii Renewable Energy Alliance

Open Topic Discussion

5:00pm

Wrap up

Walt Musial/ John Smith

5:30pm

Day 2 – August 14 Marine Hydrokinetic Focus

August 14th Call-in number: 877-951-7311 Participant passcode: 8482549

URL: <https://www.mymeetings.com/nc/join.php?i=PW6246478&p=8482549&t=c>

Registration and Coffee		8:00am
Opening Session – MHK	Walt Musial/John Smith	8:30am
<ul style="list-style-type: none"> • Opening remarks and key Messages from Day 1 • Regulatory opening remarks (BOEM) • Meeting Goals and Objectives (NREL) 		
FERC Regulatory Perspective	Tim Welch– FERC	8:45am
<ul style="list-style-type: none"> • FERC jurisdiction on the OCS • Types of authorizations • Licensing process • Key concepts and implementation of the BOEM/FERC guidelines 		
Environmental Lessons -Terrestrial Wind and MHK Research	Robert Thresher- NREL	9:15am
Offshore Wind Impacts, Competing Uses, and Economic Development	Ian Baring-Gould – NREL	9:45am
Discussion – Questions and Answers		
Break		10:15am
Ocean Wave Energy Technology	Robert Thresher - NREL	10:45am
<ul style="list-style-type: none"> • Marine energy resource estimates • Ocean wave technology - present & future potential • Wakes and Arrays (alternative use impacts e.g. fishing) • Modeling and Analysis – Design Codes • Highlight in electrical aspects difference from offshore wind • International Markets/Projects • U.S. projects being developed • Projected cost of energy • Device Testing and the National Marine Energy Centers • The Technology Readiness Level development path 		
Discussion - Question and Answers		
International Standards for Marine Energy	Bill Staby – Resolute Marine	11:45am
Discussion - Question and Answers		
Lunch on your own (1 ½ hours)		12:15pm

Offshore Wind and Marine Energy Market Overview

Ian Baring-Gould- NREL 1:45pm

- Leveraging Land-based Markets
- International Markets
- Cost of Energy
- Offshore Energy Policy Issues
- Electricity prices – hurdle price
- Electricity Market Opportunities

Discussion - Question and Answers

Break 2:30pm

Hawaii Marine Energy Technology and Deployment Panel

Tim Ramsey –DOE 3:00pm

- Ken Rhinefrank -Columbia Power Technologies
- Bill Staby - Resolute Marine Energy
- Andrew Rocheleau –Sea Engineering, Inc.
- Duke Hartman – Makai Ocean Engineering, Inc.
- Paul Holthus – World Ocean Council

Meeting Wrap-Up

John Smith – BOEM 4:30pm

Adjourn Public Meeting

5:00pm

DRAFT