



# UTILITY WIND INTEGRATION GROUP FALL TECHNICAL WORKSHOP

October 12-14, 2011  
Sheraton Maui, Lahaina, Hawaii

## PROGRAM AGENDA

### Wednesday October 12, 2011

#### **User Group Meetings (UWIG Members and Invited Guests Only)**

7:00 a.m. – 8:00 a.m.

#### **Registration & Continental Breakfast**

Location: Foyer/Kahalui

8:00 a.m. – 12:00 p.m.

#### **DG Evaluation Toolbox Workshop**

Chair: Tom McDermott, Meltran

Location: Hana

8:00 a.m. – 12:00 p.m.

#### **User Group Meetings (Parallel Sessions)**

8:00 a.m. – 12:00 p.m.

#### **Operating Impact and Integration Study User Group Meeting**

Chair: Ed DeMeo, Renewable Energy Consulting Services

Location: Wailuku

8:00 a.m. – 12:00 p.m.

#### **Market Operations and Transmission Policy User Group Meeting**

Chair: Charlie Smith, UWIG

Location: Kihei

8:00 a.m. – 12:00 p.m.

#### **Wind Plant Modeling and Interconnection Study User Group Meeting**

Chair: Bob Zavadil, EnerNex

Location: Wailea

9:30 a.m. – 10:00 a.m.

#### **Break**

Location: Foyer/Wailuku

12:00 p.m. – 1:00 p.m.

#### **Lunch**

Location: Kahalui

1:15 p.m. – 5:00 p.m.

**Technical Site Visit**

6:30 p.m. – 8:30 p.m.

**UWIG Board of Directors Meeting**

Location: Coral Reef

## **Thursday October 13, 2011**

7:00 a.m. – 8:00 a.m.

### **Registration & Breakfast**

Location: Kahalui, sponsored by OSIsoft

8:00 a.m. – 5:00 p.m.

### **Fall Technical Workshop Technical Program**

Location: Wailuku

8:00 a.m. – 8:30 a.m.

### **Welcome and Overview Session**

#### Welcome & Introduction

Henry Durrwachter, UWIG President/Luminant

#### Aloha and Welcome to Hawaii: Hawaii Clean Energy Initiative

Edward Reinhardt, President, MECO

#### Meeting Introduction and Overview

Charlie Smith, UWIG

8:30 a.m. – 10:00 a.m.

### **Island Power Systems**

Session Chair: Brent Petrie, Alaska Village Electric Cooperative

#### Variable Generation Issues in Hawaii

Marc Matsuura, HECO

#### Integrating Variable Generation on the HELCO System

Lisa Dangelmaier, HELCO

#### Wind Integration on French Island Systems

Herman Bayem, EdF

#### New Zealand Integration Considerations with HVDC Terminals

Fernando Castellanos, Transpower New Zealand

10:00 a.m. – 10:30 a.m.

### **Break**

Location: Foyer/Wailuku, sponsored by DNV

10:30 a.m. – 12:00 p.m.

### **Variable Generation Modeling and Power System Operations Developments**

Session Chair: Abe Ellis, Sandia National Labs

#### Hydro Quebec Requirements for Inertial Response

Noël Aubut, Hydro Quebec

#### Variable Generation Developments in Germany

Hendrik Neumann, Amprion

Frequency Control A/S for High Penetration in Australia  
Jenny Riesz, ROAM Consulting

NERC Interconnection Requirements Recommendation Status  
Dick Piwko, GE

12:00 p.m. – 1:00 p.m.

**Lunch**

Location: Kahalui, sponsored by Alstom Grid

1:00 p.m. – 2:45 p.m.

**Variable Generation Integration Studies**

Session Chair: Bob Zavadil, EnerNex

HECO High Penetration PV Study Results  
Leon Roose, HECO/Dick Piwko, GE

MECO Wind Integration Study  
Mathew McNeff, MECO

DOE SPP Wind to SERC Study  
Daniel Brooks, EPRI

Portland General Electric Wind Integration Study Results  
Ty Bettis, PGE

Western Wind and Solar Integration Study Hydropower Analysis Results  
Tom Acker, Northern Arizona University

2:45 p.m. – 3:15 p.m.

**Break**

Location: Foyer/Wailuku, sponsored by ABB

3:15 p.m. – 5:00 p.m.

**Variable Generation Integration and Market Design and Operation**

Session Chair: Matt Schuerger, Consultant

Integrating Variable Generation Forecasting into System Operations  
Lawrence Jones, Alstom Grid

Ramp Capability for Load Following in MISO Markets  
Dale Osborn/Nivad Navid, MISO

Wind Integration as a Driver for Transmission Expansion in China  
Bai Jianhua, State Grid Energy Research Institute

Allocating Variability and Reserves for the Energy Imbalance Market (EIM)  
Brendan Kirby, Consultant

5:00 p.m.

**Adjourn for Day**

6:00 p.m. – 8:00 p.m.

**Reception**

Location: Ocean Lawn/Kapalua & Napili as backup, sponsored by Energy Exemplar

## **Friday, October 14, 2011**

7:00 a.m. – 8:00 a.m.

### **Breakfast**

Location: Kahalui, sponsored by S&C Electric

8:00 a.m. – 12:30 p.m.

### **Fall Workshop Technical Program**

Location: Wailuku

8:00 a.m. – 9:45 a.m.

### **Extracting Flexibility from the Balance of the System**

Session Chair – Brian Parsons, NREL

#### Fossil Plant Cycling Cost – Part 2

Steve Lefton, Aptech

#### Flexibility and Customer Loads in BPA

Diane Broad, Ecofys USA

#### Flexibility in Hawaii Power Systems

Dora Nakafuji, HECO

#### IEA Flexibility Index

Aiden Tuohy, EPRI

#### Variable Generation Impact on Fossil Plant Emissions

Matthias Fripp, University of Oxford

9:45 a.m. – 10:15 a.m.

### **Break**

Location: Foyer/Wailuku, sponsored by ABB

10:15 a.m. – 12:15 p.m.

### **Planning for Offshore Wind Development**

Session Chair: Lawrence Jones, Alstom Grid

#### DOE Offshore Wind R&D Program

Charlton Clark, U.S. Department of Energy

#### Offshore Turbine Technology and Economics

Bob Thresher, NREL

#### Hawaii Big Wind Project Status

Leon Roose, HECO

#### HVDC for Offshore Grids

Mike Bahrman, ABB

#### Perspective on HVDC for East Coast Offshore Wind

Lawrence Jones, Alstom Grid

Offshore Wind Resource Assessment  
Jeff Freedman, AWS Truepower

12:15 p.m. – 12:30 p.m.

**Closing Remarks – Charlie Smith**

**Adjourn**