

Impacts of Renewables and End-Use Energy On Utility System Grids

March 21 and 22, 2012

University of Washington—Kane Hall—Room 110

Agenda

Wednesday March 21, 2012

8:00-8:30 AM	Registration / Refreshments
8:30-8:45 AM	Opening Remarks: Mohamed El-Sharkawi (UW) and Matt O'Donnell, Dean of Engineering (UW)
8:45-10:15 AM	UW/WSU Smart Building Demonstrations: John Chapman (UW) and Anjan Bose (WSU)
10:15-10:45 AM	Break
10:45-11:45 AM	LED Street Light Application: Vicki Marsten (SCL) and Gordon Hayslip (SNOHOMISH PUD)
11:45-1:00 PM	Lunch—Provided
1:00-3:30 PM (With a break from 2:15-2:35 PM)	Renewable Resources: Transmission Constraints, Capacity and Ancillary Service Markets, Generation Based Solutions and Overview of Challenges. Elliot Mainzer (BPA), Laura Beane (IBERDROLA), David Mills (PSE)
3:30-4:30 PM	Renewable Resources: Panel Q&A

Thursday March 22, 2012

8:00-8:30 AM	Refreshments
8:30-10:30 AM	Smart Chargers: Eric Sortomme (ALSTOM), Rick Durst (PGE), Michael Kintner-Meyer (PNNL)
10:30-11:00 AM	Break
11:00-12:00 PM	Smart Grid Case Study: Curt Kirkeby (AVISTA)
12:00-1:00 PM	Lunch—Provided
1:00-2:00 PM	Distribution Automation: Will Odell (SNOHOMISH PUD) and John Sell (ALSTOM)
2:00-2:15 PM	Break
2:15-4:15 PM	Volt Var Optimization: Analysis Tools, Bob Uluski (EPRI), and Case Studies, Tom Wilson (PCS UTILIDATA)

Overview

The Northwest Energy Systems Symposium will identify and discuss emerging issues in renewables and end-use energy applications. This two day symposium covers a wide range of topics providing utility, industry and academic perspectives on how best to address some of the most pressing issues facing our region today. Those involved in Engineering, Operations, Marketing and Conservation will benefit from this conference.

Organizing Committee

Pacific Northwest National Laboratory
University of Washington EE Dept
Bonneville Power Administration
Snohomish County PUD
Puget Sound Energy
Seattle City Light
Tacoma Power
Alstom

Registration

Register online by Friday, March 16, 2012 by going to the symposium website at www.nwess.org and selecting the registration link (\$225 for Non Members, \$200 for IEEE Members, Students Free). Registration requires payment by credit card. Paid registration includes all presentations, refreshments during breaks, and lunches.
 Parking available onsite: \$15/day.

REGISTRATION OPEN

Additional information
 available at

www.nwess.org

Speakers and Case Study Presentations



Smart Buildings:

Anjan Bose: WSU Professor and member of the US National Academy of Engineering will present WSU's Smart Building effort for conservation and energy management.



LED Street Lighting Systems:

Vicki Marsten: Street Light Engineering Supervisor, SCL, will discuss SCL's LED Streetlight Application Assessment Project and Pilot Study for conversion of SCL's 84,000 HPS streetlights to LED. It will cover major elements and progress to date.



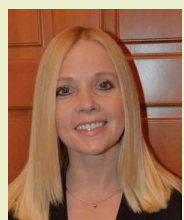
Gordon Hayslip: Principal Engineer, Snohomish PUD, will present recent forays into LED street lighting. Snohomish will discuss how LED street lighting performs, how much energy it saves, how much it costs and what information should you require from your LED fixture suppliers.



Renewable Resources:

The presentation will focus on three main areas; transmission and operational constraints, market based solutions such as emerging Energy Imbalance, Capacity, and Ancillary Service Markets, and generation based solutions.

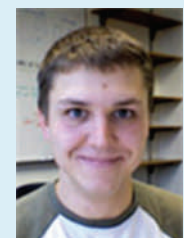
Elliot Mainzer: Executive Vice President for Corporate Strategy, BPA. An overview of renewables and transmission integration.



Laura Beane: Manager, Policy and Regulatory Group, Iberdrola. Market based solutions to transmission capacity and ancillary services.



David Mills: Director of Energy Supply and Planning, PSE. A utilities perspective on renewables integration.



Smart Chargers:

Eric Sortomme: PhD, UW, Senior Power Engineer, Alstom
Presentation on the impacts to energy supply and distribution of smart chargers using advanced charger controls.



Smart Chargers (cont.):

Rick Durst: Project Manager, Transportation Electrification, Portland General Electric. Talk will focus on the issues facing utilities with the roll out of large numbers of electric vehicles. There will be load profiles from the different charging levels and projections for the expected use of energy and demand levels. Vehicle Infrastructure, Program Manager, Presentation on the Load of Electric Vehicles and their impact to the distribution system, including Load Forecasts and residential load.



Michael Kintner-Meyer: Senior Research Scientist, PNNL Smart Charging Hardware
Energy storage: How much do we need?
How much can we afford?
The use of vehicle charging for mitigation of renewable energy intermittency.



Smart Grid:

Curt Kirkeby: Senior Electrical Engineer, AVISTA Utilities will update outcomes and provide details regarding their development of a microgrid and the use of intentional islanding started in 2009.



Distribution Automation:

Presentation on distribution automation efforts at Snohomish in 2010 and 2011.

Will Odel: Smart Grid Manager, Engineer, Snohomish PUD

Snohomish PUD and Alstom Grid will discuss their partnership in installing a distribution automation demonstration project while implementing a distribution management system to provide active monitoring, control and optimization of the grid. We will discuss the selection of devices, communication technologies, test lab, power flow analysis, integration of auto-restoration schemes (FISR), and energy delivery optimization.



John Sell: Marketing Manager, Integrated Distribution Management System, Alstom



Volt/Var Control and Optimization:

Robert Uluski: Technical Executive, EPRI, will present load modeling for voltage optimization.



Tom Wilson: Founder PCS Utilidata, will speak on equipment, installation and volt / var case studies.