

# ***i*-PCGRID Workshop 2011**

Innovations in Protection & Control for Greater Reliability Infrastructure Development

## **Landscape of the Revitalized Grid in the 21st Century**

### **Program**

March 30 – April 1, 2011  
245 Market Street, Auditorium  
San Francisco, California, USA

You are cordially invited to attend the Eight Annual Workshop in Innovations in Protection and Control for Greater Reliability Infrastructure Development (i-PCGRID) hosted by Pacific Gas and Electric Co. (PG&E) and organized by PG&E, Mississippi State University and Quanta. Amongst the Power System issues to be addressed are: Transmission and Distribution Reliability, Sustainable Energy, Distributed Resources, Electrical Vehicles, Storage, Automated Metering, Asset Management Strategies, and Protection and Control Technologies. The global topic of development and deployment of a “smarter” electricity grid will be discussed amongst the academics, regulators, vendors, and power system professionals in attendance. Advanced monitoring, protection, and control technologies enable implementation of “smarter” electrical grids to realize the needs of the electricity users for sustainable energy delivery and enhanced power system performance.

Power companies are in the position to benefit by making the transition from existing infrastructures to cutting edge technology in improved reliability and reduced maintenance cost. Achieving these objectives require the coordinated efforts of a broad range of stakeholders, including regulatory agencies, associations, power companies, regional transmission organizations (RTOs), equipment and system vendors, and others to address both technology advancements and institutional changes.

The PG&E hosted workshops are one way for fostering a vision and to set the foundation for a transition to a Modern Grid. These workshops are a forum to discuss industry trends and challenges, exchange ideas, and to help prioritize directions. Participation in this process at an early stage will enable stakeholders to shape the direction of this critical program and maximize benefits from the fruits of the program. The ultimate goal of this effort is to foster best practices and provide a collaborative approach.

**On-line Registration:** [https://www.cavs.msstate.edu/iPCGRID\\_Registration/registration.htm](https://www.cavs.msstate.edu/iPCGRID_Registration/registration.htm)

To register by phone, please contact Gail Jackson: [gail@cavs.msstate.edu](mailto:gail@cavs.msstate.edu)

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On site registration is available during the Event. Partial registration is not available. Should you have any questions, please feel free to contact us.

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To register, please contact Gail Jackson, Mississippi State Univ. - Phone: 662-325-9088

On-line Registration: [https://www.cavs.msstate.edu/iPCGRID\\_Registration/registration.htm](https://www.cavs.msstate.edu/iPCGRID_Registration/registration.htm)

Wednesday, March 30, 2011

<b>Time</b>	<b>Item</b>	<b>Presenter</b>
<b>11:30 AM</b>	<b>Registration and Refreshments</b>	
<b>12:00 Noon</b>	Lunch	
<b>1:00 PM</b>	Introductions and Welcome	Vahid Madani – PG&E Jonathan Sykes – PG&E
<b>1:25 PM</b>	Plausible Futures for the Grid of the 21st Century A Scenario Planning Exercise	Merwin Brown & Lloyd Cibulka – CA Institute for Energy & Environment (CIEE)
<b>1:50 PM</b>	Compatibility of Existing Infrastructure with the Vision of the Future of Smart Grid	Mike Montoya - SCE
<b>2:20 PM</b>	Asset Management - Tools, Tracking, and Lessons Learned	Predrag Vujovic – Long Island Power Authority
<b>2:50 PM</b>	<b>Break</b>	
<b>3:05 PM</b>	Impact of Electrical Vehicles on Electrical Grid	Dan Bowermaster – PG&E
<b>3:30 PM</b>	Smart Grid Education Curriculum - DOE Award	Tommy Morris - MSU
<b>3:55 PM</b>	Updates on NASPI Activities and Future Initiative	Alison Silverstein
<b>4:15 PM</b>	Global Synchronized Phasor Measurement Standards	Vahid Madani – PG&E Farnoosh Rahmatian – Quanta
<b>4:40 PM</b>	Electric Ship Research and Development Consortium	Mike Mazzola - MSU
<b>Posted Presentation</b>	Synchrophasor and tele-protection market research Update on plans for IEC 61850 implementations	Charles Newton - Newton-Evans Research
<b>5:05 PM</b>	Day 1 Closeout - <b>Adjourn</b>	Vahid Madani & Session Coordinators

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245 Market Street, San Francisco, Auditorium

Thursday, March 31, 2011

Time	Item	Presenter
<b>7:30 AM</b>	<b>Registration and Refreshments</b>	<i>Session Coordinator – Sandra Ellis – PG&amp;E</i>
8:00 AM	Introduction	Jonathan Sykes – PG&E
8:10 AM	PG&E's Journey to a Sustainable Electric System	Kevin Dasso - PG&E
8:35 AM	Event Analysis – Informing the Road Forward	Bob Cummings – NERC
9:00 AM	BPA Smart Grid Initiatives, Progress Report, and Roadmap	Larry Bekkedahl - BPA
9:30 AM	Pioneering New Frontiers in Revitalizing the Grid	Vahid Madani – PG&E Damir Novosel – Quanta Technology
<b>9:55 AM</b>	<b>Break</b>	<i>Session Coordinator–Frankie Au-Yeung - PG&amp;E</i>
10:10 AM	IEC 61850 Status and Advantages	Christoph Brunner – IT4Power Alex Apostolov – Omicron Eric Udren – Quanta
10:45 AM	IEC 61850 Process Bus Implementation	Bryan Gwyn - National Grid US Aaron Feathers – PG&E Solveig Ward – Quanta
11:15 AM	PMU Project Summary Updates and Panel Moderator - <b>Damir Novosel</b>	Jim Dow – WECC Dejan Sobajic – NYISO Jim McIntosh – CAISO
<b>12:10 PM</b>	<b>Lunch</b>	<i>Session Coordinator - Trevor Hall - Quanta</i>
1:05 PM	Distribution Feeder Fault Location Using IED and FCI Information	Armando Guzman – SEL
1:30 PM	ORNL Supercomputer Capabilities for Smarter Grid – Need for Faster than Real-Time Dynamic Analysis for Protection and Control	Aleks Dimitrovski – Oakridge National Lab
1:55 PM	Presentation and Panel on Interoperability Standards Moderator: <b>Paul Myrda</b>	Jerry Stenbakken – NIST Sakis Meliopoulos - Georgia Tech Mladen Kezunovic - TAMU Farnoosh Rahmatian – Quanta
<b>2:55 PM</b>	<b>Break</b>	<i>Session Coordinator – Mike Jensen - PG&amp;E</i>
3:10 PM	Synchrophasor measurement-based applications for the Control Center	Jay Giri, Manu Parshar, John Wulf – ALSTOM
3:40 PM	IEEE 1588 - Seamless Redundancy - New Technologies for Smart Grid Information Networks	Richard Harada - RuggedCom
4:05 PM	Utility Presentations Utility Phasor Projects - Deployment Plans & Lessons Learned Balancing R&D and Industry Needs	Dmitry Kosterev – BPA Dewey Day – PG&E Network Tariq Rahman, – SDG&E Matt Gardner - Dominion
<b>5:20 PM</b>	<b>Day 2 - Adjourn</b>	

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Friday, April 1, 2011

Time	Item	Presenter
7:30 AM	<b>Registration and Refreshments</b>	<i>Session Coordinator – Anthony Boardingham – CA Department of Water Resources</i>
8:00 AM	Keynote Presentation: NIST Smart Grid Standards and Interoperability	Jerry Fitzpatrick – NIST
8:20 AM	Smart Grid – Smart, but is it beautiful?	Sergiu Paduraru – ABB
8:45 AM	New Directions for Emerging Distribution Automation and DMS	S. S. (Mani) Venkata – Univ. of Washington
9:05 AM	Phasor Data Concentrator Overview	Mark Adamiak - GE
9:30 AM	Aurora Issues Panel <b>Facilitator: Gene Henneberg</b>	Emanuel Barnabeu - Dominion Jonathan Sykes - PG&E Juergen Holbach – Quanta
<b>10:15 AM</b>	<b>Break</b>	<i>Session Coordinator – Shirin Tabatabai (PG&amp;E)</i>
10:30 AM	CEC's Energy Storage Vision for 2020	Avtar Bining - CEC
10:55 AM	Synchrophasor Use Cases	Robin McLaren - Psymetrix
11:15 AM	System Testing – Presentation and Panel <b>Facilitator: Alex Apostolov – OMICRON</b>	Mladen Kezunovic – TAMU Rafael Pineda – PG&E Juan Casteneda - SCE Juergen Holbach – Quanta
<b>12:15 pm</b>	Lunch	<i>Session Coordinator–Monica Anderson (PG&amp;E)</i>
12:50 PM	NASPINet	<b>Paul Myrda</b>
1:15 PM	Threat Actor Profiles: Tools, Techniques, and Procedures	Dutcher, Darin – PG&E
1:35 PM	Distributed State Estimator - Benefits and Steps to Implementation, numerical experiments, testing	Sakis Meliopoulos - Georgia Tech
2:00 PM	Cyber Security <b>Moderator - Tommy Morris – MSU</b>	Scott Mix – NERC Mark Freund – PG&E Sharon Xia - ALSTOM Daniel Thanos – GE
<b>2:55 pm</b>	<b>Break</b>	<i>Session Coordinator – Ben Tatera</i>
3:10 PM	PMU Applications using Cyber Secure Synchrophasor Platform	Chuck Wells – OSI Pi
3:30 PM	Implementation of Centralized RAS (C-RAS)	Patricia Aarons – SCE
3:50 PM	Bridging the Gap Between Legacy and Modern Substation Communications	Emmanuel Duvelson - RFL
4:15 PM	PG&E's Pacific AC Intertie RAS - One Year into Operation	Lyle Dixson, Admir Trebincevic, V. Madani
4:45 PM	Wrap-up / Topics for 2012	R. King / T. Morris, V. Madani, D. Novosel
<b>5:00 pm</b>	<b>Adjourn</b>	