

i-PCGRID Workshop 2013

Innovations in Protection & Control for Greater Reliability Infrastructure Development

Journey in Modernizing the Grid for the 21st Century

2.0 Continuing Education Units (CEU) available this year

Program

March 26 – March 28, 2013

245 Market Street, Conference Room A, San Francisco, California, USA

You are cordially invited to attend the Tenth 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 Technology.

2013 is a critical year for addressing better system resiliency, exploring Smart Grid deployment programs, and sustainability concerns worldwide. The last four years have been an intense learning phase, with some painful lessons, as the Industry has transformed pioneering visions into Reality. Previous years' discussions of "Someday" have become "Today's" reality. Benchmarking, Lessons Learned, and Sustainability Programs are critical in the current dynamic environment. Mutual participation efforts will help alleviate the growing pains in our journey together towards more reliable and sustainable systems in the near future.

Core Program discussions focus on **Past, Present and Future Power Systems** in complex interconnected grid environments from around the world. Recent increases in weather related activities have impacted aging infrastructure, requiring the development of new strategies to improve system reliability. Hurricanes, tsunamis, geo-magnetic disturbances and other phenomenon have resulted in game changing approaches to outage management. **IN-DEPTH** featured topics dive into global grid resiliency strategies and modernization efforts in Europe, Africa, Asia, and the Americas. Lessons learned from deployment of smart grid technologies, evolving strategies, operational aspects of managing grid systems, and asset investments are featured. These worldwide efforts and multibillion dollar investments offer many **lessons learned and the winning strategies** to others embarking on new projects or seeking expertise at different stages of modernization undertakings.

Supplemental Power System discussions include Sustainable Energy, T & D Reliability, Distributed Resources, Microgrids, Advanced Monitoring, Protection and Control Technologies, Security, Data Exchange practices, Reliability Strategies, and maintaining longevity of investments. Endeavors and findings by practitioners navigating the Frontiers of the Smart Grid, Balancing Operational Readiness, Energy Mix Strategies, and Implementing Advances in Technology.

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 will enable stakeholders to shape the direction of this critical program and maximize benefits from the program achievements. 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

To register by phone, please contact Gail Jackson: gail@cavs.msstate.edu

Center for Advanced Vehicular Systems
Box 5405
Mississippi State University
Mississippi State, MS 39762-5405
Phone: 662-325-9088

Overnight Shipping address:
200 Research Boulevard
Starkville, MS 39759

Fax: 662-325-5433 (f)

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

Vahid Madani
Pacific Gas and Electric Co.
(510) 874-2300
Vxm6@pge.com

Roger King
Mississippi State University
(662) 325-2189
rking@cavs.msstate.edu

Damir Novosel
Quanta Technology
(919) 334-3010
dnovosel@quanta-technology.com

i-PCGRID Workshop 2013

Innovations in Protection & Control for Greater Reliability Infrastructure Development

Journey in Modernizing the Grid for the 21st Century

2.0 Continuing Education Units (CEU) available this year

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

Day 1 - Tuesday, March 26, 2013

Time	Item	Presenter
7:15 AM	Registration and Refreshments	<i>Session Coordinator – Sandra Ellis – PG&E</i>
8:00 AM	Introductions and Welcome	Vahid Madani & Jonathan Sykes - PG&E
8:10 AM	Keynote – Chartering The Course For A Robust And Reliable Power Systems	Mark Johnson - PG&E
8:35 AM	Keynote - Disaster Resilience & Asset Planning	William Ball – Southern Company
9:00 AM	Keynote - Reliability Improvements In Latin America	Nohemi Arboleda - XM Columbia
9:25 AM	Keynote - Industry Opportunities And Challenges	Terry Boston – PJM
9:50 AM	Keynote - Asset & Technology Sustainability Strategies	Roger King – Mississippi State Univ. (MSU)
10:15 AM	Break	<i>Session Coordinators Trevor Hall – QT, Lise Phan – PG&E</i>
10:30 AM	Keynote - Managing Renewable Energy	Larry Bekkedahl – Bonneville Power Administration (BPA)
10:55 AM	OMS/DMS Implementation at SDG&E	Vic Romero – San Diego Gas & Electric
11:15 AM	DOE Smart Grid Vision - Phasor Measurements for Blackout Prevention	Anjan Bose - WSU
11:40 AM	Reliability Toolshed - Vegetation & Pole Management Program	Steve Tankersley – PG&E
12:05 PM	Lunch	<i>Session Coordinator–Mark Schexnayder –PG&E</i>
12:55 PM	IEEE PES GMD Initiatives	Bill Chiu – Southern California Edison (SCE)
1:15 PM	West Texas Load Growth – Transmission Solutions	Wes Speed - Oncor
1:35 PM	Updates from Japan	Yutaka Kokai – Tokyo
1:55 PM	Applied Technology Services & Smart Grid Testing	Dave Bradley – PG&E
2:15 PM	Magnetic Amplifier for Power Flow Control	Marcus Young – Oak Ridge National Lab (ORNL)
2:40 PM	Micro-synchrophasors for Distribution Systems – The CIEE's ARPA-E Project	Sascha Vonmeier - CIEE
3:00 PM	The Grid of the Future - A Scenario Exercise	Merwin Brown – CIEE
3:15 PM	Break	<i>Session Coordinator – Anthony Boardingham – CA Department of Water Resources</i>
3:30 PM	Panel on Voltage Management Moderator: Damir Novosel - Quanta	Ron Markham – PG&E Gordon Matthews – BPA Bharat Bhargava – Electric Power Group Dejan Sobajic – NYSIO Jay Giri – Alstom Grid Yuri Makarov – Pacific NW Nat'l Lab (PNNL)
5:15 PM	Day 1 Closeout – Adjourn	<i>Vahid Madani, Damir Novosel, Roger King</i>

i-PCGRID Workshop 2013

Innovations in Protection & Control for Greater Reliability Infrastructure Development

Journey in Modernizing the Grid for the 21st Century

245 Market Street, San Francisco, Conference Room A

Day 2 - Wednesday, March 27, 2013

Time	Item	Presenter
7:30 AM	Registration and Refreshments	<i>Session Coordinators – Shirin Tabatabai</i>
7:55 AM	<i>Introduction and Welcome</i>	<i>Nicolas Younan - MSU</i>
8:00 AM	Keynote – Cyber Security Strategies in Smart Grid	James Sample – PG&E
8:20 AM	Keynote – Wide Area Monitoring & System Protection	Gabriel Arguello – CENACE, Ecuador
8:45 AM	Keynote – Smart Grid Initiatives in Europe	Hubert Lemmens – ELIA, Belgium
9:10 AM	Keynote-Protection & Automation in Future Networks	Juan Macias – GE
9:35 AM	New Frontiers in Revitalizing the Power Grid	Damir Novosel - QT, Vahid Madani - PG&E
10:05 AM	Break	<i>Session Coordinator – Guorui Zhang- QT</i>
10:20 AM	Conformance Testing for Standards Strategies	Jerry Fitzpatrick & Tom Nelson - NIST
10:40 AM	NERC CIP & Cyber Security Standards Update Versions 4 & 5 (Impact Levels, Format, Features)	Scott Mix – NERC
11:05 AM	Precision Frequency Measurements	Bill Dickerson - Arbiter
11:25 AM	A Process for Assessing the Security of Synchrophasor Intelligent Electronic Devices	Tommy Morris – MSU
11:45 AM	Designing for the Substation Environment A Review of IEEE 1613	William Higinbotham - RFL
12:05 PM	Lunch	<i>Session Coordinator –Carmen Contreras-PG&E</i>
12:45 PM	Slide Show: Proof of Concept Facility Benchmarks & Strides in Synchrophasor Technology	Vasudev Gharpure –QT, James Barich-PG&E
1:00 PM	An Alternative to Patching Firmware for Cyber Security- Adaptive Anti-Malware Protection (AAMP)	Eric MacDonald – GE
1:20 PM	Distribution Automation Initiatives at PEPCO - Early Impacts on Reliability and Lessons Learned	Joseph LoPorto – PEPCO
1:40 PM	Microgrids for Energy System Resiliency	Erich Gunther - Enernex
2:00 PM	Improving The Future of Distribution Automation (DA) Using Available Technologies	Ratan Das – ABB
2:20 PM	New Directions for Emerging DA & DMS	S. S. (Mani) Venkata - Alstom
2:40 PM	Modern Multifunction Recorder Technology Capabilities	Charlie Childs - AMETEK
3:00 PM	Break	<i>Session Coordinator - Yujie Yin, GE</i>
3:15 PM	Real-time tools for Grid Reliability	Jim Gotesky and Andrew Mann - PG&E Cyd Caduyac - ALSTOM
3:45 PM	Precision Time Protocol (PTP) and Power Profile	Doug Arnold – Symmetricom Dewey Day - PG&E
4:10 PM	A New Method of Identifying Grid Parameters From Disturbance Events	Chuck Wells – OSI
4:30 PM	Disaster Recovery and Reliability for RAS / SIPS	Lyle Dixson & Admir Trebincevic - PG&E
4:50 PM	Advanced Analytics & Off-line Engineering Tools	Manu Parashar – ALSTOM
5:10 PM	Day 2 – Adjourn	<i>Roger King & Session Coordinators</i>

i-PCGRID Workshop 2013

Innovations in Protection & Control for Greater Reliability Infrastructure Development

Journey in Modernizing the Grid for the 21st Century

245 Market Street, San Francisco, Conference Room A

Day 3 - Thursday, March 28, 2013

Time	Item	Presenter
7:30 AM	Registration and Refreshments	<i>Session Coordinator – Scott Hayes – PG&E</i>
7:55 AM	Introduction and Welcome	<i>Luther Dow - QT</i>
8:00 AM	Keynote – Transmission System Operation Reliability	Gregg Lemler – PG&E
8:25 AM	Keynote - Technology Initiatives at BC Hydro	Kip Morrison – BC Hydro
8:45 AM	Battle Scars – Balancing Technology and Protection & Control Reliability	Jerry Timiraos & Jonathan Sykes - PG&E
9:10 AM	GMD - Modeling of Geomagnetically Induced Currents - State of the Art Technology	Patrick Donohoe - MSU
9:30 AM	Wide-Area Measurement and Control Scheme Maintains Central America's Power System Stability	Armando Guzman – SEL
9:55 AM	Testing Wide Area SIPS Using IEC 61850	Ralph Mackiewicz - SISCO
10:15 AM	Break	<i>Session Coordinator: Jun Wen – SCE, Chase Sun- PG&E</i>
10:30 AM	Update on Setting-less Protection	Sakis Meliopoulos – GT, Paul Myrda –EPRI
10:50 AM	Smart Distribution Management System in Operation	Larry Clark - Southern Co., Alabama Power
11:10 AM	Engineering Data Concentrator	Mark Adamiak – GE
11:30 AM	Dynamic Line Rating	Peter Schell – Ampacimon (Belgium)
11:50 AM	Practical Challenges of Integrating Synchrophasor Applications into an EMS	Anil Jampala – Alstom Joe Betro – PG&E
12:10 PM	Lunch	<i>Session Coordinator: Atousa Yazdani - QT, Monica Anderson – PG&E</i>
12:45 PM	IEEE & IEC Interoperability Standards Alex Apostolov - OMICRON	
1:05 PM	Panel on Data Exchange Moderator: Barbara Motteler - Alstom	Jeff Dagle – PNNL; Yi Hu – Quanta; Greg St. Martin - PG&E, Galina Antonova - ABB, Dejan Sobajic – NYISO
2:30 PM	Reliability Improvements and Disaster Readiness Plan	Alex Apostolov - OMICRON Bryan Gwyn – QT
2:50 PM	Update on Super Calibrator	S. Meliopoulos & George Cokkinides – GT, Vahid Madani – PG&E
3:10 PM	Break	<i>Session Coordinator: Alex Morales – PG&E</i>
3:25 PM	Keys to Managing Technical and Business Visions - Sustainability Factors	James Barich – PG&E, John Wulf – Alstom Luther Dow – QT, Dave Alcock - GE
4:20 PM	Practical Experiences with High Power Computing in Power System Applications	Liang Min - Lawrence Livermore National Lab
4:40 PM	Advanced Inverter Technologies Report	Wendy Almukdad - CPUC
5:10 PM	Wrap-up / Topics for 2013 - Adjourn	<i>R. King, V. Madani, D. Novosel</i>