

IEEE Innovative Smart Grid Technologies Conference (ISGT)

January 19 – 21, 2010

Gaithersburg, Maryland USA

Opening Session: Setting the Stage for Smart Grid

Moderator: **Wanda Reder**

Chair, IEEE Smart Grid

Past President, IEEE Power & Energy Society

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ISGT Conference Overview

- Conference participation
 - ~700 delegates from 32 countries
 - 2/3rds IEEE members
 - 80% from industry
 - 30% management / senior executives

- Leading smart grid experts
 - Power and energy systems applications
 - Cyber and physical security systems
 - Wide area protection, communication, and control
 - Smart sensing and advanced metering
 - Home automation, demand response
 - Renewable integration

Thank You

- Attendees, speakers, authors, media
- Organizing Committee
- Sponsors:
 - IEEE Power & Energy Society
 - IEEE Communications Society
 - IEEE Computer Society
 - IEEE Power Electronics Society
 - IEEE Signal Processing Society
 - IEEE USA
- Host: NIST

Organizing Committee

- Don Von Dollen (chair)
- Erich Gunther
- Doug Houseman
- Barry LeCerf
- D'Nese Moore
- Steve Pullins
- Pat Ryan
- Mohammad Shahidehpour
- Jianhui Wang

Pat Gallagher: Director, NIST

Welcome

IEEE Smart Grid

- Organizes, coordinates, leverages and builds upon the strength and experience of all IEEE entities
- Provides thought leadership and coordination for the global smart grid movement
 - Unmatched diversity of expertise
 - Unbiased in nature
 - Proven standards-development process
 - Stability and global reach
 - Comprehensive education programs to share best practices, publish developments, provide intelligence

Launched Today: IEEE Smart Grid Web Portal

IEEE Smart Grid



IEEE Smart Grid News:

- 11 January 2010
IEEE lays groundwork for adoption of DNP3 Protocol as new IEEE standard
- 10 January 2010
First IEEE SmartGridComm 2010 will take place Oct 4-6, 2010 at NIST, Gaithersburg, MD
- 07 January 2010
IEEE marks major milestones in advancement of P1901 Draft Standard for Broadband Over Power Line networks
- 09 January 2010
IEEE engages manufacturers of Home Appliances and Smart Meters in discussions on Smart Grid Standards at International CES 2010, Las Vegas

Upcoming Events:

- 19 JAN
IEEE PES Conference on Innovative Smart Grid Technologies
- 26 JAN
IEEE P3030 Working Group Meeting
- 23 MAR
IEEE International Symposium on Power Line Communications
- 28 MAR
2010 Asia-Pacific Power and Energy Engineering Conference (APPEEC)

Get involved in IEEE Smart Grid >>

Conferences
IEEE annually hosts nearly 1,000 conferences and meetings throughout the world where information and best practices are exchanged. [Learn More](#)

Smart Grid Spotlight
John McDonald
IEEE Fellow
In July 2009, IEEE Fellow and GE Energy Transmission & Distribution marketing general manager, John McDonald, and several IEEE members participated at FORTUNE magazine's prestigious FORTUNE Brainstorm. [Learn More](#)

Featured Articles
Taking the latest in computing and communications technology to make the electrical system more interactive, efficient, and robust is not a new idea. What's new is that suddenly more than 10 billion federal dollars are being poured into it. [Learn More](#)

View all >>
IEEE Videos
A Smart Grid for Intelligent Energy U...
★★★★★
Our future is in the smart grid that will enable consumers to save money by controlling their use of energy. An 8-minute video, "A Smart Grid for Intelligent Energy Use," explains the smart grid and its importance for reducing our carbon footprint. According to the leading engineers, business leaders and public policy experts interviewed at the 2008 IEEE Energy 2030 Conference, significant energy savings will result from the use of communications and computing technology to improve electricity transmission and distribution. [Read more.](#)

Smart Grid Photovoltaics Renewable Energy

TOP Publications
Grid of the future
Article # 4787536
Many believe the electric power system is undergoing a profound change driven by a number of needs. There's the need for environmental compliance and energy conservation. [Read more.](#)

NIST Smart Grid Framework
Bulk Generation
Transmission
Distribution
Customer
Operations
Markets
Service Provider

Resource Center
Contact
Sitemap
Get Involved

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- A consolidated gateway to smart grid intelligence, education and news
- Features IEEE multi-disciplinary coordination and expertise
- Created specifically for anyone interested in smart grid
 - Manufacturers
 - Policymakers
 - Educators
 - Governments
 - Researchers

<http://smartgrid.ieee.org/>



IEEE Smart Grid: Standards

- Over 100 standards spanning smart grid spectrum

- Examples:

- **IEEE C37.118:**

- Synchronized phasor measurements

- **IEEE 1686:**

- IEEE Standard for Substation Intelligent Electronic Devices (IEDs) Cyber Security Capabilities

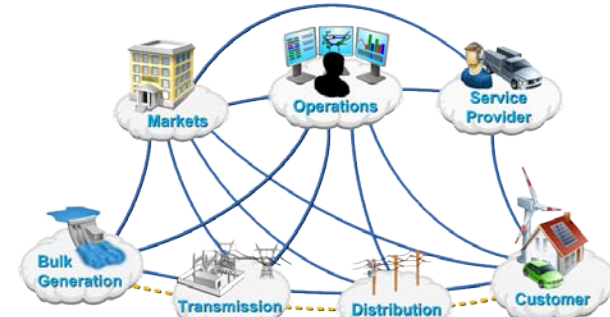
- **IEEE P2030:**

- creating a guide for smart grid interoperability that sets the stage for future standards making

- **IEEE P1815:**

- fast-tracking adoption of DNP3 as an IEEE standard to promote interoperability, strengthen security and maintain compatibility

- Coordinating with NIST and other Standards Development Organizations (SDOs)



IEEE Smart Grid: Transactions

- IEEE has ~2,500 smart grid papers in 40 journals
- Creating new, multi-disciplinary scientific journals
 - **IEEE Transaction on Smart Grid**
 - Editor-in-Chief is Mohammad Shahidehpour
 - First issue is June, 2010
 - **IEEE Transaction on Sustainable Energy**
 - Editor-in-Chief is Saifur Rahman
 - First issue in April, 2010
- Dedicated to disseminating smart grid and sustainable energy research and implementation strategies
 - Four releases annually for each transaction
 - Visit <http://mc.manuscriptcentral.com/pes-ieee>

IEEE Smart Grid: Conferences

- IEEE hosts ~1,000 events throughout the world annually
- Consolidated calendar of IEEE smart grid conferences is included on the IEEE Smart Grid Web Portal

- Selected upcoming IEEE events:

| | Starting |
|--|----------|
| – P2030 Working Group Meeting | Jan 23 |
| – 2010 Asia-Pacific Power And Energy Engineering Conf | Mar 28 |
| – International Symposium On Power Line Communications | Mar 23 |
| – Transmission & Distribution Conference & Exposition | April 19 |
| – PES General Meeting | July 25 |
| – SmartGridComm 2010 | Oct 4 |

- Please visit and post IEEE smart grid conferences
 - <http://smartgrid.ieee.org/>

Conclusion

- Through IEEE Smart Grid, all IEEE stakeholders are coming together under one umbrella to become:
 - The leader in the Smart Grid movement
 - Number one resource for enabling Smart Grid technologies
 - THE place for smart grid information and collaboration

