

UIC2010: 6th Annual Utility Integration Conference

November 2-3, 2010

Philadelphia, PA

PROGRAM AGENDA:

Tuesday, November 2, 2010

7:30 - 8:00 a.m. :: Registration and Continental Breakfast

Day 1 Conference Timing: 8:00 a.m. - 6:00 p.m.

Opening Remarks

Ali Vojdani, CEO, UISOL

The Distributed Grid - Challenges and Opportunities

Paul Feldman, Chairman, Midwest ISO, Independent Director, WECC

- The evolving electrical grid
- Technology and cultural considerations
- Perspectives on change from the bulk power system to the end user
- Challenges and opportunities

The NIST Interoperability Framework for the Smart Grid

George Arnold, National Coordinator for Smart Grid Interoperability, NIST

- Overview of the NIST Release 1.0 framework
- Smart grid interoperability panel
- Current status of the standards and key issues being addressed
- Cyber security

Integrating Demand Resources into PJM's Wholesale Electricity Markets (Case Study)

Pete Langbein, Manager, Retail Demand Response Integration, PJM Interconnection

- Current demand response markets at PJM
- Demand Response 3.0: How dynamic pricing offers new opportunities
- Designing performance evaluation methods to fit a wide selection of resource types
- Ideas to increase participating by demand in ancillary service markets

Transforming NYC Commercial Buildings into Virtual Generation Assets (Case Study)

Troy DeVries, Project Manager for DOE Smart Grid Demonstration Project, Consolidated Edison NY

Alain Steven, CTO, Viridity Energy

- Project overview and objectives
- Commercial buildings as virtual distributed generators in the wholesale market
- Commercial buildings optimization for load relief
- Solution approach
- Preliminary results

Microgrid Optimization for Demand Response (Case Study)

Byron Washom, Director, Strategic Energy Initiatives, University of California, San Diego

Kevin Meagher, CTO, EDSA Micro

Alain Steven, CTO, Viridity Energy

- Overview of the University of California San Diego's microgrid
- Objectives of the RESCO project
- Definition and role of a master controller in a microgrid
- Security-constrained optimal dispatch of microgrid distributed energy resources
- Results and next steps

Group Luncheon :: 12:00 - 1:00 p.m.

Integrating Battery Energy Storage System (BESS) into Distribution Network (Case Study)

Helen Whittaker, Senior Strategic Technology Specialist, BC Hydro

- Overview of BESS project
- Business case
- Design challenges
- Project challenges
- System studies and results

Integrating Proxy Demand Resources into California's Wholesale Electricity Markets (Case Study)

Jill Powers, Lead, Manager, Energy Measurement, Acquisition and Analysis, California ISO

- Developing additional opportunities for demand response resources
- Comparison between participating load and proxy-demand resource
- Process and application implementation for the deployment of PDR
- Leveraging PDR for future demand response programs

Implementation of a Multiple-Organization MDM Solution for the Purpose of Developing DR Programs (Case Study)

Andrew Horstman, Manager of Load Response, Wabash Valley Power

- Integrating multiple AMI technologies into a single MDM
- Integration standards: Do they work?

- Integration of multiple CIS into a single MDM
- Data sharing and privacy across multiple organizations
- Developing and managing DR resources across utility boundaries

Integrating Distributed Generation, Distributed Storage, and Demand Response to Create a Self-Healing, High-Reliability Microgrid at Portland General Electric (PGE) (Case Study)

Mark T. Osborn, Distributed Resources Manager, Portland General Electric

- How PGE has integrated and dispatched customer owned backup generators for the last 10 years
- An overview of PGE's project for the Pacific Northwest Smart Grid Demonstration Project with Battelle
- Planned integration and dispatch of distributed storage and demand response within the distribution grid
- Implementing a modern, distributed energy resources management system in real-time

Demand Response at Tennessee Valley Authority (TVA) (Case Study)

Butch Massey, General Manager, Demand Response, Tennessee Valley Authority (TVA)

- Challenges of implementing demand response programs at a non-vertically, integrated utility
- Pilot programs
- Technology challenges of working with 155 local distributors

5:00 - 6:00 p.m. :: Cocktail Reception

Wednesday, November 3, 2010

7:30 - 8:00 a.m. :: Continental Breakfast

Day 2 Conference Timing: 8:00 a.m. - 4:30 p.m.

A Report from NERC Integration of Variable Generation Task Force (IVGTF)

Dariush Shirmohammadi, Chief Consultant, Shir Consultants

- Impact of large penetration of variable generation on power system planning and operations
- Recommendations on system planning practices to address large penetration of variable generation in power system
- Recommendations on system operations practices to address large penetration of variable generation in power system

Establishing Wholesale Standards for DR Communications and M&V (Case Study)

Donna Pratt, Demand Response Market Product Specialist, New York Independent System Operator

Scott Coe, Vice President, UISOL

- The relevance of NIST's Priority Action Plans to wholesale markets
- Demand response communication standards
- Demand response M&V business practice standards
- Moving toward adoption: Necessary steps

Integrating Aggregations of Retail Customers into Midwest ISO's Wholesale Electricity Markets (Case Study)

Mike Robinson, Manager of Market Development, Midwest ISO

- Dealing with a multi-state footprint with varying view of demand participation
- Key concepts of accurate settlements between demand response providers and load serving entities
- Challenges of proper modeling of distributed demand resources

The Smart Grid Integration Lab (Case Study)

Stu Bresler, Vice President, Market Operations and Demand Resources, PJM Interconnection

Scott Coe, Vice President, UISOL

- Smart grid integration lab concept
- The role of smart communications protocols in the lab
- The role of smart technologies in the lab
- Results from the Price-Responsive Demand (PRD) demonstration with PJM

Addressing the Cyber Security Issues of Smart Grid

Chris Smith, GM Utilities Line of Business and Smart Grid, Boeing Energy

- Enabling a secure, distributed control system architecture
- Creating a hybrid of hierarchical control and distributed architecture with fault and intrusion design
- Leveraging best of breed from DOD experience
- Analysis of existing vulnerabilities
- Implications of new smart grid technologies

Wholesale Demand Response: The Art of Integrating Retail DR programs into Wholesale Supply Resources (Case Study)

G Muir Davis, Senior Project Manager, Demand Resource Integration, Southern California Edison

- Demand response provider - Load-serving entity, direct participation
- Retail relationships - What do customers really want?
- Stakeholders
- Desirable resources
- Smart grid impact on demand response

12:00 - 1:00 p.m. :: Group Luncheon

Panel Session: Technology Solutions for Distributed Resources Integration

Alain Steven, CTO, Viridity Energy

Dirk Mahling, CTO, CPower Inc.

Ivo Steklac, Executive VP, Tendril

Mark Bloomberg, Utility Practice Manager, Progress Software

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[Kevin R. Evans](#), CEO, Energy Connect

Establishing Wholesale Standards for Integrating Electric Vehicles and Storage Technologies (Case Study)

Ken Huber, Manager Advanced Technology, PJM Interconnection

- Experience with grid storage and electric vehicles in today's grid
- Opportunities for fleets of electric vehicles to accelerate integration
- The emergence and role for the storage and electric vehicle aggregator
- Projections for impact on grid reliability and wholesale markets

Integrating Renewable Energy in Power Systems and Markets Operations (Case Study)

Lawrence E. Jones, Director, Strategy and Special Projects, AREVA T&D Inc

- Operational vs. informational integration
- Solutions for managing uncertainty and variability
- Integrating renewable energy forecast
- Smart grid applications (e.g. DR, DLR, PMU) that can enable renewable integration
- Case studies from Denmark, France, Hawaii, and Ireland

Microgrid (Perfect Power) Implementation at Illinois Institute of Technology (Case Study)

Mohammad Shahidehpour, Professor ECE Dept, IIT

- Essence of a perfect power system
- Smart switches for enhancing reliability
- Master controller for a microgrid
- Demand response in a perfect power system
- Sustainable generation in a perfect power system

West Coast OADR vs. East Coast Reserve and Capacity Programs (Case Study)

Dirk Mahling, CTO, CPower Inc.

Co-presenter TBD, representing a national retail chain,

- Automated Demand Response (DR), a reaction to behavioral DR
- OpenADR, a standard for automating DR
- Elements of capacity and reserve programs
- What OpenADR does not cover
- Running OADR and other DR programs across a national account

Conference Adjourns 4:30 p.m.