



Staff Workshop on Voltage Coordination on High Voltage Grids

**December 1, 2011
9:00 a.m. – 4:30 p.m.**

Agenda

9:00 – 9:15 AM Greeting and Opening Remarks by David Andrejcek and Dick O' Neill

9:15 AM – 12:15 PM - Current approaches and challenges to analyzing voltage support and reactive margin during operations planning and real-time.

Presentations: Panelists will be asked to describe how their companies currently coordinate the dispatch of reactive resources to support forecasted loads, generation and interchange transactions during operations planning and real-time. Panelists should address the following in their presentations:

- a. Describe the pre-scheduling and real-time processes that involve the commitment or dispatch of reactive resources from a reliability perspective. What applications or tools are used to evaluate reactive or voltage support needs from this perspective?
- b. Describe the pre-scheduling and real-time processes that involve the commitment or dispatch of reactive resources from an economic perspective. What applications or tools are used to evaluate reactive or voltage support needs from this perspective?
- c. Explain whether and how pre-scheduling, real-time and post analysis evaluations are performed on the bulk electric system or on lower voltage systems to maximize opportunities for additional reliability or economic transactions.
- d. Describe the situations where the dispatch of reactive resources may limit System Operating Limits or whether and how more transactions could be supported.
- e. Describe how reactive power needs of the distribution system or loads are coordinated or optimized.

Panelists

- Khaled Abdul-Rahman, California Independent System Operator
- Xiaochuan Luo, ISO New England
- Wes Yeomans, New York Independent System Operator
- Dave Zwergel, Midwest ISO
- Chantal Hendrzak, PJM Interconnection
- Bruce Rew, Southwest Power Pool

12:15 – 1:30 PM Lunch Break

1:30 – 4:00 PM The next generation of voltage support and reactive margin applications used during operations planning and real-time

Presentations: Panelists will be asked to describe capabilities of the present and anticipated future software that can be used as decision tools to help system operators optimize voltage support resources to preserve and protect reliability and support market-based economic transactions. Panelists should address the following in their presentations:

- a. What are the objectives of software products available to industry that optimize the system for operations planning and real-time? (Minimize losses, maximize transfer capability, and/or minimize production costs?)
- b. Describe the system optimization software products currently used or tested in industry. Discuss how widely these are used in industry.
- c. Describe how these software products are evaluated and validated using a post analysis process.
- d. What effort is involved in implementing the application for use in industry?
- e. Discuss whether the application can be used on an interconnection-wide, Balancing Authority or local distribution system basis and, if so, how the application would be utilized.
- f. Discuss whether the applications can be used to optimize reactive power resources in the distribution system or loads and coordinate with higher voltage systems.

Panelists:

- Kedall Demaree, Alstom
- Rod Sulte, GE
- Soorya Kuloor, Gridiant
- Marija Ilic, New Electricity Transmission Software Solutions (NETSS)
- Dan French, Siemens
- Xiaoming Feng, ABB/Ventyx Network Management Systems

4:00 – 4:30 PM Summary Remarks by Richard O’Neill and David Andrejczak