

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Increasing Market and Planning Efficiency through  
Improved Software

Docket No. AD10-12-000

NOTICE OF TECHNICAL CONFERENCE TO DISCUSS INCREASING MARKET  
AND PLANNING EFFICIENCY THROUGH IMPROVED SOFTWARE

(May 7, 2010)

Take notice that Commission staff will convene technical conferences on the following dates to discuss increasing market and planning efficiency through improved software.

The development of improved optimization solution algorithms and hardware processing speed will allow more realistic power system market models to be solved in a sufficiently short amount of time for such models to be adopted into market operation software. Smarter software is a valuable tool for improving the efficiency of electricity market operations and system planning, and can be beneficial for increased penetration of locationally-constrained variable resources (for example, wind and solar), demand resources, flexible assets, and storage technologies.

Staff will hold conferences in June 2010 to discuss increasing market and planning efficiency through improved software and hardware. The conferences will bring together diverse experts from ISOs/RTOs, the software industry, government, research centers and academia for the purposes of stimulating discussion and sharing of information about the technical aspects of these issues and identifying fruitful avenues for research.

The three conferences are organized as described below.

Enhanced day-ahead ISO and RTO unit-commitment market models

Dates: June 2-3, 2010

Speaker Nomination Deadline: May 14, 2010

This conference will focus on improving the performance of the day-ahead market and the integration of variable resources, demand resources (DR, DG, and storage) and other technologies by developing unit-commitment models that can accommodate more complex physical and market constraints. Improvements in formulations and solution techniques for unit-commitment will be presented and discussed. Better modeling will be discussed for both new and existing assets. Technology-specific modeling issues and bidding parameters will be discussed for a wide range of resources including wind, solar, demand resources (DR, DG, and storage), electric vehicles, dispatchable transmission, and combined cycle generating stations. Additional topics discussed at this conference will include co-optimization (with respect to energy, reserves, ramp rates, and network

topology), flexible dispatch, settlement calculations, transmission switching, and development of a unit-commitment test bed to benchmark the speed and efficiency of solution techniques.

#### Enhanced wide-area planning models

Dates: June 9-10, 2010

Speaker Nomination Deadline: May 17, 2010

This conference will focus on enabling a more efficient planning and cost allocation process through the employment of better large-scale transmission expansion and economic planning models. Integration of more components of the planning process into a single modeling framework should lead to an overall improvement in planning efficiency. Better models are required to efficiently plan transmission investments in an environment of competitive markets with locationally-constrained variable resources. Discussions at the conference will include issues surrounding the integration and modeling of variable energy resources and demand resources (DR, DG, and storage) in planning software. Additional issues to be discussed include planning under uncertainty, optimal selection of transmission investments among alternatives, modeling generation expansions in transmission planning models, market-based investment models, and development of a planning model test bed to benchmark models and techniques. Algorithmic approaches in economic planning will also be presented and discussed.

#### Enhanced real-time optimal power flow market models

Dates: June 23-24, 2010

Speaker Nomination Deadline: May 24, 2010

This conference will focus on improving dispatch of generation assets, integration of variable energy resources and demand resources (DR, DG, and storage) and utilization of flexible transmission assets through the development of a large-scale AC optimal power flow (AC OPF) model with sufficient usability and speed to facilitate better unit-commitment and real-time dispatch, including the optimal dispatch and pricing of reactive power from generators, transmission assets and load. Development of an AC power system test bed to benchmark the speed of solution techniques will be discussed.

The technical conferences will be held in the Commission Meeting Room at the Federal Energy Regulatory Commission, 888 First Street, NE, Washington, DC 20426. All interested persons are invited to participate in the conference, on a space-available basis. However, the presentations and discussions at these particular conferences are intended to focus on the computational and modeling aspects of these issues. We expect that participants with technical understanding of operations research, power system engineering, mathematical modeling, and/or computer science will probably benefit most from attendance.

Participants wishing to present a paper or to speak must nominate themselves by emailing Eric Krall and Tom Dautel (see contact information below) the proposed speaker's name, organization, email, phone number, and address, along with a title and

description of the proposed presentation. Speaker nominations must be submitted by the respective deadline listed above for each conference. Due to time constraints, we may not be able to accommodate all those interested in speaking.

Further notices with a detailed agenda for each conference will be issued shortly after each speaker nomination deadline. Following the conferences, a comment date will be set for the filing of post-conference comments.

There is an “eSubscription” link on the web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please email [FERCOnlineSupport@ferc.gov](mailto:FERCOnlineSupport@ferc.gov), or call 866 208-3676 (toll free). For TTY, call 202 502-8659.

A free webcast of this event will be available through the FERC website. Webcast viewers will not be able to participate during the technical conference. Anyone with Internet access interested in viewing the webcast of this conference can do so by navigating to Calendar of Events at [www.ferc.gov](http://www.ferc.gov). The events will contain a link to the webcast. The Capitol Connection provides technical support for the webcasts and offers the option of listening to the conferences via phone-bridge for a fee. If you have any questions, visit [www.CapitolConnection.org](http://www.CapitolConnection.org) or call (703) 993-3100.

FERC conferences are accessible under section 508 of the Rehabilitation Act of 1973. For accessibility accommodations please send an email to [accessibility@ferc.gov](mailto:accessibility@ferc.gov) or call toll free (866) 208-3372 (voice) or (202) 502-8659 (TTY), or send a fax to (202) 208-2106 with the required accommodations.

For further information about these conferences, please contact:

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