

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Increasing Market and Planning Efficiency and
Enhancing Resilience through Improved Software

Docket No. AD10-12-011

NOTICE OF TECHNICAL CONFERENCE:
INCREASING REAL-TIME AND DAY-AHEAD MARKET EFFICIENCY AND
ENHANCING RESILIENCE THROUGH IMPROVED SOFTWARE

(February 14, 2020)

Take notice that Commission staff will convene a technical conference on June 23, 24, and 25, 2020 to discuss opportunities for increasing real-time and day-ahead market efficiency and enhancing the resilience of the bulk power system through improved software. A detailed agenda with the list of and times for the selected speakers will be published on the Commission's website¹ after May 22, 2020.

Staff has held similar conferences in this proceeding in the past years, focused on enhancing market and planning efficiency and the resilience of the bulk power system. As in past conferences, this conference will bring together experts from diverse backgrounds and experiences, including electric system operators, software developers, and those from government, research centers and academia for the purposes of stimulating discussion, sharing information, and identifying fruitful avenues for research concerning the technical aspects of improved software for increasing efficiency and resilience of the bulk power system.

This conference is intended to build on those previous discussions. Staff will be facilitating discussions to explore research and operational advances with respect to market modeling that appear to have significant promise for potential efficiency or resilience improvements. Broadly, such topics fall into the following categories:

- (1) Improvements to the representation of physical constraints that are either not currently modeled or currently modeled using mathematical approximations (e.g., voltage and reactive power constraints, stability constraints, fuel delivery constraints, and constraints related to contingencies);
- (2) Consideration of uncertainty to better maximize economic efficiency (expected market surplus) and better understand events that could impact resilience of the

¹ <http://www.ferc.gov/industries/electric/indus-act/market-planning.asp>.

bulk power system, e.g., stochastic modeling, or other improved modeling approaches to energy and reserve dispatch and system planning that efficiently manage uncertainty;

- (3) Software related to grid-enhancing technologies, such as those described in the notices for Docket No. AD19-19, “Grid-enhancing Technologies,” and Docket No. AD19-15, “Managing Transmission Line Ratings,” including optimal transmission switching, dynamic line ratings, distributed energy resources, and software for forecasting and enhancing visibility into changing system conditions.
- (4) Improvements to the ability to identify and use flexibility in the existing systems in ways that improve bulk power system resilience and economic efficiency, e.g., transmission constraint relaxation practices, and ramp management;
- (5) Improvements to the duality interpretations of the economic dispatch model, with the goal of enabling the calculation of prices which represent better equilibrium and incentives for efficient entry and exit;
- (6) Limitations of current electricity market software due to its interaction with hardware, for example, parallel computing and better cache management;
- (7) Other improvements in algorithms, model formulations, or hardware that may allow for increases in market efficiency and enhanced bulk power system resilience.

Within these or related topics, we encourage presentations that discuss best modeling practices, existing modeling practices that need improvement, any advances made, or related perspectives on increasing market efficiency and resilience through improved power systems modeling.

The technical conference will be held at the Federal Energy Regulatory Commission headquarters, 888 First Street NE, Washington, DC 20426. All interested participants are invited to attend, and participants with ideas for relevant presentations are invited to nominate themselves to speak at the conference.

Speaker nominations must be submitted on or before April 17, 2020 through the Commission’s website² by providing the proposed speaker’s contact information along with a title, abstract, and list of contributing authors for the proposed presentation. Proposed presentations should be related to the topics discussed above. Speakers and

² <https://www.ferc.gov/whats-new/registration/real-market-6-23-20-speaker-form.asp>

presentations will be selected to ensure relevant topics and to accommodate time constraints.

Although registration is not required for general attendance by United States citizens, we encourage those planning to attend the conference to register through the Commission's website.³ We will provide nametags for those who register on or before June 5, 2020.

We strongly encourage attendees who are not citizens of the United States to register for the conference by April 24, 2020, in order to avoid any delay associated with being processed by FERC security.

The Commission will accept comments following the conference, with a deadline of July 31, 2020.

There is an "eSubscription" link on the Commission's 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, or call (866) 208-3676 (toll free). For TTY, call (202) 502-8659.

WebEx streaming of this conference will be available. Off-site participants interested in listening via teleconference or listening and viewing the presentations through WebEx must register at by 5:00 PM EST on June 12, 2020. WebEx and teleconferencing may not be available to those who do not register.

FERC conferences are accessible under section 508 of the Rehabilitation Act of 1973. For accessibility accommodations please send an email to 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.

³ The registration form is located at <https://www.ferc.gov/whats-new/registration/real-market-6-23-20-form.asp>.

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