

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Increasing Market and Planning Efficiency and
Enhancing Resilience through Improved Software

Docket No. AD10-12-010

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

(March 29, 2019)

Take notice that Commission staff will convene a technical conference on June 25, 26, and 27, 2019 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 13, 2019.

Staff has held similar conferences in this proceeding in the past few years, all focused on enhancing market efficiency. The Commission last year initiated a proceeding in Docket No. AD18-7 to explore bulk power system resilience issues and expanded the scope of the 2018 conference to include opportunities for enhancing resilience through improved software. 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 the discussions initiated in the previous Commission staff technical conferences on increasing market and planning efficiency and for enhancing resilience through improved software. A number of the topics that have been discussed during previous conferences have relevance to resilience in addition to market efficiency. Staff will be facilitating a discussion to explore research and operational advances with respect to market modeling that appear to have significant promise for potential efficiency improvements. Given the priority the Commission places on resilience, presentations that also discuss research and operational advances

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

that could enhance resilience of the bulk power system are encouraged. 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 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) 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., optimal transmission switching, dynamic transmission ratings, transmission constraint relaxation practices, and ramp management;
- (4) 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;
- (5) Limitations of current electricity market software due to its interaction with hardware, for example parallel computing and better cache management.
- (6) 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 19, 2019 through the Commission's website² by providing the proposed speaker's contact information along

² The speaker nomination form is located at <http://www.ferc.gov/whats->

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 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 14, 2019.

We strongly encourage attendees who are not citizens of the United States to register for the conference by May 10, 2019, 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, 2019.

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.

A WebEx will be available. Off-site participants interested in listening via teleconference or listening and viewing the presentations through WebEx must register at <https://www.ferc.gov/whats-new/registration/real-market-6-26-18-form.asp>, and do so by 5:00 PM EST on June 14, 2019. 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.

[new/registration/real-market-6-24-19-speaker-form.asp](https://www.ferc.gov/whats-new/registration/real-market-6-24-19-speaker-form.asp)

³ The registration form is located at <https://www.ferc.gov/whats-new/registration/real-market-6-25-19-form.asp>

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