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DEPARTMENT OF ENERGY
Federal Energy Regulatory Commission

Docket No.   AD10-12-005]

Increasing Market and Planning Efficiency
through Improved Software;

Supplemental Agenda Notice

Take notice that the Commission staff will convene a technical conference on June 23, 24, and 25, 2014 to discuss opportunities for increasing real-time and day-ahead market efficiency through improved software.

This conference will bring together diverse experts from public utilities, the software industry, government, research centers and academia and is intended to build on the discussions initiated in the previous Commission staff technical conferences on increasing market and planning efficiency through improved software.

The agenda for this conference is attached. If any changes occur, the revised agenda will be posted on the calendar page for this event on the Commission's web site[1] prior to the event.

Dated: May 23, 2014.

Kimberly D. Bose,
Secretary.

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[1] http://www.ferc.gov/industries/electric/indus-act/market-planning/2014-conference.asp.

Monday, June 23, 2014

8:30 AM	Introduction (3M-2)
	Richard O'Neill, Federal Energy Regulatory Commission (*Washington, District of Columbia*)
9:00 AM	Session M1 (Meeting Room 3M-2)
	Overcoming Computational Challenges on Large Scale Security Constrained Unit Commitment Problems - MISO and ALSTOM's Experience with MIP Solver
	Yonghong Chen, MISO (*Carmel, Indiana*)
	Xing Wang, Qianfan Wang, Alstom Grid (*Redmond, Washington*)
	Experiences of Operation Efficiency Evaluation and Improvement at PJM
	Hong Chen, PJM Interconnection (*Audubon, Pennsylvania*)
	Day-Ahead and Short-Term Unit Commitment OPF with Voltage Stability Constraints
	Khaled Abdul-Rahman, Enamul Haq, Jun Wu, California ISO (*Folsom, California*)
	Hsiao-Dong Chiang, Bigwood Systems, Inc. (*Ithaca, New York*)
	Reserve Requirement Calculator in SPP Integrated Marketplace
	Jie Wan, Alstom Grid (*Redmond, Washington*)
	Casey Cathey, Southwest Power Pool (*Little Rock, Arkansas*)
11:00 AM	Break
11:15 AM	Session M2 (Meeting Room 3M-2)
	Optimizing Wind Generation in ERCOT Nodal Market
	Resmi Surendran, Hailong Hui, ERCOT (*Taylor, Texas*)
	Chien-Ning Yu, ABB/Ventyx (*Santa Clara, California*)
	Wind Dispatch Using Do-Not-Exceed Limit
	Tongxin Zheng, Eugene Litvinov, Jinye Zhao, ISO New England (*Holyoke, Massachusettes*)
12:15 PM	Lunch
1:30 PM	Session M3 (Meeting Room 3M-2)
	Estimation of the Secure Range for Dynamic Interchange Adjustment
	Slava Maslennikov, ISO New England (*Holyoke, Massachusetts*)
	Yuri Makarov, Pavel Etignov, PNNL (*Richland, Washingtond*)
	Topology Control Algorithms Simulations in PJM with AC Modeling
	Pablo Ruiz, Xiao Li, Bruce Tsuchida, The Brattle Group (*Cambridge, Massachusetts*)
	Michael C. Caramanis, Evgeniy Goldis, Boston University (*Boston, Massachusetts*)
	C. Russ Philbrick, Polaris Systems Optimization (*Shoreline, Washington*)
	Aleksandr Rudkevich, Newton Energy Group (*Newton, Massachusetts*)
	Richard D. Tabors, Across The Charles (*Cambridge, Massachusetts*)
	On the Use of Operating Parameters in Defining Marginal Cost and Minimizing Uplift
	Paul Sotkiewicz, PJM Interconnection, LLC (*Audubon, Pennsylvania*)
3:00 PM	Break
3:30 PM	Session M4 (Meeting Room 3M-2)
	Operational and Practical Considerations for Stochastic Unit Commitment Solutions
	Nivad Navid, Todd Ramey, Dhiman Chatterjee, MISO (*Carmel, Indiana*)
	Performance-based Regulation Compensation Improve PJM Market Efficiency
	Ying Xiao, Alstom Grid (*Redmond, Washington*)
	Paul Sotkiewicz, PJM Interconnection, LLC (*Audubon, Pennsylvania*)
	Performance-Based Pricing of Frequency Regulation in Electricity Markets
	Alex Papalexopoulos, Panagiotis Andrianesis, ECCO International (*San Francisco, California*)
5:00 PM	Adjourn

Tuesday, June 24, 2014

8:15 AM	Arrive and welcome (3M-2)

8:30 AM	Session T1-A (Meeting Room 3M-2)

On Deployment Barriers and Research Challenges for Stochastic Unit Commitment
  Jean-Paul Watson, Sandia National Laboratories (*Albuquerque, New Mexico*)
A Comparison of Various Unit Commitment Techniques Dealing with Uncertainty
  Daniel Kirschen, Yury Dvorkin, Yishen Wang, Ting Qiu, Hrvoje Pandzic, University of
  Washington (*Seattle, Washington*)
An Improved Stochastic Unit Commitment Formulation to Accommodate Wind Uncertainty
  Canan Uckun, Audun Botterud, Argonne National Laboratory (*Lemont, Illinois*)
  John R. Birge, University of Chicago (*Chicago, Illinois*)
Economic Impacts of Wind Covariance Estimation on Power Grid Operations
  Cosmin Petra, Mihai Anitescu, Victor Zavala, Argonne National Laboratory (*Argonne, Illinois*)

Session T1-B (Meeting Room 3M-4)
Full AC Network Integrated Core Solver for the SuperOPF Framework
  Hsiao-Dong Chiang, Bin Wang, Patrick Causgrove, Bigwood Systems, Inc. (*Ithaca, New York*)
Graph-Theoretic Algorithm for Arbitrary Polynomial Optimization Problems
  Javad Lavaei, Ramtin Madani, Ghazal Fazelnia, Abdulrahman Kalbat, Columbia University
  (*New York, New York*)
  Somayeh Sojoudi, New York University (*New York, New York*)
Moment-Based Relaxations of Optimal Power Flow Problems
  Daniel Molzahn, Ian Hiskens, University of Michigan (*Ann Arbor, Michigan*)
Local Optima and Bounds in Optimal Power Flow Problems
  Kenneth McKinnon, Edinburgh University (*Edinburgh, United Kingdom*)
  Waqquas Bukhsh, Technical University of Denmark (*Copenhagen, Denmark*)

10:30 AM	Break

10:45 AM	Session T2-A (Meeting Room 3M-2)

Robust Reserve Modeling for Wind Power Integration in Ramp-Based Unit Commitment
  German Morales-Espana, Royal Institute of Technology (KTH) (*Madrid, Spain*)
  Ross Baldick, University of Texas (*Austin, Texas*)
  Javier Garcia-Gonzalez, Andres Ramos, Universidad Pontificia Comillas (*Madrid, Spain*)
Concepts and Practice Using Stochastic Programs for Determining Reserve Requirements
  Robert Entriken, Eamonn Lannoye, Aidan Tuohy, EPRI (*Palo Alto, California*)
  Garret LaBove, Russ Philbrick, PSO
  Edward Lo, CAISO
  Larsen Plano, PG&E
SCUC and SCD Software for Fully Coordinated Regional Power Markets
  Assef Zobian, Cambridge Energy Solutions (*Cambridge, Massachusetts*)
  Kurt Glaesemann, Northwest National Laboratory (*Richland, Washington*)

Session T2-B (Meeting Room 3M-4)
**Establishing a Consistent State of the European Electricity Transmission Network by Merging
  Non-synchronised Data from Several Countries with an AC Optimal Power Flow**
  Maxime Fender, Artelys (*Montreal, Canada)*
  Mireille Chevallier, Rte (*Versailles, France*)
  Sylvain Mouret, Pierre Girardeau, Manuel Ruiz, Artelys (*Paris, France*)
Operating Beyond PV Curve Limits
  Marija Ilic, Jeffrey Lang, NETSS, Inc (*Sudbury, Massachusetts*)
  Sanja Cvijic
Stochastic Optimal Power Flow with Uncertain Reserves from Flexible Loads
  Johanna Mathieu, Siqian Chen, University of Michigan (*Ann Arbor, Michigan*)
  Maria Vrakopoulou, Goran Andersson, ETH Zurich (*Zurich, Switzerland*)

Tuesday, June 24, 2014

12:15 PM	Lunch

1:30 PM Session T3-A (Meeting Room 3M-2)

A Stochastic Electricity Market Clearing Formulation with Consistent Pricing Properties
   Victor Zavala, Mihai Anitescu, Argonne National Laboratory (*Argonne, Illinois*)

Stochastic Modeling at Multiple Timescales
   Hongyu Wu, Erik Ela, NREL (*Golden, Colorado*)

Multistage Robust Unit Commitment with Affine Policies and Efficient Algorithms
   Sun Xu, Alvaro Lorca, Georgia Institute of Technology (*Atlanta, Georgia*)
   Tongxin Zheng, Eugene Litvinov, ISO New England (*Holyoke, Massachusetts*)

Session T3-B (Meeting Room 3M-4)

Model-Predictive Cascade Mitigation in Electric Power Systems With Storage and Renewables
   Mads Almassalkhi, Ian Hiskens, University of Michigan (*Ann Arbor, Michigan*)

Multi-time-step Chance Constrained Generation Re-dispatch
   Daniel Bienstock, Columbia University (*New York, New York*)
   Michael Chertkov, Scot Backhaus, Russell Bent, Los Alamos National Laboratory
   (*Los Alamos, New Mexico*)

Quantifying the Trade-off Between Secure and Economic Operation of Power Systems Under Uncertainty
   Maria Vrakopoulou, John Lygeros, Goeran Andersson, ETH Zurich (*Zurich, Switzerland*)
   Kostas Margellos, UC Berkeley (*Berkeley, California*)

3:00 PM	Break

3:30 PM Session T4-A (Meeting Room 3M-2)

Scenario Reduction for Scalable Stochastic Unit Commitment
   Sarah Ryan, Yonghan Feng, Iowa State University (*Ames, Iowa*)
   Cesar Silva-Monroy, Jean-Paul Watson, Sandia National Laboratories
   (*Albuquerque, New Mexico*)
   David L. Woodruff, University of California Davis (*Davis, California*)

Stochastic Models for Generation Unit Commitment
   Tim Schulze, The School of Mathematics (*Edinburgh, United Kingdom*)
   Kenneth I.M. McKinnon, The University of Edinburgh (*Edinburgh, United Kingdom*)

A Scalable Decomposition Algorithm for Solving Stochastic Transmission and Generation Investment Planning Problems
   Francisco Munoz, Jean-Paul, Sandia National Laboratories (*Albuquerque, New Mexico*)

Session T4-B (Meeting Room 3M-4)

Computational Performance of the Current-Voltage (IV) Linearization of the ACOPF: Before Extensions
   Anya Castillo, Johns Hopkins University (*Baltimore, Maryland*)

Transmission Switching with the Current-Voltage (IV) Linearization of the ACOPF
   Paula Lipka, University of California, Berkeley (*Berkeley, California*)

Evaluating High Penetrations of Off-Shore Wind using SMART-ISO
   Warren B. Powell, Hugo P. Simao, Princeton University (*Princeton, New Jersey*)

Computational Study of Security Constrained Economic Dispatch with Multi-period Rescheduling
   Michael Ferris, Yanchao Liu, Feng Zhao, University of Wisconsin (*Madison, Wisconsin*)

6:00 PM	Adjourn

Wednesday, June 25, 2014

8:45 AM	Arrive and welcome (3M-2)
9:00 AM	Session W1-A (Meeting Room 3M-2)

Session W1-A (Meeting Room 3M-2)

Distributionally Robust Congestion Management with Dynamic Line Ratings
Feng Qiu, Jianhui Wang, Argonne National Laboratory (*Argonne, Illinois*)

Real Time Dynamic Path Limit Computation for Market Efficiency and Grid Reliability
Nilanjan Ray Chaudhuri, Naresh Acharya, Chaitanya Baone, Santosh Veda, GE Global Research (*Niskayuna, New York*)

Implementation Of Dynamic Thermal Ratings in the Operational Environment
Kwok Cheung, Alstom Grid (*Redmond, Washington*)
Hongxia Wu

Identifying, Modeling and Utilizing The Hidden Capacity in the Transmission Network
Richard Tabors, Tabors Caramanis Rudkevich (*Cambridge, Massachusetts*)
Adam Rousselle, Utility Risk Management Corporation (*New Hope, Pennsylvania*)
Aleksandr Rudkevich, Newton Energy Group (*Newton, Massachusetts*)
Michael Seelhof, Tabors Caramanis Rudkevich (*New York, New York*)

Session W1-B (Meeting Room 3M-4)

Stochastic Operations Toolkit for Power Systems with High Penetration of Solar Energy
Cesar Silva-Monroy, Jean-Paul Watson, Francisco Munoz, Sandia National Laboratories (*Albuquerque, New Mexico*)
Richard Chen, Ali Pinar, Sandia National Laboratories (*Livermore, California*)
Andrew Mills, Lawrence Berkeley National Laboratory (*Berkeley, California*)

Use of Cloud Computing in Power Market Simulations
Aleksandr Rudkevich, John Goldis, Newton Energy Group (*Cambridge, Massachusetts*)
Richard Tabors, Lorna Omondi, Tabors Caramanis Rudkevich (*Cambridge, Massachusetts*)

Incorporating Intra-hour Market Pricing
Gary Dorris, Ascend Analytics, LLC (*Boulder, Colorado*)

Facilitating Appropriate Compensation of Electric Energy and Reserve Through Standardized Contracts
Leigh Tesfatsion, Deung-Yong Heo, Iowa State University (*Ames, Iowa*)

11:00 AM	Break
11:15 AM	Session W2-A (Meeting Room 3M-2)

Session W2-A (Meeting Room 3M-2)

Concentric Relaxations and Transmission Switching
Jim Ostrowski, Mike Hare, University of Tennessee (*Knoxville, Tennessee*)
Jianhui Wang, Argonne National Laboratory (*Argonne, Illinois*)

Probabilistic Security Analysis of Optimal Transmission Switching
Daniel Kirschen, Pierre Henneaux, University of Washington (*Seattle, Washington*)

Session W2-B (Meeting Room 3M-4)

Experience Solving the RTO Unit Commitment Test System
Stephen Elbert, Pacific Northwest National Laboratory (*Richland, Washington*)

Stochastic Look-ahead Dispatch with Intermittent Renewable Generation via Progressive Hedging and L-shaped Method
Yingzhong (Gary) Gu, Le Xie, Texas A&M University (*College Station, Texas*)

12:15 PM	Adjourn