



Monitoring
Analytics

**Activities of the
Market Monitoring Unit
2009**

**Independent Market Monitor for PJM
December 30, 2010**

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Preface

This report is posted pursuant to Section VI.C of Attachment M to the PJM Open Access Transmission Tariff (the “PJM Market Monitoring Plan” or “Plan”), which directs the Market Monitoring Unit (also known as the, “MMU,” “Independent Market Monitor for PJM” or “IMM”) to “prepare a detailed public annual report about the Market Monitoring Unit’s activities, subject to protection of confidential, proprietary and commercially sensitive information and the protection of the confidentiality of ongoing investigations and monitoring activities.”

Originally constituted as an independent division of PJM Interconnection, L.L.C. in 1999, the MMU was established in 2008 as a separate company, Monitoring Analytics, LLC. Monitoring Analytics continues to serve as the MMU under a long term contract. PJM is a regional transmission organization that is responsible for ensuring the reliability of the electric power supply system in 13 states and the District of Columbia. The MMU is responsible for promoting a robust, competitive and nondiscriminatory electric power market in PJM by implementing the PJM Market Monitoring Plan.

The Commission has identified three core functions of MMUs: Monitoring, Reporting and Market Design.¹ MMU activities during 2009 are listed below by core function.

The MMU posts market data, all public reports, presentations and market messages on the Monitoring Analytics web page at: <http://www.monitoringanalytics.com>.

Monitoring

Market Surveillance

The MMU analyzes and monitors all the PJM markets including the Day-Ahead Energy Market, the Real-Time Energy Market, the Daily Capacity Market, the Interval, Monthly and Multimonthly Capacity Markets, RPM base and incremental auctions, the Regulation Market, the Synchronized Reserve Market and the Annual, Monthly and Balance of Planning Period Auction Markets in Financial Transmission Rights (FTRs). The ongoing market analysis and monitoring form the basis for all MMU activities.

Market Participant Discussions

The PJM Market Monitoring Plan provides that, in addition to informing Commission staff, the MMU may “Engage in discussions with Market Participants regarding issues

¹ 125 FERC ¶ 61,071 (Order No. 719).

relating to their possible violations of the FERC Market Rules, in order to understand such issues and to attempt to resolve informally such issues or other issues with Market Participants.”² In fulfilling this role in 2009, the MMU monitored participant behavior and discussed relevant matters with FERC staff and with market participants. In addition, the MMU received and investigated confidential complaints. The provision of additional details on these issues is governed by confidentiality rules.

A confidential complaint can reveal flaws in existing rules or procedures. The MMU received confidential complaints and when appropriate publicly proposed rule modifications while maintaining market participant confidentiality.

In addition to providing notice and/or referrals on a confidential basis regarding the activities in the markets, the MMU engaged in the following activities in 2009:

- Participated in meetings and conference calls with individual member companies regarding RPM implementation, including avoidable costs, net revenue, mitigation, and avoidable project investment recovery.
- Participated in meetings with PJM and member companies to discuss market participation issues on topics such as DSR or opportunity cost.

Communications with Regulators

The MMU provides information to regulators, subject to compliance with applicable rules protecting confidentiality. In 2009, the MMU engaged in the following activities:

- Participated in conference calls with the Office of Enforcement regarding current issues;
- Communicated regularly with FERC on market issues and attended scheduled and ad hoc meetings at FERC;
- Provided data in response to requests from FERC’s Office of Enforcement; and
- Provided data to the Antitrust Division at the U.S. Department of Justice in response to a Civil Investigative Demand (CID).

Reporting

Reports and Analyses

The *2008 State of the Market Report*, published on March 11, 2009, and the quarterly reports published on August 14, 2009 and November 13, 2009, fulfilled both the tariff

² PJM Open Access Transmission Tariff, Attachment M, Section IV.D.

reporting requirements and the criteria listed in the Commission policy by providing a comprehensive analysis of the markets within PJM and an assessment of the competitiveness of each market.³ The reports also provided recommendations regarding retention and enhancement of market rules.

The MMU issued the following Reports in 2009:

- 2008 State of the Market Report for PJM (March 11);
- Quarterly State of the Market Report for PJM: January through March, 2009 (June 1);
- Quarterly State of the Market Report for PJM: January through June, 2009 (August 14);
- Quarterly State of the Market Report for PJM: January through September, 2009 (November 13);
- Activities of the Market Monitoring Unit for 2007 (March 18);
- Activities of the Market Monitoring Unit for 2008 (March 18);
- PJM Synchronized Reserve Market Current Trends: November 1, 2008–March 1, 2009 (March 23);
- 2012/2013 RPM Base Residual Auction(August 6);
- Annual FTR Auction Volume through December 2008 (September 16);
- ATSI Integration Capacity Auctions: Delivery Years 2011/2012 and 2012/2013 (December 16);
- MMU Analysis of the Wholesale Market Supporting New Jersey’s Basic Generation Service Auction: Planning Periods 2005–2006, 2006–2007 and 2007–December 2007 (March 23);
- Report to the Ohio Public Utility Commission: Congestion in the State of Ohio (May 8);
- Report to the Virginia State Corporation Commission: Congestion in the Dominion Service Territory in Virginia (July 15);

³ OATT Attachment M § VII.A (revised effective August 1, 2008, to become § VI.A).

- Report to the North Carolina State Corporation Commission Congestion in the Dominion Service Territory in North Carolina: May 1, 2008 through April 30, 2008 (July 15);
- Report to the Ohio Public Utility Commission: Congestion in the State of Ohio (July 15);
- MMU Analysis of the Wholesale Market Supporting Maryland's Standard Offer Service Auction: Planning Periods 2005–2006, 2006–2007 and 2007–December 2007– (August 25); and
- Report to the Virginia State Corporation Commission: Congestion in the AEP Service Territory in Virginia (December 29).

The MMU issued the following Market Messages in 2009:

- IMM CONE E&AS Offset (January 14);
- Average Number of Virtual Bids Per Hour in PJM (March 6);
- Virtual Bidding Volumes in PJM: May 2003 to March 2009 (March 19);
- Market Notice: Parameter Limited Schedule Matrix(August 10);
- Opportunity Cost Calculations (October 29); and
- MA Market Monitoring Indices (December 14).

Industry Briefings

As part of its reporting role, the MMU provided briefings and presentations to industry groups and the Federal Energy Regulatory Commission (FERC). The MMU shared the results of its analyses, experience and knowledge regarding competitive markets, market monitoring and market power mitigation.

During 2009, the MMU:

- Participated in FERC Office of Enforcement meetings for market monitors;
- Briefed FERC staff on the 2008 State of the Market Report (March 11);
- Provided State of the Market Report briefings and presentations to industry press, the Organization of PJM States, Inc. (OPSI) and state commission staffs;
- Attended meetings and conference calls with state regulators, state consumer advocates, industrial customers, Midwest ISO and the Organization of PJM States,

Inc. (OPSI) to answer questions and discuss a range of topics including monitoring, capacity markets and PJM market specifics;

- Presented, Building a Data Repository Using Base SAS at the SAS Global Forum in Washington D.C. (March 25);
- Speaker at Skadden Conference re Compliance/Enforcement in Washington, D.C. (February 3);
- Speaker at the Spring EISG Conference in Monterey, California, (April 6);
- Speaker, “Scarcity Pricing in the Context of PJM’s Market Design,” at the Energy Bar Association (October 18);
- Speaker at EUCI Conference re Smart Capacity Markets in Washington, D.C. (November 9);
- Speaker at EUCI Conference re Pros and Cons of Forward Market Obligations (November 10); and
- Speaker at Platt’s Conference re The Nodal Trader: Nodal Forward Power Trading, etc. in Jersey City, N.J. (November 10).

Market Design

Attachment M, Section IV.D provides “if the Market Monitoring Unit detects a design flaw or other problem with the PJM Markets, the Market Monitoring Unit may initiate and propose, through the appropriate stakeholder processes, changes to the design of such market. In support of this function, the Market Monitoring Unit may engage in discussions with stakeholders, State Commissions, PJM Management, or the PJM Board; participate in PJM stakeholder meetings or working groups regarding market design matters; publish proposals, reports or studies on such market design issues; and make filings with the Commission on market design issues.”⁴

In Order No. 719 and its order on compliance for PJM, the Commission has emphasized this MMU core function.⁵

⁴ OATT, Attachment M, Section IV.D.

⁵ See Order No. 719 at P 357 (“[W]e do expect the MMU to advise the Commission, the RTO or ISO, and other interested entities of its views regarding any needed rule and tariff changes. Likewise, in the event an RTO or ISO files for a proposed tariff change with which the MMU disagrees, we expect the RTO or ISO to inform the Commission of that disagreement, although not necessarily to include a written proposal with its filing.”), codified at 18 C.F.R. §

FERC Proceedings

In 2009, the MMU addressed market design issues on the following topics in proceedings at the FERC:

- **RPM Issues:** Comments of the Independent Market Monitor for PJM in Dockets ER05-1410, et al. (January 6); Comments of the Independent Market Monitor for PJM (February 24); Letter filed with the Commission regarding incorrect ACR rates for the 2011/2012 June Incremental Auction (April 29); Doc-less Motion to Intervene in ER09-412 (September 8); Doc-less Motion to Intervene in ER09-1673 (September 8); Comments of the Independent Market Monitor for PJM in ER09-1673 (September 22); Doc-less Motion to Intervene of the Independent Market Monitor for PJM in ER10-366 (December 10).
- **Operating Reserves Issues:** Protest of the Independent Market Monitor for PJM in Docket No. ER08-1569 (January 22); Motion for Leave to Answer and Answer (February 18).
- **Southern Interface Pricing Issues:** Motion for Leave to Answer and Answer of the Independent Market Monitor for PJM in Docket No. ER09-369 (January 27).
- **Black Start Service Issues:** Motion to Intervene and Comments of the Independent Market Monitor for PJM in Docket No. ER09-730 (March 13); Comments of the Independent Market Monitor for PJM (July 20); Motion for Leave to Answer and Answer of the Independent Market Monitor for PJM (August 28).

35.28 (g)(3)(ii)(A) (“The Market Monitoring Unit must perform the following core functions: (A) Evaluate existing and proposed market rules, tariff provisions and market design elements and recommend proposed rule and tariff changes to the Commission-Approved independent system operator or regional transmission organizations, to the Commission’s Office of Energy Market Regulation staff and to other interested entities such as state commissions and market participants”). In its order of December 18, 2009 on PJM’s filing in compliance with Order No. 719, the Commission required additional changes to ensure that the PJM Market Monitoring Plan fully conforms with Order No. 719’s requirements concerning the role of MMUs in market design. 125 FERC ¶61,250 at P 113 (2009) (“PJM’s OATT fails to specify the MMU’s responsibility for evaluating existing and proposed market rules, tariff provisions and market design elements, and for recommending proposed rule and tariff changes to PJM, the Commission’s Office of Energy Market Regulation and to other interested entities (i.e., state commissions and market participants). Attachment M, section IV.C, in this regard, provides only that, if the MMU “detects a design flaw or other problem with the PJM Markets,” it may initiate and propose changes to such market design. This language, however, is limited to “design” issues relating to existing provisions and thus does not address the full scope of the core MMU function addressed by the Commission in Order No. 719.”).

- **Opportunity Cost Issues:** Answer of the Independent Market Monitor for PJM in EL08-47 (April 8); Protest of the Independent Market Monitor for PJM (August 31).
- **Tower Investigation:** Motion to Intervene Out-of-Time and Comments in Docket Nos. EL08-49 and EL08-44 (April 26); Request for Clarification in Docket No.EL08-44 (May 5).
- **Order No. 719 Compliance:** Motion to Intervene and for Extension of Time in Docket No. ER09-1063 (May 4); Protest and Compliance Proposal (May 27); Report on Barriers to Demand Side Response in PJM (July 1); Motion for Leave to Answer and Answer of the Independent Market Monitor (July 22); Motion for Leave to Answer and Answer of the Independent Market Monitor for PJM (August 28).
- **Lake Erie Loop Flows:** Motion to Intervene Out-of-Time of the Independent Market Monitor for PJM in ER08-1281 (September 2).
- **ATSI Integration:** Doc-less Motion to Intervene in ER09-1598 (September 8).
- **DSR Pricing:** Doc-less Motion to Intervene in Docket No. EL09-68 (September 28); Motion for Leave to Answer and Answer of the Independent Market Monitor for PJM (October 16).
- **Regulation Market Issues:** IMM's Report on the Performance Modifications to the Regulation Market in ER09-13 (November 30); Erratum to the IMM's Report on the Performance Modifications to the Regulation Market (December 3).

Recommendations Regarding PJM Market Rules

During 2009, the MMU presented the following information and analysis to PJM Committees, specifically the Members Committee (MC), FERC Order 719 Task Force (TF719), Market Implementation Committee (MIC), Scarcity Pricing Working Group (SPWG), Markets and Reliability Committee (MRC), Capacity Market Evolution Committee (CMEC), Market Monitoring Unit Advisory Committee (MMUAC), Cost Development Task Force (CDTF), and the Broader Regional Markets Working Group (BRMWG):

- Market Monitoring Report for MC (January 22);
- Scarcity Outline for TF719 (February 2);
- Data Transparency and Lag for TF719 (February 2);
- MMU Position re Market Monitoring Related Items for TF719 (February 2);
- MMU Proposed Revisions to Attachment M, DD, K, and U for TF719 (February 2);

- MMU Position on PJM TF719 Compliance Matrix for TF719 (February 23);
- MMU Data Transparency and Lag for TF719 (February 23);
- Mitigation and Order No.719 Compliance for TF719 (February 23);
- MMU Proposed Revisions to Attachment M, DD, K, and U for TF719 (March 12);
- MMU Proposed Appendix to Attachment M for TF719 (March 20);
- MMU PJM Implementation of Prospective Mitigation for TF719 (March 22);
- 2008 State of the Market Report for MC (March 26);
- Offer Data Lag for TF719 (April 2);
- PJM Implementation of Prospective Mitigation for TF719 (April 2);
- MMU's Scarcity Proposal for TF719 (April 2);
- MMU Proposed Tariff Changes for TF719 (April 2);
- Spot Import Service for MIC (April 15);
- MMU/PJM Proposed Tariff Changes for TF719 (April 15);
- Proposal: Real Time Scarcity Pricing for SPWG (April 22);
- Spot Import Service for MRC (April 23);
- SOM Review for MRC (April 23);
- Filing to Correct ACR Default Table for CMEC (May 5); State of the PJM Market Quarter 1, 2009 for MC (May 7);
- State of the PJM Market January through April, 2009 for MC (June 4);
- IMM CMEC Issues for CMEC (June 8);
- Proposal for Cost Offer Data Submission Requirements for CDTF (June 15);
- Proposal for eFuel Changes for CDTF (June 15);
- Spread Bidding: Mitigation Outline for SBTF (June 25);
- Cost Offer Data Submission Requirements for CDTF (July 13,);
- Fuel Policy Minimum Term for CDTF (July 13);

- eFuel Update and Changes Proposal for CDTF (July 13);
- Gas Cost Recovery for CDTF (July 13);
- Proposed Modifications for CMEC (August 5);
- Comparative Rates of Increase Power Plant Costs and PPI for CMEC(August 5);
- Principles: Real Time Scarcity Pricing for SPWG (August 11);
- State of the PJM Market January through June, 2009 for MC(August 13);
- Spread Bidding: MA Concerns and Mitigation Outline for MIC (August 14);
- Proposed Modifications for CMEC (August 24);
- Proposed Revisions to Attachment DD Section 6.1 – 6.5 for CMEC (September 9);
- Scarcity Pricing True Up for CMEC (September 9);
- Competitive Offers for CMEC (September 9);
- Performance Incentives in RPM for CMEC (September 9);
- Spread Bidding: MA Concerns and Mitigation Outline for MIC (September 10);
- Analysis of the 2012/2013 RPM Base Residual Auction for MIC (September 10);
- Proposed Opportunity Cost Guideline Changes for CDTF (September 14);
- Proposal for Cost Offer Data Submission Requirements for CDTF (September 14);
- eFuel Update and Changes for CDTF (September 14);
- State of the PJM Market, January through August 2009 for MC (September 26);
- CT Revenues: Day Ahead vs. Real Time for CMEC (September 29);
- Defining the Reserve Requirement and the Penalty Factor for SPWG (October 15);
- Proposed Modifications to RPM for CMEC (October 16));
- eFuel Status Update for CDTF (October 19);
- Opportunity Cost Calculator for CDTF (October 19);
- Opportunity Cost Calculation PJM Manual Redlined for CDTF (October 19);

- Opportunity Cost Calculation PJM Manual Clean for CDTF (October 19);
- Proposed Modifications to RPM Must Offer Requirement for CMEC (November 4);
- PJM Scarcity White Paper: MA Comments for SPWG (November 6);
- MA Proposal: Scarcity Pricing for MIC (November 12);
- Comments of the Independent Market Monitor for PJM on Draft Loop Flow Recommendations of BRMG (November 13);
- 2009 Quarterly State of the PJM Market: January through September for MC (November 19);
- Treatment of Emergency Resources in Scarcity Pricing Construct for SPWG (December 4);
- Overview of Topics for Discussion for SPWG (December 4);
- MA Scarcity Pricing Proposal: 3rd Review for SPWG (December 4);
- Scarcity Pricing Mechanism: Tier 2 Synchronized Reserve Market Structure for SPWG (December 4); and
- IMM Proposed Manual 15: Section 8 Changes for CDTF (December 12).

Other Activities

Market Monitoring Unit Advisory Committee (MMUAC)

The Market Monitoring Unit Advisory Committee (“MMUAC”) is established pursuant to Section III.H of Attachment M of the OATT, which provides:

“There shall be an MMU Advisory Committee, chaired by the Market Monitor that is open to all stakeholders and representatives of Authorized Government Agencies. The MMU Advisory Committee shall act as a liaison between stakeholders and the MMU and shall provide advice from time to time on matters relevant to the MMU’s responsibilities under this Plan. The MMU Advisory Committee shall have no authority to direct, supervise, review, or otherwise interfere with the functions of the MMU under this Plan, nor any authority to terminate or propose to terminate the Market Monitor.”

- The MMUAC succeeds the PJM Market Monitoring Advisory Committee (“MMAC”). The Market Monitor convened a meeting of the MMUAC on June 9, 2009. In this meeting, the MMU led a discussion of barriers to entry to demand response in PJM to provide additional information for its report on that topic to the Commission in ER09-1063.

Other Activities

In addition to participation in committees and working groups (see above), in 2009 the MMU:

- Migrated eFuel and RPM/ACR from PJM to Monitoring Analytics on February 17, 2009; and
- Formally launched the Monitoring Analytics website on February 19, 2009.