

Activities of the Market Monitoring Unit 2013

Independent Market Monitor for PJM

December 22, 2014

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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 ("Market Monitor," 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."¹

Monitoring Analytics, LLC serves as the Independent Market Monitor for PJM.² PJM is a regional transmission organization (RTO) 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 FERC assigns three core functions to MMUs: reporting, monitoring and market design.³ These functions are interrelated and overlap. The PJM Market Monitoring Plan establishes these functions, providing that the MMU is responsible for monitoring: compliance with the PJM Market Rules; actual or potential design flaws in the PJM Market Rules; structural problems in the PJM Markets that may inhibit a robust and competitive market; the actual or potential exercise of market power or violation of the market rules by a Market Participant; PJM's implementation of the PJM Market Rules or operation of the PJM Markets; and such matters as are necessary to prepare reports.⁴

The MMU performs its reporting function primarily by issuing and filing annual and quarterly state of the market reports, and reports on market issues. The MMU also issues reports on specific topics in depth. The MMU regularly issues reports on RPM auctions. In other reports, the MMU responds to the needs of FERC, state regulators, or other regulatory authorities, in order to assist policy development, decision making in regulatory proceedings, and in support of investigations.

⁴ OATT Attachment M § IV; 18 CFR § 1c.2.

¹ PJM Open Access Transmission Tariff (OATT) Attachment M § VI.C.

² See 144 FERC ¶ 61,238 (2013).

³ 18 CFR § 35.28(g)(3)(ii); see also Wholesale Competition in Regions with Organized Electric Markets, Order No. 719, FERC Stats. & Regs. ¶31,281 (2008) ("Order No. 719"), order on reh'g, Order No. 719-A, FERC Stats. & Regs. ¶31,292 (2009), reh'g denied, Order No. 719-B, 129 FERC ¶ 61,252 (2009).

To perform its monitoring function, the MMU screens and monitors the conduct of Market Participants under the MMU's broad purview to monitor, investigate, evaluate and report on the PJM Markets.⁵ The MMU has direct, confidential access to the FERC.⁶ The MMU may also refer matters to the attention of state commissions.⁷

The MMU monitors market behavior for violations of FERC Market Rules.⁸ The MMU will investigate and refer "Market Violations," which refers to any of "a tariff violation, violation of a Commission-approved order, rule or regulation, market manipulation, or inappropriate dispatch that creates substantial concerns regarding unnecessary market inefficiencies..." ⁹ ¹⁰ The MMU also monitors PJM for compliance with the rules, in addition to market participants.¹¹

Another important component of the monitoring function is the review of inputs to mitigation. The actual or potential exercise of market power is addressed in part through *ex ante* mitigation rules incorporated in PJM's market clearing software for the energy

⁵ OATT Attachment M § IV.

⁶ OATT Attachment M § IV.K.3.

⁷ OATT Attachment M § IV.H.

- ⁸ OATT Attachment M § II(d)&(q) ("FERC Market Rules" mean the market behavior rules and the prohibition against electric energy market manipulation codified by the Commission in its Rules and Regulations at 18 CFR §§ 1c.2 and 35.37, respectively; the Commissionapproved PJM Market Rules and any related proscriptions or any successor rules that the Commission from time to time may issue, approve or otherwise establish... "PJM Market Rules" mean the rules, standards, procedures, and practices of the PJM Markets set forth in the PJM Tariff, the PJM Operating Agreement, the PJM Reliability Assurance Agreement, the PJM Consolidated Transmission Owners Agreement, the PJM Manuals, the PJM Regional Practices Document, the PJM-Midwest Independent Transmission System Operator Joint Operating Agreement or any other document setting forth market rules.")
- ⁹ The FERC defines manipulation as engaging "in any act, practice, or course of business that operates or would operate as a fraud or deceit upon any entity." 18 CFR § 1c.2(a)(3). Manipulation may involve behavior that is consistent with the letter of the rules, but violates their spirit. An example is market behavior that is economically meaningless, such as equal and opposite transactions, which may entitle the transacting party to a benefit associated with volume. Unlike market power or rule violations, manipulation must be intentional. The MMU must build its case, including an inference of intent, on the basis of market data.
- ¹⁰ OATT Attachment M § II(h-1).

¹¹ OATT Attachment M § IV.C.

market, the capacity market and the regulation market. If a market participant fails the TPS test in any of these markets its offer is set to the lower of its price based or cost based offer. This prevents the exercise of market power and ensures competitive pricing, provided that the cost based offer accurately reflects short run marginal cost. Cost based offers for the energy market and the regulation market are based on incremental costs as defined in the PJM Cost Development Guidelines (PJM Manual 15).¹²

In order to perform its role in PJM market design, the MMU evaluates existing and proposed PJM Market Rules and the design of the PJM Markets.¹³ The MMU initiates and proposes changes to the design of such markets or the PJM Market Rules in stakeholder or regulatory proceedings.¹⁴ In support of this function, the MMU engages in discussions with stakeholders, State Commissions, PJM Management, and the PJM Board; participates in PJM stakeholder meetings or working groups regarding market design matters; publishes proposals, reports or studies on such market design issues; and makes filings with the Commission on market design issues.¹⁵ The MMU also recommends changes to the PJM Market Rules to the staff of the Commission's Office of Energy Market Regulation, State Commissions, and the PJM Board.¹⁶ The MMU may provide in its annual, quarterly and other reports "recommendations regarding any matter within its purview."¹⁷

The MMU posts market data, 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 RPM Base Residual Auctions and Incremental Auctions, the Regulation Market, the Synchronized Reserve Market, the Day-Ahead Scheduling Reserve Market and the Annual, Monthly, Long Term and Balance of Planning Period Auction Markets in Financial Transmission Rights (FTRs). The ongoing

- ¹⁴ Id.
- ¹⁵ Id.
- ¹⁶ Id.
- ¹⁷ OATT Attachment M § VI.A.

¹² See OATT Attachment M–Appendix § II.A.

¹³ OATT Attachment M § IV.D.

market analysis and monitoring forms the basis for all MMU activities. The MMU monitors participant development of inputs to prospective mitigation, including Avoidable Cost Rates and net revenues in RPM; unit-specific offers under the Minimum Offer Price Rule; and cost offers and parameter limited schedules in the energy markets, including eligibility for Frequently Mitigated Unit (FMU) adders. In the course of this monitoring, the MMU provides feedback to participants and engages in discussions about the appropriateness of costs and cost levels. The MMU applies the FTR forfeiture rule, a retroactive mitigation measure, the results of which are reviewed by PJM prior to billing PJM members. The MMU monitors compliance with the must offer rule in RPM. The MMU monitors compliance with the must offer rule in billing PJM members. The MMU monitors costs included in black start service rates. The MMU reviews proposed deactivations to identify potential market power issues. The MMU prepares monthly notifications to PJM generation owners regarding the status of Frequently Mitigated Units per Schedule 1, Section 6.4.2 of the PJM Operating Agreement.

In 2013, the MMU and PJM staff discussed issues regarding combustion turbines being scheduled in the Day-Ahead Energy Market but not being directed to operate in real time. When scheduled day ahead but not taken in real time, these units are compensated for lost opportunity cost (LOC) if their offers are lower than the real-time LMP. As a result of these discussions, PJM began to reevaluate combustion turbines that were scheduled in the Day-Ahead Energy Market using a new commitment tool. The use of the new commitment tool led to closer alignment of day-ahead commitment and real-time operation. In addition a rule change was implemented that exempted long lead time CTs (units with lead times longer than two hours which can be dispatched in the day ahead but not the real time optimization software) from being eligible for the LOC payments and PJM began scheduling units in the Day-Ahead Energy Market for black start and reactive support. As a result, 2013 LOC and canceled resources related charges decreased by \$108.2 million compared to 2012.¹⁸

In 2013, two units received make whole payments in excess of the amount they should have received because their cost-based offers were overstated. The MMU flagged these units, contacted the participant and provided PJM settlements with the corrected cost-based offers for resettlement purposes.

During the peak summer days of 2013, one participant self-scheduled two of its units which received make whole payments to cover their startup cost. Self-scheduled units

¹⁸ See "Commitment Decision Making," PJM Presentation to the Energy Market Uplift Senior Task Force (August 20, 2013) for more detail on the combustion turbine optimizer tool. <<u>http://www.pjm.com/~/media/committees-groups/task-forces/emustf/20130820/20130820bor-commitment-education.ashx</u>>.

are not eligible for make whole payments, but when units are offered as self-scheduled for a portion of the day and pool-scheduled for the balance of the day, there could be scenarios on which the unit is compensated for its startup cost. The MMU and PJM are working on rules that will avoid such a practice in the EMUSTF.

Market Participant Discussions

The PJM Market Monitoring Plan provides that, in addition to informing Commission staff, the MMU may "Engage in discussions regarding issues relating to the PJM Market Rules or FERC Market Rules in order to understand such issues and to attempt to resolve informally such issues or other issues."¹⁹ In fulfilling this role in 2013, 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 discussing notices and/or referrals on a confidential basis regarding the activities in the markets, the MMU engaged in numerous discussions with Market Participants in 2013 about issues related to participant behavior in the PJM markets.

Communications with Regulators

The MMU provides information to regulators, subject to compliance with applicable rules protecting confidentiality. In 2013, the MMU engaged in the following activities:

- Communicated with FERC staff regarding current issues.
- Provided data in response to requests from the FERC's Office of Enforcement.
- Attended meetings and conference calls with state regulators, state consumer advocates, industrial customer coalitions, Midwest ISO and the Organization of PJM States, Inc. (OPSI) to answer questions and discuss a range of topics including monitoring, capacity markets and the operation of PJM markets.
- Provided report to the North Carolina Utilities Commission Congestion in the Dominion Service Territory in North Carolina (July 15).
- IMM Notification to PJM Members of Disclosure of Confidential Information Pursuant to OATT Attachment M - Appendix I.D (July 30). (New Jersey Board of Public Utilities).

¹⁹ OATT Attachment M, § IV.J.1.

- IMM Notification to PJM Members of Disclosure of Confidential Information Pursuant to OATT Attachment M - Appendix I.D (August 6). (Public Utilities Commission of Ohio).
- IMM Notification to PJM Members of Disclosure of Confidential Information Pursuant to OATT Attachment M - Appendix I.D (September 9). (Pennsylvania Public Utility Commission).
- IMM Notification to PJM Members of Disclosure of Confidential Information Pursuant to OATT Attachment M - Appendix I.D (September 16). (Public Utilities Commission of Ohio).

Reporting²⁰

Reports and Analyses

The 2012 State of the Market Report for PJM, published on March 14, 2013, the 2013 *Quarterly State of the Market Report for PJM: January through March* (May 17), the 2013 *Quarterly State of the Market Report for PJM: January through June* (August 15) and the 2013 *Quarterly State of the Market Report for PJM: January through September* (November 14), fulfilled both the tariff 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. ²¹ The reports also provided recommendations regarding retention and enhancement of market rules.

The MMU issued the following reports in 2013:

- Analysis of Replacement Capacity for RPM Commitments: June 1, 2007 to June 1, 2013 (September 13).
- Analysis of the 2015/2016 RPM Base Residual Auction (September 24).
- Activities of the Market Monitoring Unit 2012 (October 4).

The MMU issued the following Market Messages in 2013:

- IMM Response re Draft RFP for Market Monitoring Services (March 4).
- Press Release 2012 State of the Market Report for PJM (March 14).
- Members Committee Letter 2012 State of the Market Report for PJM (March 14).
- Generation Capacity Resources in PJM Region Subject to RPM Must Offer Obligation for 2014/2015, 2015/2016 and 2016/2017 Delivery Years (March 29).
- Unit Specific MOPR Review Modeling Assumptions (June 19).
- Generation Capacity Resources in PJM Region Subject to RPM Must Offer Obligation for 2014/2015, 2015/2016 and 2016/2017 Delivery Years (June 28).

²¹ OATT Attachment M § VII.A

²⁰ Public reports by the MMU are posted at *<http://www.monitoringanalytics.com>*.

- Press Release 2013 Quarterly State of the Market Report for PJM: January through June (August 15).
- Members Committee Letter 2013 State of the Market Report for PJM: January through June (August 15).
- RPM Unit-Specific Offer Cap Review Process (August 30).
- Generation Capacity Resources in PJM Region Subject to RPM Must Offer Obligation for 2014/2015, 2015/2016 and 2016/2017 Delivery Years (September 3).
- IMM Notification to PJM Members of Disclosure of Confidential Information Pursuant to OATT Attachment M Appendix I.D (September 6).
- IMM Notification to PJM Members of Disclosure of Confidential Information Pursuant to OATT Attachment M Appendix I.D (September 16).
- Press Release 2013 Quarterly State of the Market Report for PJM: January through September (November 14).
- Members Committee Letter 2013 Quarterly State of the Market Report for PJM: January through September (November 14).
- MMUAC Agenda (December 6).
- Generation Capacity Resources in PJM Region Subject to RPM Must Offer Obligation for 2014/2015, 2015/2016 and 2016/2017 Delivery Years (December 20).

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 2013, the MMU:

- Participated in FERC Office of Enforcement meetings for market monitors;
- Participated in meetings with FERC staff, the Organization of PJM States, Inc. (OPSI) and state commission staffs.
- Speaker, "Capitalizing on Capacity Markets," PV America East, Philadelphia, PA (February 5).
- 2012 State of the Market Report Press Briefing, Washington, D.C. (March 15).
- Speaker, 2012 State of the Market Report FERC Staff Briefing (March 15).
- Speaker, "Capacity Market Issues," OPSI Spring Meeting, Indianapolis, IN (April 2).
- Speaker, "Demand Response Issues," OPSI Spring Meeting, Indianapolis, IN (April 3).
- Speaker, "2012 State of the Market Report for PJM," Canadian Electricity Association, Washington, D.C. (April 11).
- Speaker, "Taking a Closer Look at Minimum Offer Price (MOPR) Assessing Value and Exemptions," Platts 8th Annual Northeast Energy Markets Conference, New York, NY (April 23).
- Speaker, "2012 State of the Market Report for PJM," ARC Engineers, Washington, D.C. (April 29).

- Speaker, "2012 Year in Review," PJM Annual Meeting, White Sulphur Springs, WV (May 13-15).
- Speaker, FERC Technical Conference: "Capacity Deliverability Across the Midwest Independent Transmission System Operator, Inc./PJM Interconnection, L.L.C. Seam," (AD12-16) Federal Energy Regulatory Commission, Washington, D.C. (June 20).
- Speaker, "The Expanding Intersection Between FERC and EPA," ABA Center For Professional Development, Webinar, (June 18).
- Speaker, "FTR Funding Shortfalls in PJM," EUCI Financial Transmission Rights, Washington, D.C. (July 30).
- Speaker, "Modeling Day-Ahead vs. Real-Time Congestion at the CAISO," Western Power Trading Forum Roundtable, Washington, D.C. (August 9).
- Speaker, "Role of Natural Gas in Power Generation in PJM," Penn State Natural Gas Utilization Conference, Pittsburgh, PA (September 19).
- Speaker, FERC Technical Conference: "Centralized Capacity Markets in Regional Transmission Organizations and Independent System Operators," (AD13-7) Federal Energy Regulatory Commission, Washington, D.C. (September 25).
- Speaker, "Capacity Constructs," National Association of Regulatory Utility Commissioners, Washington, D.C. (September 26).
- Speaker, "What is Capacity? Reliance on non-firm and/or planned resources in RPM," OPSI Annual Meeting, Raleigh, NC (October 7).
- Speaker, "Seams Issues," OPSI Annual Meeting, Raleigh, NC (October 7).
- Speaker, "September Heat Wave Operational and Market Issues," OPSI Annual Meeting, Raleigh, NC (October 8).
- Speaker, "Market Monitor Advisory Committee," OPSI Annual Meeting, Raleigh, NC (October 8).
- Speaker, "PJM Market Update FTR Funding, Operating Reserve Charges, UTCs," Platts 6th Annual Nodal Trader, New York, N.Y. (October 28).
- Speaker, "The September, 2013 PJM Peak Record," MADRI, Washington, D.C. (December 3).
- Speaker, "Electricity Trading: Value Added or Value Removed," HEPG, Tucson, AZ (December 12).

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."²² In FERC Order No. 719 and its order on compliance for PJM, the Commission has emphasized this MMU core function.²³

The Market Monitor worked extensively with PJM staff in 2012 to improve the design of the Regulation Market consistent with requirements specified in FERC Order 755. This effort resulted in a number of significant changes in the Regulation Market design. While the revised market design continues to include the incorrect definition of opportunity cost, overall the changes, as proposed by PJM to the FERC and supported by the Market Monitor, represented significant improvements. On October 1, 2012, PJM implemented Performance Based Regulation, to comply with FERC Order No. 755. The Market Monitor provided supportive filings. On November 16, 2012, the FERC modified the PJM market design that was introduced on October 1, 2012. Due to these modifications by the FERC, the present market design, as jointly proposed by PJM and the Market Monitor, has not been fully implemented. Important parts of the design involving the consistent implementation of the marginal benefit factor in optimization, pricing and settlement remain to be decided by the FERC. In the absence of a consistent implementation of the marginal benefit factor in optimization, pricing and settlement,

²² OATT Attachment M § IV.D.

23 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. § 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 to 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").

the current market design is flawed. On February 5, 2013, the Market Monitor filed with the FERC to have the outstanding market design issues resolved. The FERC retained the flawed design elements in its final order. The Market Monitor tracked and reported on the resulting performance of Regulation Market in 2013.

FERC Proceedings

In 2013, the MMU addressed market design issues on the following topics in proceedings at the FERC:

- Gross CONE (ER12-513) Answer and Motion for Leave to Answer of the Independent Market Monitor for PJM (January 7).
- PJM Regulation Filing (ER12-1204-001, -02 and ER12-2391) IMM Comments, Motion for Technical Conference and Motion to Accept Comments (February 7).
- NY ISO Second Compliance Filing (ER13-780) IMM Comments (February 8).
- GenOn Settlement (ER12-1901) IMM Explanatory Statement in Support of Settlement Agreement (February 28). Comment of the Independent Market Monitor for PJM (May 28). Comment of the Independent Market Monitor for PJM (June 7). Comment of the Independent Market Monitor for PJM (June 12).
- NY ISO Second Compliance Filing (ER13-780) IMM Answer and Motion for Leave to Answer (March 12).
- FTR Allocation Complaint (EL13-47) Comment of the Independent Market Monitor for PJM (March 18). Answer and Motion for Leave to Answer of the Independent Market Monitor for PJM (April 18).
- MOPR Deficiency Notice (ER13-535) Comments of the Independent Market Monitor for PJM (March 25). Answer and Motion for Leave to Answer of the Independent Market Monitor for PJM. (April 19).
- JP Morgan Ventures (ER13-830-001) Comment of the Independent Market Monitor for PJM (April 3).
- DRC Complaint (EL13-57) Comment of the Independent Market Monitor for PJM. (April 16).
- PJM Up-to Congestion Definition (ER13-1654) Comment of the Independent Market Monitor for PJM (July 1). Motion for Leave to Answer and Answer of the Independent Market Monitor for PJM (August 6). Answer and Motion for Leave to Answer and to File Comments Out-of-Time of the Independent Market Monitor for PJM (October 25).
- FirstEnergy FTRs (EL13-47-001) Answer and Motion for Leave to Answer of the Independent Market Monitor for PJM (July 19).
- MISO/Ameren RMR Compensation Filing (EL13-76 and ER13-1962). Answer and Motion for Leave to Answer of the Independent Market Monitor for PJM (July 31).
- Deadlines for Deactivation Exception to Must Offer (ER13-2140) Answer and Motion for Leave to Answer of the Independent Market Monitor for PJM (September 13).
- Forward Capacity Market (ER11-4081-001) Answer and Motion for Leave to Answer of the Independent Market Monitor for PJM (November 27).

- DR Technical Conference (ER13–2108-000) Answer and Motion for Leave to Answer of the Independent Market Monitor for PJM (September 12). Correction to Answer and Motion for Leave to Answer of the Independent Market Monitor for PJM (September 17). Comments and Motion for Leave to Comment of the Independent Market Monitor for PJM (December 3).
- NRG and EME Merger (EC14-14-000) Comment of the Independent Market Monitor for PJM (December 9).
- RPM Import Cap (ER14-503-000) Comment of the Independent Market Monitor for PJM (December 20).
- Limited DR Cap (ER14 -504 -000) Comment of the Independent Market Monitor for PJM (December 20).

State Proceedings

In 2013, the MMU addressed the following market topics in proceedings at state public utility commissions, in response to requests from state public utility commissions or at hearings at state legislatures:

- Participated in discussions with the Illinois Commerce Commission at their open policy meeting (November 7).
- Pennsylvania House of Representatives Environmental Resources and Energy Committee House Bill 1699 re RICE (November 20).

Recommendations Regarding PJM Market Rules

During 2013, the MMU presented information, analysis and recommendations to PJM Committees.²⁴

Capacity Senior Task Force (CSTF)

• Participated in task force discussions charged with resolving issues related to RPM replacement capacity, Demand Response as an operational Capacity Resource, the clearing of Limited DR in RPM and the Minimum Offer Price Rule (MOPR) unit-specific review process.

Cost Development Subcommittee (CDS)

- Regulation Cost Based Offers Problem Statement and Issue Charge (January 7).
- Cyclic Peaking Starting Factors Problem Statement (January 7).
- Participated in subcommittee discussions including the development of Manual language for unit types not already defined in Manual 15, defining variable operations and maintenance costs, defining shut down costs for demand response resources and defining appropriate cost-based offers in the performance based regulation market.

²⁴ OATT Attachment M § IV.D.

Demand Response Subcommittee (DRS)

 Participated in subcommittee discussions including the demand response registration process, normal operations of demand response resources, subzonal dispatch, implementation of extended summer and annual resources, product substitution of resources, measurement and verification, data collection for demand response resources and defining appropriate economic demand response.

Energy Market Uplift Senior Task Force (EMUSTF)

- Provided education regarding energy uplift credits and charges. Reviewed the historical energy uplift credits, allocation of charges, operating reserve rates and concentration of energy uplift credits (September 17).
- Provided recommendations aimed at enhancing the current energy uplift credits calculation rules, reducing the amount of energy uplift and increasing the transparency of energy uplift payments (December 20).

Finance Committee (FC)

- 2012 Monitoring Analytics Financial Results (March 21).
- Audited Monitoring Analytics Financials for 2012 (May 14).
- Preliminary Monitoring Analytics Budget for 2014 (August 20).
- Proposed Monitoring Analytics Budget for 2014 (September 17).

Financial Transmission Rights Task Force (FTRTF)

- FTR Issues (February 15).
- Participated in task force discussions.

Gas Electric Senior Task Force (GESTF)

• Participated in task force discussions.

MC Webinar

- Selected MMU Market Issues (January 28).
- Selected MMU Market Issues (February 25).
- 2012 State of the Market Report for PJM (March 25).
- Market Monitor Report (April 22).
- Market Monitor Report (June 24).
- Market Monitor Report (June 23).
- Market Monitor Report (September 23).
- Market Monitor Report (October 21).
- 2013 State of the Market Report for PJM: January through September (November 18).

Market Implementation Committee (MIC)

- Proposed Revisions to FTR Forfeiture Rule (February 4).
- Definition of DR Commitment in Auctions (February 14).
- FMU Problem Statement and Issue Charge (March 6).
- Sham Scheduling problem Statement and Issue Charge (March 6).
- Sham Scheduling Problem Statement (March 6).

- FTR Forfeiture Rule (March 6).
- FTR Forfeiture Implementation (March 6).
- FTR Forfeiture Rule for UTCs Redline (March 6).
- FTR Forfeiture Rule for UTCS (March 6).
- FTR Forfeiture Rule for INCs and DECs Redline (March 6).
- FTR Forfeiture Rule for INCs and DECs (March 6).
- Market Path/Interface Pricing Point Alignment Problem Statement/Issues Charge (April 10).
- Frequently Mitigated Units and Associated Units Adders Problem Statement/Issues Charge (April 10).
- Synchronized Reserve Units with Physical Limitations (May 8).
- Synchronized Reserve Must-Offer (June 5).
- Supply Curve Smoothing (July 11).
- Analysis of Replacement Capacity for RPM Commitments (July 23).
- Energy Scheduling Issue (October 1).
- Participated in special session discussions defining appropriate unit notification and start-up time rules.
- Participated in special session discussions defining appropriate unit parameter limited schedule rules.
- Participated in special session discussions defining appropriate allocation of energy market make whole payments for black start units.
- Participated in special discussions defining lost opportunity cost in energy and ancillary service markets.

Markets and Reliability Committee (MRC)

- Proposed Revisions to FTR to FTR Forfeiture Rule (January 31).
- FTR Forfeiture Rule M-06, MIC Posting Amended (January 31).
- IMM Revisions of Proposed Up To Congestion Tariff Language (January 31).
- Not Willing to Pay Congestion Transactions (February 28).
- Up to Congestion Proposed Tariff Revisions (February 28).
- DR Plan Enhancements (February 28).
- FTR Forfeiture Rule Draft manual 6 Revisions (February 28).
- FTR Forfeiture Rule Draft Tariff and OA Revisions (February 28).
- FTR Forfeiture Implementation (February 28).
- State of the Market Report Review (March 28).
- Synchronized Reserve must-offer compliance (September 25).
- Joint Problem Statement Minimum Offer Price Rule (MOPR) Unit Specific Review Process (May 30).

Operating Committee (OC)

• Synchronized Reserve Units with Physical Limitations and the implementation of SpinMax (July 8).

• Participated in committee discussions defining appropriate ways to model combined cycle generation units in the PJM market, as well as rules limiting different modes of combined cycle operation.

Transmission Owner Agreement - Administrative Operating Committee (TOA-AC)

• Participated in committee discussions concerning issues related to transmission. (September 3).

System Restoration Strategy Task Force (SRSTF)

- Jointly developed the PJM IMM Proposal for procuring black start generation.²⁵ This proposal included new rules that increased redundancy, cross zonal coordination, and black start supply. The new rules were implemented by the MRC on February 28, 2013, and PJM initiated its first RFP under the new rules on July 1, 2013.
- Participated in task force discussions defining appropriate levels of black start generation, methods for procuring black start generation, PJM's role in system restoration and transmission zone interaction in black start restoration plans.
- Participated in task force discussions concerning PJM's RTO-wide Request for Proposals for Black Start Service both publicly with PJM stakeholders and privately with PJM staff.
- Participated in task force discussions regarding compensation for black start generation. The MMU opposed proposed changes to the fuel storage cost component that would have permitted pumped-storage hydro units providing Black Start Service to recover fuel storage costs for water in the reservoir claimed to be reserved solely for Black Start Service because the evidence did not support the claims.

PJM eTools Refresh

• Participated in discussions related to the various PJM eTools refresh projects to provide input and design criteria.

Other Activities

Seams Coordination

• Participated in the PJM/MISO Joint and Common Market Initiative (PJM/MISO JCM), a joint stakeholder group formed to address market issues at the PJM and MISO border. Presented information on congestion in interface pricing (November 8).

²⁵ See PJM SRSTF. Final Proposal Report. February 15, 2013. http://www.pjm.com/~/media/committees-groups/task-forces/srstf/20130222/20130222-srstf-final-report-compromise-proposal-clean.ashx>.

- Participated in the PJM/NYISO Coordinated Transaction Scheduling (CTS) meetings, a joint stakeholder group formed to develop a methodology for coordinating interchange transactions at the PJM and NYISO border.
- Participated in the Congestion Management Process Working Group (CMPWG) to discuss the status of and potential modifications to the Market to Market process.
- Participated in the MISO Seams Management Working Group (SMWG), a MISO stakeholder group that discusses and proposes potential market initiatives to address seams issues between the PJM and MISO border.

OPSI Advisory Committee

The OPSI Advisory Committee is established pursuant to Section III.G of Attachment M of the OATT, which provides:

"There shall be an OPSI Advisory Committee comprised of five (5) representatives appointed by the Organization of PJM States, Inc. The OPSI Advisory Committee shall meet with the Market Monitoring Unit on a regular basis and as otherwise necessary to receive and discuss information relevant to this Plan. In addition to the specific responsibilities regarding budget and termination set forth in Sections III.E and III.F, the OPSI Advisory Committee may provide advice to the Commission, Market Monitor, the PJM Board, stakeholder committees, and stakeholder working groups regarding any matter concerning the Market Monitor, Market Monitoring Unit or Market Monitoring Plan. Any formal advice shall be in writing and, subject to confidentiality provisions, shall be made publicly available."

In 2013, the Market Monitor met with the OPSI Advisory Committee on Tuesday, October 8, 2013.

Market Monitoring Unit Advisory Committee

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 succeeded the PJM Market Monitoring Advisory Committee ("MMAC").

The Market Monitor convened a meeting of the MMUAC on December 6, 2013. In addition to requesting comments from stakeholders concerning the IMM's implementation of the PJM Market Monitoring Plan, the IMM provided an overview of (i) the deadlines and process applicable to RPM auctions, (ii) the IMM's proposed correction to the inconsistent and inaccurate approach for calculating lost opportunity costs in the current PJM market rules, and (iii) the IMM's concerns about sham scheduling and examples of patterns of conduct that raise particular concern.