



# **Activities of the Market Monitoring Unit 2005**

PJM Market Monitoring Unit  
December 29, 2006

## Background

By order issued March 10, 1999, the Federal Energy Regulatory Commission (“FERC” or “Commission”) accepted the Market Monitoring Plan filed by PJM as part of the PJM Tariff to be effective April 1, 1999.<sup>1</sup> The Commission found the ability of the Market Monitoring Unit (“MMU”) to effectively and broadly monitor and investigate the PJM Market to be essential in view of its contemporaneous decision to approve market-based pricing authority on offers to sell energy in PJM.<sup>2</sup> This report is posted pursuant to Section VII.C of the Plan.

## Activities

The MMU’s primary objectives, as defined in Section I of the Market Monitoring Plan, are to:

(1) monitor and report on issues relating to the operation of the PJM Market, including the determination of transmission congestion costs or the potential of any Market Participant(s) to exercise market power within the PJM Region; (2) evaluate the operation of both pool and bilateral markets to detect either design flaws in the PJM Market operating rules, standards, procedures, or practices as set forth in the PJM Tariff, the PJM Operating Agreement, the PJM Reliability Assurance Agreement, The Reliability Assurance Agreement-South, the Reliability Assurance Agreement-West, the PJM Manuals, or PJM Regional Practices Document or to detect structural problems in the PJM Market that may need to be addressed in future filings; (3) evaluate any proposed enforcement mechanisms that are necessary to assure compliance with pool rules; and (4) ensure that the monitoring program will be conducted in an independent and objective manner. The Plan also prescribes reporting procedures that PJM will use to inform governmental agencies and others concerning its market monitoring activities.<sup>3</sup>

Section III of the PJM Market Monitoring Plan states:

The Market Monitoring Unit shall be responsible for monitoring the following:

- A.** Compliance with the PJM Market Rules.
- B.** Actual or potential design flaws in the PJM Market Rules.
- C.** Structural problems in the PJM Market that may inhibit a robust and competitive market.
- D.** The potential for a Market Participant to exercise market power or violate any of the FERC Market Rules.

Paragraph 2 of FERC’s “Policy Statement on Market Monitoring Units”<sup>4</sup> states:

---

<sup>1</sup> 86 FERC ¶ 61,247 (1999) (“March 10 Order”).

<sup>2</sup> Id. at n.4 (citing Atlantic City Elec. Co., 86 FERC ¶ 61,248 (1999)).

<sup>3</sup> PJM Open Access Transmission Tariff, Attachment M, “PJM Market Monitoring Plan”.

<sup>4</sup> 111 FERC ¶ 61,267 (2005).

In order to achieve the stated purpose of enhancing the competitive structure of the ISO/RTO markets, MMUs perform several valuable tasks:

- To identify ineffective market rules and tariff provisions and recommend proposed rule and tariff changes to the ISO/RTO that promote wholesale competition and efficient market behavior.
- To review and report on the performance of wholesale markets in achieving customer benefits.
- To provide support to the ISO/RTO in the administration of Commission-approved tariff provisions related to markets administered by the ISO/RTO (e.g., day-ahead and real-time markets).
- To identify instances in which a market participant's behavior may require investigation and evaluation to determine whether a tariff violation has occurred, or may be a potential Market Behavior Rule violation, and immediately notify appropriate Commission staff for possible investigation.

The MMU performs economic analysis and monitoring of 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, the Regulation Market, the Spinning 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, which can be categorized as monitoring of market participant behavior; market analysis submitted to FERC in formal proceedings; participation in FERC proceedings; provision of data to FERC; market analysis in the form of published and internal reports; recommendations regarding PJM market rules, participation in PJM committees and working groups, support of PJM in the administration of Commission-approved tariff provisions, industry briefings and presentations, and other activities.

The MMU posts all public reports, presentations and market messages and selected data on the PJM web page at this address: <http://www.pjm.com/markets/market-monitor/market-monitor.html>.

### ***Monitoring***

In its “Policy Statement on Market Monitoring Units,” the Commission listed as one of the valuable tasks performed by market monitoring units: “To identify instances in which a market participant's behavior may require investigation and evaluation to determine whether a tariff violation has occurred, or may be a potential Market Behavior Rule violation, and immediately notify appropriate Commission staff for possible investigation.”<sup>5</sup> The PJM Market Monitoring Plan provides that, in addition to informing Commission staff, the MMU may “Engage in discussions with Market Participants regarding issues 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

---

<sup>5</sup> 111 FERC ¶ 61,267 (2005) at 2.

with Market Participants.”<sup>6</sup> In fulfilling this role in 2005, 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. Additional details on these issues cannot be provided based on rules governing confidentiality.

### *FERC Activities*

In its “Policy Statement on Market Monitoring Units,” the Commission stated that “MMUs perform an important role in assisting the Commission in enhancing the competitiveness of ISO/RTO markets.” In fulfilling this role in 2005, the MMU:

- Submitted reports in Docket Nos. ER04-539, ER03-236 and EL04-121 regarding tariff provisions for frequently mitigated units, scarcity pricing and the three pivotal supplier test, as follows:
  - Response of PJM Interconnection, L.L.C. to the Commission’s Deficiency Notice in Docket Number ER04-539 (February 4, 2005);
  - Declaration of Joseph E. Bowring (Docket No. ER03-236, March 4, 2005); and
  - Answer to Protest of Mirant Companies of PJM Interconnection, L.L.C. (Docket No ER04-539, March 30, 2005).

In addition, the Market Monitor participated extensively in settlement negotiations, including a FERC discovery conference and separate meetings with FERC staff, PJM members from the generator sector and PJM members from the load sector. The parties submitted a Settlement Agreement in November 2005. FERC staff filed comments supporting the Agreement and urged the Commission to certify it. In early 2006, the Settlement Agreement was approved and accepted by the Commission;

- Submitted an updated analysis of the Regulation Market in PJM’s West/South Regulation Zone (Docket No. ER05-10), concluding that the market was characterized by market power that was not mitigated by excess supply. The report noted that results in the West/South Regulation Zone had been consistent with a competitive outcome because offers had been limited to cost-based levels. Based on this analysis, the Commission approved market-based rates for the regulation zone but required the dominant suppliers to submit cost-based bids;
- Participated in FERC Office of Market Oversight and Investigation (OMOI) meetings for market monitors;
- Reported market metrics to FERC;
- Briefed FERC Commissioners on the *2004 State of the Market Report* at a public meeting April 13, 2005;
- Regularly communicated with FERC staff on market issues;
- Provided data in response to requests from FERC OMOI;
- Participated in a FERC technical conference on “Capacity Markets in the PJM Region” (Docket No. PL05-7);

---

<sup>6</sup> PJM Open Access Transmission Tariff, Attachment M, Section IV.C.1.

- Filed an affidavit as part of PJM’s Reliability Pricing Model (RPM) filing in Docket Nos. ER05-1410 and EL05-148;
- Evaluated the ConEd/PSEG Wheel protocol and submitted a statement in a report filed jointly by PJM, NYISO and PSEG in Docket No. EL02-23; and
- Participated in visits by FERC Commissioners and staff to PJM.

### ***Reports***<sup>7</sup>

In its “Policy Statement on Market Monitoring Units,” the Commission included as one of the valuable tasks performed by market monitoring units: “To review and report on the performance of wholesale markets in achieving customer benefits.”

The *2004 State of the Market Report*, published on March 8, 2005, 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. The report also provides recommendations regarding retention and enhancement of market rules.

The MMU posts market data at <http://www.pjm.com/markets/market-monitor/data.html> to enhance market transparency. In 2005, in addition to ongoing data postings, the MMU added hourly data on marginal fuel type in the PJM real-time energy market.

The MMU wrote reports entitled “The Calculation of Fuel-Cost Adjusted Load-Weighted PJM LMPs” and “Marginal Fuel Information for Eastern PJM.”

In response to requests from various government agencies, the MMU prepared the following:

- Monthly reports on the ComEd Control Zone, as requested by the Illinois Commerce Commission;
- Three reports on the expected impacts of the proposed merger of PSEG and Exelon for the New Jersey Board of Public Utilities:
  - PSEG/Exelon Merger Analysis (May 24, 2005);
  - PSEG/Exelon Merger Analysis Supplemental Report (June 16, 2005); and
  - PSEG/Exelon Merger Analysis Part Two (October 14, 2005);
- Responses to data requests as part of the Department of Justice’s Civil Investigative Demand in connection with the proposed merger of PSEG and Exelon;
- A report on congestion for the Virginia State Corporation Commission agreed to as part of the Stipulation submitted with AEP’s application to transfer functional control of its transmission facilities to PJM (Case No. PUE-2000-00550). The report included information on transmission constraints in Virginia and associated congestion costs, plus LMPs by bus (location) with the congestion component identified; and

---

<sup>7</sup> Public reports by the MMU are posted at <http://www.pjm.com/markets/market-monitor/reports-2005.html>.

- “Potomac River Plant Outage Market Analysis” (December 6, 2005) for the Public Service Commission of the District of Columbia.

### ***Recommendations Regarding PJM Market Rules***

The Commission identified the first of several valuable tasks performed by market monitoring units as: “To identify ineffective market rules and tariff provisions and recommend proposed rule and tariff changes to the ISO/RTO that promote wholesale competition and efficient market behavior.”<sup>8</sup> As part of this task, the MMU participates in committees and working groups to provide expertise and assist the RTO and its members in evaluating and designing effective market rules.

Attachment M, Section IV.C.2 gives the Market Monitoring authority to take additional action, including to “Recommend to the appropriate entity (including, if and as appropriate, PJM committees, the PJM Board, or the Commission) modifications to the PJM Market Rules. This recommendation may be made in the form of a written or oral report to the appropriate entity.”<sup>9</sup>

During 2005, the MMU presented information and analysis to PJM Committees on the following topics:

- RTOR Elimination for the Market Implementation Committee (MIC);
- Capacity Markets and the proposed Reliability Pricing Model for the Resource Adequacy Market Stakeholders Working Group (RAMSWG), Electricity Markets Committee (EMC) and Members Committee (MC);
- FERC Orders and Tariff revisions for frequently mitigated unit and associated units for the MIC, EMC and MC;
- Proposed revisions to the Market Monitoring Plan for the Market Monitoring Advisory Committee (MMAC), Tariff Advisory Committee (TAC), EMC and MC;
- Proposed Operating Agreement changes for a cost-based no-load option for price based offers for the Cost Development Task Force (CDTF), MIC, EMC and MC;
- Proposed modification of variable operation and maintenance (VOM) expense definition for the CDTF, MIC, EMC and MC;
- Spread bidding for the MIC;
- Operating Reserve Rules for the Reserve Markets Working Group and MIC; and
- *2004 State of the Market Report* for the EMC.

Presentations are available on PJM’s website at <http://www.pjm.com/markets/market-monitor/presentations.html>.

Representatives of the MMU also regularly attended MC meetings and periodically provided reports on MMU activities and issues to the MIC and EMC.

---

<sup>8</sup> 111 FERC ¶ 61,267 (2005) at 2.

<sup>9</sup> PJM Open Access Transmission Tariff, Attachment M, Section IV.C.2.

The MMU chairs the MMAC and the CDTF.

The CDTF met four times during 2005 and discussed issues related to cost development, including contract based start-up costs, cost-based offers for pumped storage, major combustion turbine overhaul costs, cost-based no-load option for price based offers, variable operations and maintenance cost development, gas procurement issues and a definition for combustion turbine no-load fuel burn. The CDTF proposed Tariff changes for a cost based no-load option for price based offers and proposed a modification the definition of variable operation and maintenance (VOM) expense in the CDTF manual. The MMU presented the proposals to the MIC, EMC and MC, each of which voted to approve the changes.

In June 2005, the MMAC met to review the proposed changes to Attachment M of the Tariff (“PJM Market Monitoring Plan”) and to discuss FERC’s “Policy Statement on Market Monitoring Units.” The Market Monitor also discussed the MMU’s approach to market mitigation, scarcity and corrective actions. The annual meeting of the MMAC was held in December 2005 and the members reviewed the proposed monitoring plan for the next year and recommended changes and additions. Members also continued discussions of the proposed changes to the Market Monitoring Plan.

### ***Industry Briefings and Presentations***

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

During 2005, the MMU provided:

- State of the Market Report briefings and presentations to industry press, FERC staff, the Mid-Atlantic Conference of Regulatory and Utility Commissions (MACRUC), state commission staffs and the PJM Industrial Customers Council (PJMICC);
- Briefings on monitoring practices to international electricity professionals, including delegations from China, the Philippines, Russia, Australia and Japan;
- Meetings and conference calls with state regulators, the Department of Justice, the Pennsylvania Attorney General’s staff, the Organization of PJM States, Inc. (OPSI) to answer questions and discuss a range of topics including monitoring, mergers, capacity markets and PJM market specifics;
- Presentations at industry conferences:
  - “RPM and Market Power Mitigation” – Electric Utility Consultants, Inc. conference;
  - “PJM Capacity Market: Present and Future” – Public Utility Commission of Texas;
  - “Demand Response” – Mid-Atlantic Distributed Resources Initiative (MADRI) Advanced Metering Infrastructure Workshop;
  - “Market Monitoring Issues” – Public Utility Commission of Texas;
  - “Market Monitoring Issues” – National Conference of Regulatory Attorneys (NCRA) Conference; and

- “Approaches to Market Power Analysis” – National Association of Regulatory Utility Commissioners (NARUC) Annual Meeting.

### ***Support of PJM in the Administration of Commission-Approved Tariff Provisions***

The Commission, in its “Policy Statement on Market Monitoring Units,” listed one of the valuable tasks performed by market monitoring units: “To provide support to the ISO/RTO in the administration of Commission-approved tariff provisions related to markets administered by the ISO/RTO (e.g. day-ahead and real-time markets).”<sup>10</sup> Based on its independent evaluation of the operation of markets and analysis of market competitiveness, the MMU often provides support to PJM in the administration of Commission-approved tariff provisions. In addition to participation in committees and working groups (see above), in 2005 the MMU:

- Posted market messages regarding clarification of or compliance with PJM Market Rules or related communications;
- Provided internal presentations for employees on the *2004 State of the Market Report*;
- Participated in meetings with PJM and member companies to discuss market issues, e.g. the impact of the difference between the trading day for gas and electricity;
- Testified before the North Carolina Utilities Commission regarding market competitiveness and monitoring in support of Dominion North Carolina’s application to join PJM;
- Participated in the 2005 Eastern RTO/ISO Conference (May 11-12, 2005) in Washington, D.C. as a panelist for a workshop on “Market Monitoring”;
- Prepared an internal report on the definition and reporting of outages;
- Prepared an internal report on data posting;
- Collaborated on draft proposals for data posting practices; and
- Provided assistance and expertise regarding pumped storage payments and associated Operating Agreement revisions.

### ***Other Activities***

In 2005 the MMU participated in the Economic Infrastructure Surveillance Group (EISG) and the Harvard Electric Policy Group (HEPG).

The MMU hosted an intern from RTE France for three months. The internship provided the intern the opportunity to learn market monitoring practices in order to share best practices with French colleagues as they develop a monitoring program.

In October 2005, the Market Monitor submitted a chapter titled “The PJM Market” for the book Electricity Market Reform: An International Perspective, published by Elsevier Ltd in April 2006.

---

<sup>10</sup> 111 FERC ¶ 61,267 (2005) at 2.