

132 FERC ¶ 61,173  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;  
Marc Spitzer, Philip D. Moeller,  
John R. Norris, and Cheryl A. LaFleur.

PJM Interconnection, LLC

Docket No. PA09-10-000

ORDER APPROVING AUDIT REPORT AND DIRECTING COMPLIANCE AND  
OTHER CORRECTIVE ACTIONS

(Issued August 26, 2010)

1. In this order, the Commission approves the attached Audit Report (Report) prepared by the Division of Audits in the Office of Enforcement (OE). The Report contains staff's findings and recommendations with respect to PJM Interconnection, LLC's (PJM) compliance with (a) rules concerning its independence, governance structure, market operations, and budget processes of its Operating Agreement;<sup>1</sup> (b) terms and conditions of its Open Access Transmission Tariff (OATT);<sup>2</sup> and (c) Commission accounting regulations in the Uniform System of Accounts (USofA) under 18 C.F.R. Part 201 (2009), financial reporting requirements in the FERC Form Nos. 1 and 3-Q, and related regulations. Audit staff evaluated PJM's compliance from January 1, 2007 through December 31, 2009.
2. On February 9, 2009, OE staff issued a public letter advising PJM that it was commencing this audit. During the audit, OE staff issued data requests, conducted analyses, performed site visits, examined e-mails, and held many meetings and interviews with PJM officials and staff.
3. After audit fieldwork was completed, OE staff sent PJM a draft audit report on June 18, 2010, and asked PJM to respond to the audit findings and recommendations. PJM's response to this report on July 15, 2010, as modified August 5, 2010, stated that it generally agreed with the draft audit report findings and would implement all of the recommendations.

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<sup>1</sup> *PJM Interconnection, LLC*, FERC Electric Tariff Sixth, Revised Volume No. 1.

<sup>2</sup> *Pennsylvania-New Jersey-Maryland Interconnection*, 81 FERC ¶ 61,257 (1997) (Order Conditionally Accepting PJM's June 2, 1997 Filing of Its Amended and Restated Operating Agreement and Open Access Transmission Tariff, Among Other Things).

4. As evidenced in the Report, PJM took actions to comply with most of audit staff's recommendations during the course of the audit. PJM's response to the Report outlines all of the steps it took to proactively address the findings and recommendations. PJM's response also outlined the additional steps it would undertake to address the remaining recommendations, as well as the expected implementation date for each additional step.

5. The Report contains nine audit findings and recommends twenty-five corrective actions. The audit findings include: (1) PJM had inadequate controls to ensure it consistently applied procedures for identifying potential price errors in real time Locational Marginal Prices, and its lack of procedures for posting actual price errors in a timely manner; (2) PJM did not ensure its Secretary recorded all proceedings for Board of Managers meetings; (3) PJM did not always charge time for services performed on behalf of its subsidiaries or for subsidiaries' use of PJM data; (4) PJM employees traveled in a higher class fare than allowed by its travel policy; (5) PJM had inadequate procedures to monitor and enforce employees' acceptance of gifts and entertainment from vendors, and some PJM employees accepted vendor gifts of entertainment that had no business-related purpose or proper management approval; (6) PJM did not always follow its procurement policies regarding competitive bidding and sometimes did not retain procurement records; (7) PJM did not use actual time or a time study for a representative period as the basis for employee labor charges included in its Transmission and Markets accounts; (8) PJM did not correctly classify for accounting purposes the noncurrent portion of its pension and other postretirement benefits liabilities; and (9) PJM did not report information for two supporting schedules in the FERC Form No. 1.

6. In addition to these findings, the Report identifies one other matter pertaining to generators access to market data. Specifically, PJM provides generators zonal dispatch rate data through dispatch instructions about five seconds prior to making this information available to all market participants on its public Web site. PJM contends that it was unaware of any member having used this prior notice for improper purposes. The audit determined PJM should address this matter as part of its stakeholder process with market participants to determine whether changes are necessary. PJM met with stakeholders several times between April 14, 2010 and June 16, 2010, to address their concerns regarding this issue. These discussions resulted in PJM committing to change the dispatch instructions PJM provides its members to eliminate the zonal dispatch rate data by the end of the fourth quarter of 2010.

7. The Commission is encouraged that PJM has agreed to implement audit staff's recommendations. This will ensure policies, procedures, and controls are strengthened in the future relating to PJM's responsibilities under its Operating Agreement and OATT, and the Commission's accounting and reporting requirements. The Commission expects PJM to comply with all of the recommended actions in the Report, and we direct OE staff to notify the Commission of any failure of PJM to comply.

The Commission orders:

- (A) The attached Report is approved in its entirety without modification.
- (B) PJM is hereby directed to implement the corrective actions recommended in the Report.
- (C) PJM is directed to submit a status report outlining the steps it will take to implement the recommendations in the Report within 30 days of the issuance of this order.
- (D) PJM must make non-public quarterly submissions to OE detailing its progress in implementing the recommendations until all corrective actions are completed. The submissions must be made no later than 30 days after the end of each calendar quarter, beginning with the first quarter after the submission of the compliance plan and continuing until PJM completes all the recommended corrective actions.

By the Commission.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.



Federal Energy Regulatory Commission

Audit of PJM Interconnection,  
LLC's Compliance with its  
Regional Transmission  
Operating Agreement, Open  
Access Transmission Tariff,  
and Commission Accounting  
and Financial Reporting  
Regulations

Docket No. PA09-10-000  
August 5, 2010

**Office of Enforcement**  
Division of Audits

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## I. Executive Summary

### A. Overview

The Division of Audits within the Office of Enforcement has completed an audit of PJM Interconnection, LLC. The audit was commenced by letter dated February 9, 2009. The audit evaluated whether PJM complied with (a) rules concerning its independence, governance structure, market operations, and budget processes of its Operating Agreement;<sup>1</sup> (b) terms and conditions of its Open Access Transmission Tariff (OATT);<sup>2</sup> and (c) Commission accounting regulations in the Uniform System of Accounts (USofA) under 18 C.F.R. Part 101 (2008), financial reporting requirements in the FERC Form Nos. 1 and 3-Q, and related regulations. Audit staff evaluated PJM's compliance from January 1, 2007 through December 31, 2009.

### B. PJM Interconnection

PJM was created when three utilities formed the world's first continuing power pool in 1927. Other utilities joined in 1956, 1965, and 1981, when PJM was operated by a department of one of its member utilities. In 1997, PJM opened membership to nonutilities and elected an independent Board of Managers (Board). On April 1, 1997, PJM opened its first bid-based energy market. Later that year, the Commission approved PJM as an independent system operator (ISO). In 2001, PJM became the nation's first fully functioning Regional Transmission Organization (RTO). It expanded by adding Allegheny Power in 2002; Commonwealth Edison, American Electric Power, and Dayton Power & Light in 2004; and Duquesne Light and Dominion in 2005.

PJM is a limited liability company organized under Delaware law and run by an independent Board. PJM has more than 600 employees in nine divisions including: the Office of the President; Reliability Services; Finance; Information Technology Services; System Planning; System Operations; Market Services; Business and Member Services; and Reliability Integration. PJM's senior management is comprised of the President and Chief Executive Officer, Chief Financial Officer and Treasurer, General Counsel, Senior Vice Presidents of

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<sup>1</sup> *PJM Interconnection, LLC*, FERC Electric Tariff Sixth Revised Volume No. 1.

<sup>2</sup> *Pennsylvania-New Jersey-Maryland Interconnection*, 81 FERC ¶ 61,257 (1997). (Order Conditionally Accepting PJM's June 2, 1997 Filing of Its Amended and Restated Operating Agreement and Open Access Transmission Tariff, Among Other Things).

Operations and Markets, and the Vice President of Business and Member Services.

PJM has a for-profit subsidiary, PJM Technologies, LLC (PJM Tech), which was formed in 2000 to license PJM's intellectual property to third parties, such as other RTOs. PJM Tech has two subsidiaries, PJM EnviroTrade, Inc. (PJM EnviroTrade), and PJM Environmental Information Services, Inc. (PJM EIS). PJM EIS was formed in 2005 to operate PJM's Generation Attribute Tracking System (GATS), an environmental and emissions tracking and reporting service. PJM EnviroTrade was formed in 2010 to run monthly auctions for renewable energy certificates. These subsidiaries have no employees and rely on PJM staff to conduct their business activities. Although PJM Tech is largely dormant, it derives limited revenues from mostly passive activities, such as facilitating advertising on PJM's Web sites. However, most of the subsidiaries' business occurs at PJM EIS.

### **C. Summary of Compliance Findings**

Audit staff's compliance findings are summarized below. A detailed discussion of these findings is included in Part IV of this report. Audit staff found nine areas of noncompliance:

- *Locational Marginal Prices* - PJM had inadequate controls to ensure it consistently applied procedures for identifying potential price errors in real time Locational Marginal Prices (LMPs). Also, PJM did not have procedures for posting actual price errors in a timely manner;
- *Board of Managers Meeting Minutes* - PJM did not ensure its Secretary recorded all proceedings for Board of Managers meetings as required by its Operating Agreement;
- *Cross-Subsidization of PJM Subsidiary Costs* - PJM did not always charge time for services performed on behalf of its subsidiaries or for subsidiaries' use of PJM data, in accordance with its policies. As a result, PJM members subsidized some labor and data services costs of PJM's subsidiaries;
- *Employee Travel* - Employees traveled in a higher class fare than allowed by PJM's travel policy and an executive's employment contract;

- *Vendor Gifts and Entertainment Received by PJM Employees* - PJM had inadequate procedures to monitor and enforce employees' acceptance of gifts and entertainment from vendors under its employee code of conduct. Also, some PJM employees accepted vendor gifts of entertainment that had no business-related purpose or proper management approvals, as required by PJM's employee code of conduct;
- *Procurement Policies for Competitive Bidding* - PJM did not always follow its procurement policies regarding competitive bidding of purchases over \$50,000 for "commoditized goods and/or services, where numerous capable suppliers are available to bid." As a result, PJM members may be paying higher costs for goods and services secured through sole and single-source contracts. Also, PJM did not always follow Commission or PJM policies requiring retention of procurement records;
- *Allocation of Employee Labor Charges* - PJM did not use actual time or a time study for a representative period as the basis for employee labor charges in its Transmission and Markets accounts as required by the USofA;
- *Misclassification of Pension and Other Postretirement Benefits* - PJM did not classify the noncurrent portion of its pension and other postretirement benefits liabilities in accordance with the Commission's Chief Accountant's guidance letter; and
- *Completion of the FERC Form No. 1 Supporting Schedules* - PJM did not report information for two supporting schedules in accordance with the FERC Form No. 1 instructions.

In addition to these findings, audit staff identified a market issue that PJM should address as part of its stakeholder process with market participants to determine whether changes are necessary. Specifically, PJM provides generators zonal dispatch rate data through dispatch instructions about five seconds prior to posting this information for all market participants on its public Web site. Further details on this issue are included in Part V of this report.

#### **D. Summary of Recommendations and Corrective Actions Taken**

This section summarizes audit staff's recommendations to remedy this report's findings and corrective actions taken by PJM. Detailed recommendations

and corrective actions are included in Section IV of this report. Audit staff recommends that PJM:

- Update procedures to ensure employees adjust and reset the Price Bounding Tolerance (PBT) default value timely and consistently, and provide documented reasons for changes;
- Implement procedures to timely notify market participants of price corrections;
- Strengthen procedures to ensure that minutes for executive and closed sessions are taken and provided to the Secretary for recordation in accordance with PJM's Operating Agreement;
- Strengthen its policies and procedures to ensure its subsidiaries are accurately and timely charged for all labor and data services fees;
- Charge PJM EIS and PJM Tech \$7,950 for unbilled employee labor hours and make appropriate refunds to customers;
- Charge PJM EIS \$40,000 for unbilled data services fees;
- Submit documentation supporting the refunds to the Division of Audits, Office of Enforcement. This report should show underlying supporting calculations, and be submitted within 30 days of the refund date;
- Update the study supporting the \$10,000 quarterly fee assessed to PJM EIS for data services to ensure it reflects current market prices;
- Modify its travel policies to include a list of common exceptions that require approval by an officer or Vice President;
- Maintain records of all trips involving travel policy exceptions or approval by an officer or Vice President;
- Provide training to ensure all necessary PJM employees are familiar with the classes of travel allowed for all employees, and first class travel is used according to PJM's Business Travel Policy and the terms of employment contracts;
- Create procedures that require employees to document and report all gifts equal to or exceeding \$50 from business vendors.

Documentation should include pertinent information, such as a description and the value, assigned by the vendor, for the gift or entertainment;

- Modify the employee code of conduct to clearly define tangible business benefits to PJM that warrant entertainment exceptions;
- Define PJM's threshold for accepting gifts as per year, per vendor, or an aggregate limit over a 12-month period;
- Train employees involved in the purchasing of goods and services to ensure all employees consistently apply procurement policies for sole, single-source, and competitively bid contracts;
- Revise procedures and enhance controls to ensure procurement documents, such as contracts and purchase orders, are properly archived in compliance with Commission and PJM record retention policies;
- Change procedures to develop hardware specifications in-house or with consultants not involved in selling PJM hardware to ensure it receives competitive prices and appropriate quantities for goods and services;
- Consider using sealed bids or another control procedure for competitive bidding to ensure vendor confidentiality;
- Revise procedures to ensure the appropriate amount of labor is allocated to the Transmission and Markets accounts based on actual employee time or a time study for a representative period;
- Perform a time study for a representative period to support the reasonableness of amounts allocated to the Transmission and Markets accounts during the audit period;
- Submit the time study to the Division of Audits no later than 90 days after this audit report is issued;
- Strengthen its accounting and reporting procedures to ensure the noncurrent portion of its pension and other postretirement benefits liabilities are recorded to Account 228.3;

- Reclassify the noncurrent portion of its pension and other postretirement benefits liabilities from Account 242 to Account 228.3;
- Provide descriptions and balances at year end for projects under construction on the schedule for Account 107, in accordance with the instructions on page 216 of the FERC Form No. 1; and
- Report the balance and other specific information for amounts recorded on the schedule for Accounts 208-211, in accordance with the instructions on page 253 of the FERC Form No. 1.

During the course of the audit, PJM made corrective actions to comply with most of audit staff's recommendations. These corrective actions are discussed in the findings of this report.

#### **E. Compliance and Implementation of Recommendations**

Audit staff further recommends that PJM submit for audit staff's review:

- Plans for implementing audit staff's recommendations. PJM should provide these plans to audit staff within 30 days of the issuance of the final audit report;
- Quarterly reports to the Division of Audits describing PJM's progress in completing each corrective action recommended in the final audit report in this docket. PJM should make quarterly filings no later than 30 days after the end of each calendar quarter, beginning with the first quarter after the final audit report in this docket is issued, and continuing until it completes all recommended corrective actions; and
- Copies of any written policies and procedures developed in response to recommendations in the final audit report. These documents should be submitted for audit staff review in the first quarterly filing after PJM completes them.

## II. Background Information

### A. PJM Operations and Markets

As an RTO, PJM is responsible for operating the wholesale electric market and centrally dispatching electric systems in the PJM region. PJM coordinates a generating capacity pool of about 165 gigawatts and operates wholesale electricity markets, for which some 550 companies are eligible to transact. This arrangement enables the delivery of electric power to about 51 million people throughout all or parts of 13 states that include Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia, as well as the District of Columbia.

PJM coordinates the continuous buying, selling, and delivery of wholesale electricity through an energy market. The company uses a bid-based, security-constrained economic dispatch and unit commitment model to determine real-time and next-day LMP for electricity, which reflect the value of energy at a specific location and time it is delivered. If the lowest-priced electricity can reach all locations, prices differ at the approximately 8,000 pricing nodes on the transmission system by marginal losses only. When transmission congestion prevents the free flow of energy, more expensive electricity is ordered to meet that demand, and the LMP is higher in congested areas.

PJM's day-ahead market is a forward market in which hourly LMPs are calculated for the next operating day based on generation offers, demand bids, and scheduled bilateral transactions. The real-time market is a spot market in which LMPs are calculated at five-minute intervals based on grid operating conditions every hour. PJM bases billing settlements on the average of 12 five-minute intervals each hour and bills market participants weekly. Besides PJM's energy market, four other markets are available to PJM participants. They include:

- Financial Transmission Rights Market (FTR) – This involves financial instruments that entitle the holder to a stream of revenues, or charges, based on hourly congestion price differences across a transmission path in the day-ahead energy market. PJM auctions FTRs to help market participant's hedge their price risk when delivering energy. FTRs can be traded separately from transmission service, allowing market participants to hedge against their congestion costs by acquiring FTRs consistent with their energy deliveries.
- Day-Ahead Scheduling Reserve Market (DASR) – This provides PJM operators the ability to schedule sufficient generation to preserve reliability during unanticipated system conditions throughout the

operating day. The market provides price signals that encourage generation and demand resources to provide day-ahead scheduling reserves, and deployment of new resources with the capability to provide such reserves.

- Ancillary Service Market (ASM) – This market includes two ancillary services: synchronized reserve and regulation. The synchronized reserve service supplies electricity if the grid has an unexpected demand for more power on short notice. The regulation service corrects for short-term changes in electricity use that might affect power system stability.
- Reliability Pricing Model Market (RPM) – This is a capacity market that provides long-term price signals to attract needed investment in the PJM region through a competitive auction process three years in advance. Capacity auctions under the RPM obtain the remaining needed capacity after market participants have committed the resources they will supply themselves or provide through contracts. PJM coordinates RPM with its Regional Transmission Expansion Plan to ensure reliability within the PJM region.

## **B. Corporate Governance**

PJM employs a two-tiered governance model to assure that it operates neutrally and independently in managing the electric grid and markets. This structure consists of the Board of Managers and the Members Committee. Besides this structure, PJM has an external market monitor to independently oversee markets within the PJM region, and other corporate compliance entities, to ensure PJM fulfills its regulatory and corporate responsibilities.

### PJM Board of Managers

PJM is governed by a 10-member Board of Managers (Board), nine of whom PJM members elect. The Board appoints the tenth, the President and CEO, to direct and supervise day-to-day operations. This person reports to the Board, which governs independently under an Operating Agreement that specifies its rights, powers, and duties. The Board is generally responsible for oversight of system reliability, operating efficiency, short- and long-term planning and competitive wholesale markets. Under PJM's Operating Agreement, the Board is required to:

- Review and monitor operating, financial and corporate plans, strategies, and objectives;
- Select, evaluate, and set the President and CEO's compensation;
- Develop, approve, and implement succession plans for the CEO;
- Evaluate the performance of PJM and its senior management;
- Adopt corporate conduct policies and monitor PJM's compliance with those policies as well as laws and regulations;
- Monitor the adequacy of PJM's accounting, financial, and other internal controls; and
- Conduct periodic self-evaluation.

The Board does not exist to serve members' interests and in fact must see that members do not exercise undue influence over PJM's control area. No Board member may be (or have been within five years of election) a director, officer, or employee of a member or any affiliated or related party, and must divest any member-related ownership or financial interests within six months of assuming office. These requirements comport with Commission Order Nos. 888 and 2000, which established the principles of independence.

The Board also supervises and oversees "other activities." PJM created an Activity Protocol, effective August 16, 1999 to specify its role in activities not described within PJM's Operating Agreement. The protocol requires PJM to advise members of all activities outside the agreement so they can actively provide PJM appropriate advice and recommendations about these activities.

### PJM Members Committee

PJM's members are market participants, but not owners of PJM. While their role is advisory and not managerial, PJM members influence its operations, budgets, market rules, tariffs, reliability functions, planning, and programs through a stakeholder process that permits participants in all member sectors to comment on potential rule changes and propose alternative solutions.

Within PJM, they are represented by a Members Committee that elects and, indirectly, nominates Board members; provides advice and recommendations to the Board; has the right to terminate and amend the agreement, including its schedules; and may make related filings with the Commission. The committee is

composed of five voting sectors representing generation owners, other suppliers, transmission owners, electric distributors and end-users. A supermajority “yes” vote by sectors is required to pass motions. To ensure that the Board fully understands member views, a Liaison Committee meets with the Board regularly. It includes representatives from each membership sector.

### PJM Market Monitor

In March 2008, the Commission approved a settlement in which PJM amended its Open Access Transmission Tariff (OATT) and Operating Agreement to outsource its market monitoring function.<sup>3</sup> Effective August 1, 2008, PJM hired Monitoring Analytics to perform this responsibility under a six-year contract. Monitoring Analytics is responsible for promoting a robust, competitive and nondiscriminatory electric power market by implementing PJM’s Market Monitoring Plan.

Under this plan, Monitoring Analytics is responsible for monitoring, investigating, evaluating, and reporting on PJM markets, including structural, design or operational flaws, market manipulation, and the exercise of market power. Monitoring Analytics also monitors PJM actions and their impact on market outcomes. Monitoring results can be seen in Monitoring Analytics’ State of the Market report, which is publicly issued quarterly and annually. In its final quarterly report for 2009, Monitoring Analytics recommended several changes in PJM operations, but concluded that the results of all of PJM’s markets were competitive.<sup>4</sup>

### PJM Corporate Compliance

PJM’s President and CEO supervises the company’s day-to-day operations, reports to the Board, and directs and supervises PJM’s staff in operating the transmission grid and energy markets. The PJM Operating Agreement requires this person to keep members “regularly informed of the outlook for, functioning of, and results achieved by the PJM Region.”

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<sup>3</sup> *Allegheny Electric Cooperative v. PJM Interconnection, L.L.C., order approving uncontested settlement and denying rehearing*, 122 FERC ¶ 61,257 (2008).

<sup>4</sup> 2009 Quarterly State of the Market Report for PJM: January through September, November 13, 2009, Monitoring Analytics. However, the Market Monitor subsequently noted, in the 2009 State of the Market Report, that the regulation market results were not competitive.

Before PJM's former President and CEO resigned in July 2007, the company's compliance efforts were decentralized, with each department responsible for complying with rules within its purview. In September 2008, the President and CEO created the Regulatory Oversight and Compliance Committee (ROCC), comprised of 10 manager-level and above employees who have direct responsibility to complete or support compliance activity.<sup>5</sup> The ROCC's chair is an Assistant General Counsel of PJM, who reports to PJM's General Counsel. All ROCC members have direct access to PJM's President and CEO. The ROCC's chair is required to meet with the President and CEO monthly, and the Board's Governance Committee at least quarterly. PJM said centralizing compliance responsibilities in the ROCC has improved the visibility, coordination, and consistency of its compliance programs.

PJM has a seven-member Internal Audit Department that conducts audits on subjects ranging from accounting and procurement controls to cyber security. The Board also has a three-member Audit Committee that oversees Internal Audit's performance and monitors PJM compliance with financial reporting rules and internal controls.

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<sup>5</sup> The Board's Governance Committee approved the ROCC's charter in January 2009.

### III. Introduction

#### A. Objectives

The objectives of this audit were to determine whether PJM complied with (a) the rules concerning its independence, governance structure, market operations, and budget processes of its Operating Agreement, (b) the terms and conditions of its OATT; and (c) Commission accounting regulations in the USofA at 18 C.F.R. Part 101 (2008), and financial reporting requirements in the FERC Form Nos. 1 and 3-Q, and related regulations. Audit staff evaluated PJM's compliance from January 1, 2007 through December 31, 2009.

#### B. Scope and Methodology

Audit staff performed actions to facilitate the testing and evaluation of PJM's compliance with Commission requirements relevant to the audit objectives:

- *Reviewed Public Information* – Audit staff reviewed publicly available materials on the Commission and PJM's Web sites, and other key industry and news sites before it commenced the audit. Examples of materials reviewed include PJM's OATT, Operating Agreement, the FERC Form Nos. 1 and 3-Q, PJM operational and employee manuals, key regulatory filings and orders, and other data. Audit staff also reviewed data posted on PJM's Open Access Same Time Information System (OASIS);
- *Identified Standards and Criteria* – Audit staff identified standards and criteria to use for evaluating PJM's compliance with Commission rules, regulations, and other requirements. Examples of standards and criteria include the terms and conditions of PJM's OATT and Operating Agreement, Commission orders, and PJM's internal policies and procedures relevant to audit objectives;
- *Sought Interoffice Support* – Audit staff met with members of the Office of Enforcement's Division of Energy Market Oversight (DEMO) and Office of Electric Market Regulation (OEMR) for background briefings on PJM and consultations on issues of concern;
- *Conducted Site Visits* – Audit staff conducted three site visits to PJM offices in Norristown, PA. These visits enabled audit staff to:

- Obtain an overview of PJM’s corporate structure, and its RTO functions and responsibilities;
  - Tour PJM’s primary and secondary system control centers, and observe market operations;
  - Interview executives, managers, and operational employees;
  - Review internal audit reports and Board minutes;
  - Evaluate administration of requirements in PJM’s Operating Agreement and its OATT;
  - Review accounting and reporting processes, procedures, systems, controls, and records;
  - Review and test PJM’s internal policies and procedures relevant to audit objectives; and
  - Review PJM’s regulatory and corporate compliance programs.
- *Conducted Interviews and Teleconferences* – Audit staff conducted interviews and teleconferences with PJM employees and Board members, as well as non-PJM employees, to support the audit team’s evaluation of PJM’s compliance with Commission rules, regulations, and other requirements. Key people involved in interviews and teleconferences included: four current nonexecutive Board members, including the Chairman; a former Board member; the President and CEO; five current and two former Vice Presidents; the General Counsel and Assistant General Counsel; the Controller and accounting staff; the General Manager of Internal Audit and auditing staff; six Administrative and Operational Managers; four procurement personnel; 11 PJM vendors of goods and services; and five PJM members and stakeholders; and
  - *Issued Data Requests* – Audit staff issued many data requests to PJM during this audit. The information requested included internal policies and procedures, operational and accounting data, employee emails, and other key documents. The audit team used this data as its underlying support for testing and evaluating PJM compliance with Commission requirements relevant to audit objectives.

Audit staff performed several specific actions to evaluate PJM compliance with requirements within the scope of this audit, including PJM's Operating Agreement and OATT, and Commission accounting and reporting requirements. The audit team also performed other testing and analysis to review the effectiveness of PJM's corporate compliance program. A summary of staff's specific actions follows.

### PJM Operating Agreement

Audit staff reviewed PJM's independence requirements, governance structure and rules, market operations, and budgets to ensure compliance with the requirements of PJM's Operating Agreement during the audit period. Specifically, audit staff:

#### *Independence and Governance*

- Reviewed PJM's documents, including its Operating Agreement and Board by-laws to understand the company's requirements and responsibilities as an RTO. This review also included PJM's internal policies and procedures, such as its employee code of conduct, and procurement and travel policies;
- Evaluated PJM's organizational structure, particularly the Board of Managers, Members Committee, and each subcommittee, to ensure their structures aligned with independence requirements;
- Reviewed affiliate disclosure forms to ensure members identified all affiliates and potential conflicts of interest;
- Interviewed the independent market monitor to understand its relationship with and independence from PJM, and to evaluate the execution of its responsibilities under the Market Monitoring Plan;
- Reviewed meeting minutes for the Board, Audit Advisory Committee, Audit Committee, Market Monitoring Advisory Committee, and Members Committee to ensure no concerns were evident as to independence and governance, and further evaluate audit issues. Audit staff also reviewed policies and procedures concerning Board executive and closed sessions;
- Attended two PJM members meetings to observe stakeholders' governance and interaction among the five voting sectors;

- Interviewed PJM senior managers, the President and CEO, four current nonexecutive Board members, and one former member of the Board to review their roles and responsibilities as to governance, and evaluate potential conflicts of interest;
- Reviewed Board members' current and prior industry affiliations for potential conflicts of interest;
- Reviewed the completion of annual employee code of conduct training and signed compliance statements of all Board members and officers, and select employees to verify they signed compliance statements required under PJM's code of conduct. Also, tested employees' request for approval, acceptance, and reporting of gifts from market participants, contractors, and vendors, under terms outlined in the employee code of conduct;
- Evaluated how PJM ensures that consultants, contractors, and subcontractors disclose financial affiliations and conflicts of interest with members, market participants, or eligible customers under the code of conduct. Also, reviewed competitive bidding to ensure PJM awarded contracts in accordance with its procurement policies governing relationships with vendors and market participants, and to evaluate achieved cost savings to PJM members; and
- Reviewed PJM policies, procedures, and controls relating to Board structure, member relations, and other internal governance documents to evaluate changes that occurred with the movement of senior executives, including the President and CEO, and the Chief Operating Officer. Also, reviewed PJM policies governing personal relationships to identify conflicts of interest among employees, management, and the Board.

#### *Market Operations and Budget Processes*

- Reviewed the Operating Agreement and interviewed PJM staff to understand PJM and market participant roles and responsibilities. Areas examined included market participation, recordkeeping and reporting, scheduling and dispatch, posting requirements, and market pricing and billing;
- Tested selected requirements within PJM's Operating Agreement to ensure PJM markets functioned in accordance with this agreement;

- Reviewed PJM's procedures to understand its budget development and approval process. Also reviewed PJM Finance Committee's Financial Review, Reporting, and Communications Protocol to understand the committee's structure and budget oversight activities;
- Reviewed cost categories in PJM's budgets and sampled specific activities to understand the classification of costs in the budget. Also, analyzed PJM's incentive compensation plans and corporate goals to understand how they aligned with budgeting; and
- Reviewed Finance Committee meeting minutes to ensure no concerns had surfaced about the budget during the audit period.

### PJM Open Access Transmission Tariff

Audit staff reviewed PJM's processes and procedures relating to selected terms and conditions of its OATT to ensure compliance. Specifically, audit staff:

- Interviewed market operations employees and reviewed PJM policies and procedures to understand its responsibilities for administering the terms and conditions of its OATT;
- Reviewed day-to-day operations of transmission facilities under PJM's control to assess its operational authority. This included touring PJM's primary and secondary system control centers to observe real-time system operations for the PJM region. This also included review of PJM's authorization of requests for service, scheduling of transactions, determination of available transmission capacity, and requests for scheduled outages of transmission facilities;
- Evaluated select policies to assess consistency with OATT requirements. For example, audit staff examined the calculation and posting of LMPs, including price corrections;
- Examined information and data posted on PJM's OASIS for consistency with the terms and conditions of its OATT;
- Reviewed market monitoring responsibilities for overseeing, investigating, evaluating, and reporting on PJM markets as required under PJM's OATT. Also reviewed the process for sharing data and information between PJM and the market monitor; and

- Reviewed a member's invoice to compare PJM's procedures for calculating billings to the rates approved in its OATT.

### PJM Accounting and Financial Reporting

Audit staff reviewed PJM's processes and procedures for accounting and reporting to ensure it complied with the USofA requirements during the audit period. Specifically, audit staff:

- Interviewed accounting staff to understand PJM's accounting processes, procedures, and controls;
- Reviewed PJM's FERC Form Nos. 1 and 3-Q filings to identify account balances and significant fluctuations, verify consistency between prior and current period reported balances and correct use of supporting schedules, and evaluate footnoted information;
- Compared select information in PJM's FERC Form No. 1 with supporting books and records to ensure reported information was accurate and complete;
- Reviewed and analyzed account classification to ensure proper accounting under instructions of the USofA and the FERC Form Nos. 1 and 3-Q;
- Reviewed PJM's implementation of accounting and reporting changes for RTO Transmission and Markets accounts under Order No. 668.<sup>6</sup> This also included review of allocation percentages developed to classify amounts from internal cost centers to the USofA; and
- Tested subsidiary billings to ensure PJM was compensated for use of its employees and other resources when the company worked on behalf of its subsidiaries, including employee attendance at subsidiary Board of Directors meetings.

### PJM Corporate Compliance

Audit staff reviewed PJM's internal compliance program and related processes and procedures to understand its compliance environment as it related to this audit's objectives. Specifically, audit staff:

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<sup>6</sup> *Accounting and Financial Reporting for Public Utilities Including RTOs*, Order No. 668, FERC Stats. & Regs. ¶ 31,199 (2005).

- Reviewed PJM's Regulatory Oversight and Compliance Committee structure, including its authority and responsibilities for overseeing corporate compliance and the delegation of compliance responsibilities at the department level;
- Reviewed PJM's Internal Audit Department structure, including chain-of-command and Board access through the Audit Committee, to assess the effectiveness and independence of the audit process. Also, reviewed Internal Audit's completed reports to identify issues about audit objectives, and understand PJM's process for resolving recommendations by implementing corrective actions; and
- Interviewed PJM Board members, executives, and employees to evaluate their knowledge and application of PJM's compliance program.

## IV. Findings and Recommendations

### 1. Locational Marginal Prices

PJM had inadequate controls to ensure it consistently applied procedures for identifying potential price errors in real time LMPs. Also, PJM did not have procedures for posting actual price errors in a timely manner.

#### Pertinent Guidance

PJM's OATT governs, in part, its calculation for LMPs. PJM also has internal procedures for meeting the requirements of the OATT for LMPs. Specifically, PJM's LMP Verification Guidelines provide instructions for verifying LMPs. One of the instructions is for a Price Bounding Tolerance, which is a tool used to alert the market operator of a potential error in the LMP. These guidelines state:

*Section 3.1.2, Price Bounding Violation* – the Price Bounding Program (PBP) determines if a unit is receiving an LMP consistent with its dispatch rate. This is done by looking at the difference between a unit's dispatch rate (UDS\_LMP) and LMP for all eligible units. If the LMP for the unit exceeds the UDS\_LMP by the set Tolerance, the PBP program flags the unit as a PBP violation and an E44 error code is logged in the locational pricing algorithm log and a page is sent out to the LMP Verification Group email distribution list.

*Section 4.6., Price Bounding Tolerance* – is the allowable difference between the UDS\_LMP and the actual LMP that controls whether an E44 error is reported. If the difference in the LMP and UDS\_LMP exceeds this tolerance, a price bounding alert or E44 will be generated and LMPs will not be posted to the Operational Data page or eData on PJM's website. The Price Bounding Tolerance is typically set at \$20 per megawatt hour.

#### Background

Audit staff reviewed PJM's procedures for calculating real time and day ahead LMPs. This review determined that some of PJM's LMP procedures need more specification to ensure PJM identifies potential price errors and posts actual price errors within a specified time.

LMP Verification Procedures and Documentation

Audit staff reviewed PJM's processes and procedures for calculating LMPs. Interviews with PJM employees revealed that a key process for detecting potential errors in LMP calculations existed, but lacked controls to ensure that PJM consistently applied its procedures.

PJM's Market Operations Department posts final, hourly integrated real-time LMPs for every node on its system at noon each day. PJM uses an error validation process to identify and remedy any potential LMP discrepancies before posting the LMP on the operational data page or eData of its Web site. PJM's LMP Verification Guidelines provide instructions for performing this process. Accordingly, this process automatically compares the calculated LMP at each node with the Unit Dispatch System (UDS) LMP every five minutes of each hour of the day. When the difference between the LMP and the UDS LMP exceeds a threshold, known as the Price Bounding Tolerance (PBT), an automated process generates an error message alerting PJM staff to look into the discrepancy. PJM's default PBT value is \$20 per megawatt hour.

Audit staff learned that any PJM operation engineer can reset the PBT to a value above or below \$20 in response to unusual system conditions, such as when actual generation dispatch varies from projected dispatch. PJM said its engineers use their own judgment to reset the default PBT, and are not required to document the reason or receive a supervisor's approval. An engineer must manually return the PBT to the default value when an unusual system condition ends. Otherwise, the PBT remains at the reset value for the entire day before returning to the default value at the start of the next day. For example, on January 21, 2008, an engineer increased the PBT to \$100, but did not reset the tolerance to the default PBT of \$20 for almost eight hours. It is possible that PJM overlooked LMP discrepancies, given that system conditions did not warrant a \$100 PBT during this eight-hour period. Failure to keep supporting documentation for this and other changes prevented audit staff from determining whether PJM overlooked LMP discrepancies. For 2008, audit staff determined that PJM engineers reset the default value in 20 percent of calculated intervals. The changes ranged from \$0 to \$220 per megawatt hour.

Also, audit staff requested a copy of the study, on which PJM based its default PBT. PJM said it conducted the study in 2005 to support the default PBT, but did not produce a formal written report. PJM also could not provide audit staff a copy of the underlying data supporting the study. As a result, audit staff could not validate that \$20 per megawatt hour was an appropriate default value for the PBT.

### Notification of Price Corrections

During the audit period, PJM identified errors in the final posted price for seven LMPs and 24 ancillary-service market prices. For 13 of the 31 errors, it took PJM more than a week to repost the prices. For example, it took PJM 19 days to repost incorrect hourly integrated LMPs that occurred for an eight-hour period on September 4, 2008. PJM did not identify this error through the PBT or any of its other price verification processes. Instead the market monitor determined that PJM improperly included offer-capped based units in the price-based schedule. The market monitor identified this error on September 5, 2008. However, PJM did not retroactively correct market prices until September 23, 2008.

Under Order No. 2000, price recalculations should be done quickly to avoid price uncertainties.<sup>7</sup> PJM's tariff and written procedures contain no language addressing the timing for posting price corrections and notifying market participants. Most of the other RTOs and ISOs have language in their tariffs outlining a time requirement for posting price corrections. For example, one tariff requires notification to market participants of an erroneous price as soon as possible and no more than three days after the initial posting of the price. PJM informed audit staff that its Market Implementation Committee is discussing price reporting changes, including the time for posting and notifying members of price corrections.

### **Recommendations**

We recommend PJM:

1. PJM should update procedures to ensure employees adjust and reset the PBT default value timely and consistently, and provide documented reasons for changes; and
2. Implement procedures to timely notify market participants of price corrections.

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<sup>7</sup> *Regional Transmission Organizations*, Order No. 2000, FERC Stats. & Regs., Regulations Preambles July 1996 – December 2000 ¶ 31,089 at 31,217 (1999), Docket No. RM99-2-000, h. Price Recalculations.

**Corrective Actions Taken**

On April 23, 2010, PJM amended its procedures for updating the PBT. The amended procedures state that if the PBT is adjusted during normal business hours (8AM-5PM) the LMP operator will consult with the manager, senior lead engineer, or their designee to confirm the PBT change is warranted. The LMP operator must also record in the LMP verification log, the hours and intervals the tolerance was not at the default value, and the reason it was altered. The LMP operator is also required to set the PBT back to the default value at an appropriate time; should the PBT not be set back to its default value after two hours, a warning message will be displayed to the operator notifying that the PBT is higher than the default. PJM implemented similar procedures for updating the PBT after business hours. This corrective action satisfies recommendation one.

On April 29, 2010, PJM filed a process for notifying market participants of errors in the posted results of various markets and the correction of prices and quantities resulting from those markets (Docket No. ER10-1137-000). This filing contains proposed revisions to Sections 1.10.8, 7.1A.2, 7.3.7 and 7.4.2 of Schedule 1 of the Amended and Restated Operating Agreement and the parallel provisions of Attachment K - Appendix of OATT, and revisions to Section 5.11 of Attachment DD of the OATT. On June 21, 2010, the Commission approved this filing. This corrective action satisfies recommendation two.

## 2. Board of Managers Meeting Minutes

PJM did not ensure its Secretary recorded all proceedings for Board of Managers meetings as required by its Operating Agreement.

### Pertinent Guidance

The PJM Operating Agreement, Section 9.3, Secretary, states:

The Secretary shall attend all meetings of the Board and record all the proceedings of the meetings of the Board in a minute book to be kept for that purpose and shall perform like duties for the standing committees or special committees when required.

### Background

Audit staff reviewed minutes for PJM Board meetings for the audit period to identify pertinent information related to the issues under review. Audit staff determined PJM did not record minutes for executive and closed sessions that occurred during Board meetings, which may have provided valuable insight on audit matters.

Audit staff identified several instances where meeting minutes reflected the occurrence of an executive or closed session. However, PJM's Secretary did not attend and record all of the proceedings for these sessions. PJM's Operating Agreement Section 9.3 requires the Secretary to attend all Board meetings. It also requires the Secretary to record minutes of all proceedings at these meetings, including executive and closed sessions.

According to PJM, these sessions provide non-management directors the opportunity to discuss sensitive and confidential matters without the presence of PJM management. For example, human resource matters involving management performance or employee disciplinary actions may be discussed. As a result, the presence of PJM management, including the Secretary, is inappropriate. This is a typical corporate governance procedure.<sup>8</sup> However, the recording of proceedings for executive and closed sessions is clearly required by PJM's Operating Agreement. In the absence of the Secretary, PJM did not have procedures to

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<sup>8</sup> Final NYSE Corporate Governance Rules (see page 7 of 18, No. 3 at [www.nyse.com/pdfs/finalcorpgovrules.pdf](http://www.nyse.com/pdfs/finalcorpgovrules.pdf)).

ensure a designated non-management director recorded these proceedings to provide to the Secretary for inclusion in the meeting minutes.

Audit staff believes PJM should establish procedures to ensure that minutes for executive and closed sessions are taken and provided to the Secretary for recordation in accordance with the Operating Agreement.

### **Recommendations**

We recommend PJM:

3. Strengthen procedures to ensure that minutes for executive and closed sessions are taken and provided to the Secretary for recordation in accordance with PJM's Operating Agreement.

### **Corrective Actions Taken**

On December 1, 2009, after audit staff's inquiries, PJM amended its by-laws to state, "The Secretary shall keep regular minutes of all meetings of the Board. To the extent the Board meets in executive session, or if at any other time the Secretary is not present in any meeting, minutes shall be taken by the Chairperson or their designee, who shall provide such minutes to the Secretary for inclusion in the Board records." This corrective action satisfies recommendation three.

### 3. Cross-Subsidization of PJM Subsidiary Costs

PJM did not always charge time for services performed on behalf of its subsidiaries or for subsidiaries' use of PJM data, in accordance with its policies. As a result, PJM members subsidized some labor and data service costs of PJM's subsidiaries.

#### **Pertinent Guidance**

PJM's Activity Protocol, approved by member companies and the PJM Board, provides procedures for PJM and its subsidiaries participation in "other activities." The protocol defines "other activities" as "activities other than those specifically described in the [Operating Agreement]." The protocol, dated August 16, 1999, states:

PJM shall develop and implement auditable financial procedures to accurately track and account for all costs and revenues related to Other Activities. These procedures shall include, for example, regulatory accounting procedures to preclude the potential for cross-subsidization of Other Activities by Members.

In addition, PJM has a service agreement with PJM EIS. Schedule 1 of the Data and Management Services Agreement states that the use of PJM resources by PJM EIS shall be treated as follows:

Administrative Services [shall be charged] at Cost plus Ten Percent (10%)  
... Professional Personnel [shall be charged] at Cost plus Ten Percent ...  
For the Information Services, EIS shall pay an agreed upon annual service fee in the amount of Forty Thousand Dollars (\$40,000) per year, which shall be payable quarterly, in equal installments of Ten Thousand Dollars (\$10,000).

PJM has a similar service agreement with PJM Tech. The Amendment to the Management Services Agreement,<sup>9</sup> dated April 24, 2007, states:

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<sup>9</sup> The original Management Service Agreement was dated September 7, 2000. Through this agreement PJM Tech was able to purchase certain services and office space from PJM at prescribed prices. It was effective until April 24, 2007, when it was superseded by the Amendment to the Management Service Agreement.

PJM Interconnection shall charge PJM Tech for Administrative Services, Professional Personnel, and Independent Contractors provided under this Agreement, and for expenses borne by PJM Interconnection under Article 6, as follows: Administrative Services [shall be charged] at Cost plus ten (10) percent ... Professional Personnel [shall be charged] at Cost plus [ten percent].

## **Background**

PJM's subsidiaries have no employees and rely on PJM staff to conduct their business activities. Because these activities are not specifically outlined in the company's Operating Agreement, the Activity Protocol requires PJM to implement procedures to guard against the potential for cross-subsidization. The Activity Protocol also sets procedures for participation in "Other Activities." However, because the protocol does not provide an explicit definition of other activities, audit staff was unable to evaluate whether the protocol governed specific activities, or whether these procedures were always followed.

PJM EIS and PJM Tech implemented Management Services and Data and Management Services agreements to fulfill the Activity Protocol requirement to create procedures precluding cross-subsidization. To determine whether PJM subsidiaries followed the agreements' requirements, audit staff reviewed employee time cards and found PJM did not always charge its subsidiaries for employee attendance at subsidiary Board of Directors meetings. Audit staff also tested invoices and found PJM did not timely charge PJM EIS for data services received from PJM. Also, staff requested a copy of a 2005 study supporting the appropriateness of this charge, which PJM could not produce.

## Subsidiary Overview

Several years ago, PJM believed it could make a profit by licensing PJM technology to other RTOs. Because the company could not expose its members to commercial losses, in 2000 PJM created PJM Tech as a wholly owned subsidiary to assume this risk. PJM Tech provides service and technology solutions pioneered by PJM to existing and emerging energy markets, system operators, and RTOs. In 2005, PJM Tech created PJM EIS to facilitate its Generation Attributes Tracking System (GATS), an environmental and emissions tracking and reporting service, with a loan from the New Jersey Board of Public Utilities. PJM Tech is now largely dormant, and the majority of the subsidiaries' business activities occur at PJM EIS.

PJM Tech and PJM EIS use PJM employees, office space, and other facilities for their business activities. To guard against potential cross-subsidization of these subsidiaries, the Management Services and Data and Management Services agreements with PJM EIS and PJM Tech require that PJM subsidiaries pay PJM a labor rate that is marked up to account for associated overheads to fully compensate PJM for the use of its resources. This rate is equal to cost plus 10 percent.

#### Employee Time Charges to Subsidiaries

PJM is required to charge for administrative and professional services under PJM EIS' Data and Management Services Agreement and PJM Tech's Amendment to the Management Services Agreement. Audit staff interviewed employees and reviewed their timesheets to determine whether PJM employees performing work on behalf of the subsidiaries charged their time for services rendered. Audit staff determined from a sample month that PJM charged the subsidiaries correctly.

Audit staff also reviewed attendance rosters for subsidiary Board of Directors meetings and compared them with subsidiary billings. Audit staff determined that PJM did not always charge PJM Tech and PJM EIS for labor hours; PJM undercharged a combined total of 50 labor hours for meetings in 2007 and 2008. As a result, these unbilled labor hours increased PJM's costs, which were ultimately passed on to member companies. Audit staff's review prompted PJM to charge its subsidiaries \$7,950 for the additional hours.

#### Data Service Charges to Subsidiaries

PJM EIS is required to pay an annual fee of \$40,000 for the use of PJM data services under its Data and Management Services Agreement. This \$40,000 is to be paid in four \$10,000 quarterly installments. Audit staff reviewed invoices to determine whether PJM charged PJM EIS the data services fee each quarter. This review determined that PJM did not charge PJM EIS quarterly, as the agreement requires. On June 26, 2008, PJM charged PJM EIS \$60,000 for the preceding six quarters instead of charging it \$10,000 each quarter.

Audit staff also reviewed invoices from July 2008 through June 2009 and identified that PJM did not charge PJM EIS the \$10,000 quarterly fee as required. However, PJM recorded revenues from these fees on its books in the correct accounting periods and timely included these revenues in its stated rate refund calculation. Audit staff's review prompted PJM to invoice PJM EIS \$40,000 for the preceding four quarters.

PJM also said it determined the quarterly fee amount based on a study of market prices in 2005 to determine the appropriate amount for the quarterly fee. However, PJM could not locate a copy of this study for audit staff review. As a result, audit staff could not assess the appropriateness of the \$10,000 quarterly fee and whether it reflects current market prices. Also, PJM has increased its data services to PJM EIS since 2005. For example, PJM enhanced its system software to accommodate more data PJM EIS needed for GATS. These other services could affect the appropriateness of the fee now charged to PJM EIS, for which the revenue derived offsets member costs.

## **Recommendations**

We recommend PJM:

4. Strengthen its policies and procedures to ensure its subsidiaries are accurately and timely charged for all labor and data services fees;
5. Charge PJM EIS and PJM Tech \$7,950 for unbilled employee labor hours and make appropriate refunds to customers;
6. Charge PJM EIS \$40,000 for unbilled data services fees;
7. Submit documentation supporting the refunds to the Division of Audits, Office of Enforcement. This report should show underlying supporting calculations, and be submitted within 30 days of the refund date; and
8. Update the study supporting the \$10,000 quarterly fee assessed to PJM EIS for data services to ensure it reflects current market prices.

## **Corrective Actions Taken**

In November 2009, PJM implemented new procedures for charging time and data services fees. These procedures require the President of each subsidiary and the PJM Controller to review and approve employee time charges monthly. These procedures also require the Secretary of each subsidiary to review and approve charges each quarter to ensure that time is charged for attendance at Board of Directors meetings. Before the end of each quarter, the Senior Financial Accountant in the Controller Department will prepare, and the Controller will approve, a bill to be sent to the subsidiaries for all data services fees. This corrective action satisfies recommendation four.

After audit staff requested support for PJM EIS' payment of \$10,000 in quarterly data services fees, PJM charged PJM EIS \$40,000 for the previous four quarters in June 2009. In July 2009, PJM recorded revenues received from its subsidiaries for the unbilled labor hours. These revenues were included in its stated rate refund calculation. In November 2009, PJM charged the subsidiaries \$7,950 for the unbilled labor hours. PJM subsequently submitted all supporting documentation for refunds to audit staff. These corrective actions satisfy recommendations five through seven.

During the fourth quarter 2009, PJM completed an updated analysis for the \$10,000 quarterly data services fee by reviewing costs charged by companies other than PJM for similar services. The updated analysis showed that PJM's data services fee continues to remain reasonable. This corrective action satisfies recommendation eight.

#### **4. Employee Travel**

Employees traveled in a higher class fare than allowed by PJM's travel policy and an executive's employment contract.

#### **Pertinent Guidance**

PJM has a Business Travel Policy that sets guidelines for all PJM employees, contractors, and consultants to abide by while traveling on behalf of PJM. The policy says that "exceptions can only be approved by an Officer or Vice President."

In addition to its travel policy, PJM has specific language in executive and consulting contracts regarding travel. An agreed upon term included in an executive's employment contract states, "you are eligible for additional perquisites including first class travel for flights of 3 or more hours."

#### **Background**

PJM's Business Travel Policy sets guidelines for employees, contractors, and consultants to abide by while traveling on behalf of PJM. It also allows exceptions when approved by an officer or Vice President. However, this policy does not identify any specific exceptions. PJM also acknowledged that no centralized recordkeeping system exists for authorized exceptions. In reviewing employee travel, audit staff found trips where PJM could not provide documentation of authorized travel policy exceptions. As an important control over the use of authorized exceptions, audit staff believes that a list of exceptions should be included in PJM's travel policy. Further, records of specific authorized exceptions should be maintained in a centralized recordkeeping system.

Audit staff also reviewed employee domestic travel to determine whether the class of travel used was consistent with PJM's travel policy. During the audit period, staff identified 23 instances, involving domestic travel for two employees, in which PJM's travel coordinators purchased first class tickets when this was not permitted by PJM travel policies and employee contracts. Nine of these instances occurred because the travel coordinator thought an executive was permitted first class travel for flights shorter than three hours. According to the contract, first class domestic travel is permitted only for flights exceeding three hours. The other 14 instances occurred because the travel coordinator mistakenly thought an employee was a Vice President afforded first class travel privileges. The difference between first class and a lower class of travel results in additional costs

to PJM customers. However, audit staff could not determine the exact amount absent historical pricing information for these flights.

### **Recommendations**

We recommend PJM:

9. Modify its travel policies to include a list of common exceptions that require approval by an officer or Vice President;
10. Maintain records of all trips involving travel policy exceptions or approval by an officer or Vice President; and
11. Provide training to ensure all necessary PJM employees are familiar with the classes of travel allowed for all employees, and first class travel is used according to PJM's Business Travel Policy and the terms of employment contracts.

### **Corrective Actions Taken**

After audit staff tested travel fare classes, PJM provided all administrative and travel coordination personnel a "quick reference card" by September 2, 2009. This card defines the classes of travel which various classifications of PJM employees are allowed to use. Effective July 1, 2010, PJM implemented a new process which requires all exception records and approval forms to be maintained by the PJM Travel Coordinator for two years. Effective July 7, 2010, PJM updated its travel policy to include a description of common exceptions, for which it now requires approval by a Vice President or Executive Council member. PJM also developed a Business Travel Policy training plan, which PJM plans to administer to all employees by August 31, 2010.

PJM's corrective actions satisfy recommendations nine and 10. Recommendation 11 will be satisfied when PJM completes its training of its employees on the revised travel policies.

## 5. Vendor Gifts and Entertainment Received by PJM Employees

PJM had inadequate procedures to monitor and enforce employees' acceptance of gifts and entertainment from vendors under its employee code of conduct. Also, some PJM employees accepted vendor gifts of entertainment that had no business-related purpose or proper management approvals, as required by PJM's employee code of conduct.

### Pertinent Guidance

Section D of the PJM's employee code of conduct outlines policies designed to prevent "actual or potential conflict of interest." The policy in place for most of the audit period (until October 13, 2009) stated:

*Entertainment and Gifts:* To avoid even the appearance of impropriety, personnel may not accept gifts, payments, favors, meals, transportation, or services (collectively, "Gifts"), of other than nominal value, from any market participant, contractor, supplier or vendor to PJM. A Gift not exceeding One Hundred Fifty Dollars (\$150) shall be deemed to be of "nominal value." The foregoing notwithstanding, personnel may, with prior notice and approval of their Divisional Vice President, or, in the case of Divisional Vice Presidents, the Chief Executive Officer, accept meals or other entertainment (collectively, "Entertainment") exceeding nominal value if acceptance of such Entertainment is consistent with and furthers PJM's business purposes. In no event may personnel accept a loan or a cash gift of any amount from any market participant, contractor, supplier or vendor to PJM.

### Background

In 2008, PJM's Internal Audit Department conducted an audit that raised concerns about its gift and entertainment policy in the company's employee code of conduct. Specifically, the audit found that the code of conduct did not define whether PJM's \$150 threshold for accepting gifts was per year, per vendor, or an aggregate limit. Also, the audit found that PJM management had no way to enforce any limit because it did not require employees to report gifts received. PJM management agreed with the audit issues and recommendations, and said it expected to adopt corrective measures by the fourth quarter of 2008. However, PJM took no action to address this issue until October 2009, when it amended its code of conduct after questions from Commission audit staff.

Because PJM did not record gifts and entertainment, audit staff was unable to conduct a comprehensive review of PJM's compliance with its code of conduct as to acceptance of gifts and entertainment. However, a limited review revealed that some PJM employees who make buying decisions accepted trips, meals, and entertainment from PJM vendors over the \$150 limit. Also, some PJM employees received gifts and entertainment with no business-related purpose or without a division Vice President's approval, as required by PJM's code of conduct.

#### Gifts Exceeding the \$150 Limit

Through data requests, audit staff documented many examples of gifts PJM employees accepted that exceeded the \$150 limit.<sup>10</sup>

For example, a consulting firm presented 33 PJM managers and executives with more than \$11,000 in gifts between 2007 and 2009. Besides holiday gifts of wine for 18 executives in both 2007 and 2008, the consulting firm gave PJM officials and their guests tickets to professional sports events valued at \$100 to \$550 per person, a cocktail party preview to the Philadelphia Flower Show (\$400 per person), and golf outings (\$150 per person).

#### Gift Approval and Purpose

The definition of "nominal" gifts was increased to \$150 from \$75 in December 2006. At the same time, an exception to the limit was added for "meals, transportation, lodging or other entertainment" if "such Entertainment is consistent with and furthers PJM business purposes." The entertainment exception requires written approval of a Division Vice President (or the President for gifts to Vice Presidents themselves).

Audit staff conducted tests to verify PJM employees received approval from a Division Vice President for entertainment valued above \$150. Four PJM employees acknowledged they did not receive the required approval for gifts over the \$150 threshold. For example, the General Managers of IT Integration and IT Operations did not obtain approval before attending the preview of the Philadelphia Flower Show. PJM said the managers were unaware of the value of the tickets, which cost \$400 each, according to the consulting firm. Also, the General Manager of Market Strategy Development and the Manager of Strategic

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<sup>10</sup> At audit staff's request, PJM asked 19 vendors identified by audit staff for a list of gifts they provided to PJM employees. PJM also asked 30 employees identified by audit staff as participating in procurement decisions for a list of any gifts they received.

Market Services did not obtain approval before attending a Philadelphia Eagles football game, which they watched in the consulting firm's private suite; each ticket cost \$550, the firm said. PJM said neither manager was aware of the costs. Besides these four employees, a fifth provided documentation that said he received management approval, but acknowledged it was not from a Division Vice President as required by PJM's entertainment and gift policy.

Also, some entertainment gifts that PJM management approved did not meet the threshold that it be "consistent with and furthers PJM's business purposes." For example, one IT employee who received approval to attend an IBM "Executive Briefing," co-sponsored by Sirius in Las Vegas in July 2009, admitted to his superior he was unaware of the subject of the briefing. Another IT engineer, who was a frequent guest of a PJM vendor, told audit staff that only about half of the entertainment trips brought PJM any benefits.

## **Recommendations**

We recommend PJM:

12. Create procedures that require employees to document and report all gifts equal to or exceeding \$50 from business vendors. Documentation should include pertinent information, such as a description and value, assigned by the vendor, for the gift or entertainment;
13. Modify the employee code of conduct to clearly define tangible business benefits to PJM that warrant entertainment exceptions; and
14. Define PJM's threshold for accepting gifts as per year, per vendor, or an aggregate limit over a 12-month period.

## **Corrective Actions Taken**

On October 13, 2009, PJM amended its code of conduct for employee acceptance of gifts. The amended code of conduct requires any employee accepting a gift equal to or exceeding \$50 to report it to the chair of the PJM Regulatory Oversight and Compliance Committee within three business days. The revised code of conduct also specifies that the \$150 limit applies to gifts from any vendor "individually or, in the aggregate over a rolling 12-month period." If the value of a gift is "unstated or not readily apparent," an employee must request that the person or vendor offering the gift or entertainment provide him or her with its

attributed value. The revised code of conduct also requires executives approving any entertainment exceptions to specify the business purpose.

PJM also modified its code of conduct to define tangible business benefits that warrant entertainment exceptions as “Business purposes for acceptance of entertainment may be, but are not limited to, establishing strong working relationships, keeping abreast of industry and technology developments, and familiarizing new vendors with PJM’s mission and objectives.” Effective August 4, 2010, PJM’s code of conduct incorporates this definition and includes examples of the types of business reasons that support the acceptance of entertainment from vendors.

PJM provided audit staff screen shots of the revised ROCC logs for reporting the receipt of gifts. The logs include columns for a description of the gift, the name of the gift giver, the approximate value of the gift and a description of the method of valuation. In addition, the log for entertainment in excess of \$150 includes a column for the “Business Interest Furthered.”

PJM’s corrective actions satisfy recommendations 12, 13 and 14.

## 6. Procurement Policy for Competitive Bidding

PJM did not always follow its procurement policies regarding competitive bidding of purchases over \$50,000 for “commoditized goods and/or services, where numerous capable suppliers are available to bid.” As a result, PJM members may be paying higher costs for goods and services secured through sole and single-source contracts. Also, PJM did not always follow Commission or PJM policies requiring retention of procurement records.

### Pertinent Guidance

PJM’s Corporate Policy on Procurement, issued in February 2006 and revised on February 12, 2009, assigns the procurement department responsibility for coordinating and approving purchases of goods and services. The rules for making purchases are listed in the Corporate Policy and in the Procurement Departmental Procedure, which states that “in the best interest of PJM, full and open competition should be pursued.”

Competitive bidding is required for purchases exceeding \$50,000 for “commoditized goods and/or services, where numerous capable suppliers are available to bid.” However, certain classes of purchases, such as software maintenance agreements and building leases are excluded from competitive bidding requirements, as are purchases initiated by the Board, CEO or General Counsel. Also excluded from competitive requirements are purchases from:

- Vendors designated by the procurement department as “Preferred” vendors (a list that includes law firms and a provider of temporary workers).
- “Sole source” vendors (when a given product or service can be purchased or leased from only one supplier).
- “Single source” vendors (when several suppliers are capable of providing products or services, but only one supplier is solicited “due to their outstanding ability to meet critical technical, manufacturing capacity or deliver requirements”).

PJM’s requisitioning and procurement departments are required to document the reasons for bypassing competitive bidding for single and sole-source purchases on a sourcing justification form (SJF). The requisitioner generally

provides the reasons for using a single or sole source vendor; the procurement department is required to review the request and state whether or not it concurs.

In addition to these requirements, PJM's procurement policy requires all paper and electronic records be maintained according to the record retention schedule of its record management program policy. All records must be stored in a manner to ensure that they are authentic, accessible, and readable for both internal and external audits. Records pertaining to contracts, such as request for proposals and purchase orders, must be kept for six years after the contract terminates. PJM's record retention policy is consistent with Commission regulations requiring retention of records related to procurement of goods and services for six years.<sup>11</sup>

## **Background**

PJM's Internal Audit Department and independent analysis conducted by audit staff found that PJM management repeatedly ignored company policies for competitive bidding. As Internal Audits noted, the failure to follow competitive bidding procedures puts PJM at risk for "paying too much for goods and services when vendors did not have to compete with one another."

### PJM Internal Audit Department Review of Procurement Practices

PJM's Internal Audit Department completed three audits between 2005 and 2008 that examined management's adherence to company procurement policies. The first audit concluded that PJM management "often overrides existing processes for competitive bidding and facilitates the overuse of sole and single-source purchases."<sup>12</sup> Also, only one of eight contracts put out for competitive bid fully complied with PJM's procurement policies. Internal Audit suggested that the Procurement Department was having difficulty balancing its customer service role with its job of enforcing control procedures, noting that it had eliminated several controls implemented as the result of a 2001 audit. PJM management said it agreed with the findings and would reinforce "the need to use the competitive bidding process when appropriate and emphasize the need for rigorous review and questioning of sole source justifications."

The second audit, in 2006, found that PJM had improved its compliance with procurement policies, especially the competitive bidding process, and cited

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<sup>11</sup> 18 C.F.R. § 125.3 (2009), Purchases and Stores, No. 25 Procurement.

<sup>12</sup> The threshold for competitive bidding was \$25,000 for the period covered by the 2005 audit. It was increased to \$50,000 in 2006.

only minor exceptions. However, a third audit in August 2008 again found “control weaknesses and compliance issues” with competitive bidding and the source justification process. Excluding purchases exempt from bidding, such as software maintenance agreements and utility commitments, auditors found only three of 35 purchases over \$50,000 were properly competitively bid.<sup>13</sup> PJM management said it agreed with the finding and would “continue to reinforce the need to more fully utilize the competitive bid process” and make “appropriate changes” to its policies.

Audit staff noted that PJM’s Internal Audit Department has interpreted PJM policy as requiring competitive bidding on all purchases over \$25,000 (later changed to \$50,000) except for certain exceptions. In 2008, Internal Audits stated, “PJM policy requires all financial commitments exceeding \$50,000 to be competitively bid. Approved policy allows the use of Request for Proposal (RFP) or Request for Quote (RFQ) processes. Both of these processes must be coordinated by Procurement staff.” Audit staff believes that PJM internal audits reasonably interpreted PJM’s policy and agrees with this interpretation.<sup>14</sup>

#### Commission Audit Staff’s Review of PJM’s Procurement Practices

To determine whether PJM’s performance had improved since the 2008 internal audit, audit staff reviewed all purchases of goods and services over \$50,000 for the six months from October 1, 2008 to March 31, 2009. During this period, PJM spent nearly \$28 million on 128 purchases, of which 77 were subject to competitive bidding. PJM competitively bid only 21 of these purchases (totaling \$9.3 million) and sole or single-sourced the remaining 56 purchases (totaling \$11.3 million).

Audit staff’s review of the no-bid purchases in this sample identified contracts that did not fall within PJM’s competitive bidding exemptions and for which the sourcing justification forms lacked sufficient reasons for not seeking competitive bids. For example:

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<sup>13</sup> Five appeared to be requests for price quotes, but were not properly documented or had other errors. The remaining 27 were processed as single-source purchases.

<sup>14</sup> The 2005 internal audit of procurement came to the same conclusion, stating: “PJM policy requires all financial commitments exceeding \$25,000 to be competitively bid through a RFP process. Exceptions are allowed in those cases where there are valid reasons to select one vendor without consideration of other bids (‘Sole Source’). These exceptions require completion of a ‘Sole Source Justification’ explaining and validating the reasons for bypassing the bidding requirement.”

- Construction Services – PJM awarded single-source contracts totaling \$1.1 million to three vendors for construction of offices and a cafeteria at PJM headquarters in Norristown, PA. PJM said it signed a single-source contract with a general contractor for \$950,000 because it had won previous competitive bids with PJM, and bidding out these services would create delays. The other two single-source contracts were for architectural services valued at \$64,330, and a heating, ventilation, and air conditioning (HVAC) contract valued at \$89,500. PJM said these vendors provided past services, and it would be difficult to find qualified bidders. However, a project manager for a contractor that bid on a previous project with PJM told audit staff he “absolutely” would have bid on this project had he been given the opportunity.
- HVAC Services – PJM awarded a vendor two single-source contracts totaling \$542,000 for modifications to its HVAC system. The source justification form explained that this vendor provided maintenance for its HVAC system and that selecting any other vendor would “represent an undue risk to PJM’s reliability posture.”<sup>15</sup> PJM told audit staff it did not believe it would be able to get bids from other qualified companies. However, the operations manager for the company that previously held PJM’s HVAC maintenance contract told audit staff he “absolutely would have been interested” in bidding on the upgrade contract.

PJM’s IT procurement contracts were the largest category of the \$28 million in purchases in this sample, representing nearly 40 percent of the total. Most of this spending was for IBM hardware. As a result, audit staff obtained a second sample comprised of all IBM purchases since January 1, 2007. Audit staff found that PJM purchased \$18 million in IBM hardware during this period, of which it awarded \$15.2 million to companies represented by a single salesman.<sup>16</sup> This person worked for Essex Technology Group, Inc., an IBM reseller, for three years before taking a job with Sirius Computer Solutions, a competing IBM reseller, in April 2008.

While this salesman was working for Essex, PJM made nine purchases totaling nearly \$2 million in IBM hardware through the salesman. Audit staff

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<sup>15</sup> PJM said its computer systems must operate under strict temperature controls to prevent damage.

<sup>16</sup> Of the remaining \$2.9 million, PJM purchased \$1 million in hardware directly from IBM and \$1.9 million from Siemens Energy, Inc.

found irregularities in each of the nine purchases, each of which exceeded \$50,000. For six purchases totaling \$1.2 million, PJM was unable to provide records documenting whether PJM properly conducted the competitive bidding. For the other three purchases totaling more than \$684,000, PJM chose Essex even though its comparison chart showed a competitor's prices were nearly \$50,000 lower. According to PJM, Essex agreed to provide PJM with a \$50,000 discount on a future purchase, which justified the competitiveness of its bid. However, documents provided to audit staff showed this discount came from IBM itself, so it should not have been considered in comparing Essex and the resellers' prices.

Since the salesman moved to Sirius, PJM has purchased \$13.2 million in IBM hardware from Sirius, but nothing from Essex. PJM had no previous business dealings with Sirius. Interviews with the Sirius salesman and PJM staff, and audit staff's review of email and other documents, revealed that the salesman had advance knowledge of PJM's computing needs and helped craft the specifications for the IBM purchases.<sup>17</sup> In acquiring this knowledge, the salesman was able to "register" the opportunities with IBM and obtain lower wholesale prices from IBM than competing resellers.<sup>18</sup> As a result, PJM was often unable to convince Sirius' competitors to provide price quotes because the bidders said they could not compete with Sirius's "preferred pricing."

PJM awarded Sirius \$9.6 million in purchases involving competitive bid solicitations, for which Sirius was the lowest bidder except once.<sup>19</sup> For \$2.6 million in purchases, PJM sought, but did not receive, any competing bids for purchases awarded to Sirius. For \$862,000 in purchases, PJM awarded Sirius two

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<sup>17</sup> The salesman cultivated his relationship with PJM, in part, by regularly entertaining PJM IT staff and managers. From January 2007 through July 2009, he hosted at least 21 PJM IT staffers at Eagles, Flyers, and Phillies games; lunches and dinners; and trips to Tucson, AZ; Las Vegas, NV; Raleigh, NC; and Poughkeepsie, NY, for product demonstrations. Two IT engineers received iPods at drawings at product demonstrations; other PJM employees shared holiday cheese baskets. Some of the trips and events were jointly funded by IBM or other hardware and software companies represented by the salesman.

<sup>18</sup> Like other information technology vendors, IBM has a deal registration policy that gives the best pricing to resellers who offer "value added" services to customers, such as technical architecture, configuration, or consulting on solutions.

<sup>19</sup> For this one purchase, PJM awarded Sirius a \$91,618 contract, although its bid was nearly \$22,000 above one from another vendor. PJM officials said the competing vendor's bid was missing a warranty (valued at \$3,840) and other items, but they were unable to identify the other deficiencies.

contracts without seeking competitive bids. PJM explained that it single-sourced these two contracts to Sirius because of the “history of past best value provided by the vendor in terms of discount levels” and “value adds in understanding the technology and PJM’s high support standards and demands.” Upon request, PJM could not provide any justification that these two contracts met the exemptions provided in PJM’s procurement policy for competitive bidding. Absent any justification and sound reasoning for single-sourcing, PJM should have subjected these purchases to competitive bidding to ensure it received the best price.

Despite PJM’s promise to “emphasize rigorous review and questioning of sole and single-source justifications as a result of internal audits,” the company was unable to provide audit staff any examples in which procurement employees had rejected a sole or single-source justification and forced a competitive procurement. Even though PJM pledged to reinforce the need to more fully use competitive bidding, it still has control weaknesses in the application of its competitive bidding. Additionally, PJM’s procurement policy declares “it is in the best interest of PJM to conduct all procurement activities in a fair, ethical, and professional manner.” However, PJM does not solicit sealed bids as part of its competitive bidding process. While PJM’s procurement policy does not require sealed bidding or another similar control procedure, it is a common business practice to ensure fairness and integrity to the process.

#### Record Retention of Procurement Documents

Audit staff found the Procurement Department’s recordkeeping did not comply with PJM and the Commission’s record retention policy.<sup>20</sup> For example, PJM was unable to provide complete records concerning six purchases from Essex in 2007 totaling \$1.2 million. For one of these purchases, PJM explained it was an “add-on” to an earlier purchase, but was unable to offer evidence of the prior purchase. For the five other purchases, PJM was unable to provide source justification forms. PJM’s procurement policy says all records must be stored in a way that ensures that they are authentic, accessible, and readable for both internal and external audiences. PJM’s record retention policy for procurement requires it to keep such records for the life of a contract, plus six years.

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<sup>20</sup> 18 C.F.R. § 125.3, No. 25 (2009).

## **Recommendations**

We recommend PJM:

15. Train employees involved in the purchasing of goods and services to ensure all employees consistently apply procurement policies for sole, single-source, and competitively bid contracts;
16. Revise procedures and enhance controls to ensure procurement documents, such as contracts and purchase orders, are properly archived in compliance with Commission and PJM record retention policies;
17. Change procedures to develop hardware specifications in-house or with consultants not involved in selling PJM hardware to ensure it receives competitive prices and appropriate quantities for goods and services; and
18. Consider using sealed bids for competitive bidding or another control procedure to ensure vendor confidentiality.

## **Corrective Actions Taken**

As of June 21, 2010, PJM developed and is in the process of implementing a new procedure with original equipment manufacturers and their distributors to ensure it receives competitive prices and appropriate quantities for goods and services when developing hardware specifications.

On July 7, 2010 and July 28, 2010, PJM modified its procurement policy and supporting procedures to address staff's concerns by clarifying requirements for purchases of goods and services to ensure all employees consistently apply procurement policies for sole, single-source, and competitively bid contracts. PJM also made updates to ensure bids are only delivered and organized by the procurement representative managing the bid process before sharing the bids with the acquisition project team as a group.

On July 31, 2010, PJM procurement completed a review of current practices and implemented procedure revisions relating to record retention. In addition, PJM procurement plans to conduct regular self-audits on a quarterly basis and revise controls to ensure that document retention practices comply completely with PJM record retention policies.

By August 31, 2010, PJM plans to conduct training on the procurement policy and supporting procedures with all PJM managers and employees to reinforce understanding of procurement processes. PJM will satisfy recommendations 15, 16, 17, and 18 with completion of the training and full implementation of the procedures.

## **7. Allocation of Employee Labor Charges**

PJM did not use actual time or a time study for a representative period as the basis for employee labor charges in its Transmission and Markets accounts as required by the USofA.

### **Pertinent Guidance**

Accounts 561.1 through 561.8 are used by RTOs to record the costs of providing transmission services related to load dispatching, scheduling and system control (“Transmission accounts”). Accounts 575.1 through 575.6 are used by RTOs to record the costs of services for managing the various RTO markets and reviewing data to determine compliance with market rules (“Markets accounts”). The USofA instructions state that various costs should be recorded in each of the Transmission and Markets accounts, such as materials, other expenses, and employee labor.

General Instruction No. 9, Distribution of Pay and Expenses, in 18 C.F.R. Part 101 requires PJM to record employee labor charges in the USofA on the basis of actual time, or to the extent that PJM cannot determine actual time, on the basis of a representative time study. Specifically, General Instruction No. 9 states:

The charges to electric plant, operating expenses and other accounts for services and expenses of employees engaged in activities chargeable to various accounts, such as construction, maintenance, and operations, shall be based upon the actual time engaged in the respective classes of work, or in the case that method is impracticable, upon the basis of a study of the time actually engaged during a representative period.

### **Background**

Audit staff reviewed PJM’s accounting procedures and records to determine whether employee labor charges in its Transmission and Markets accounts were based on actual time or a time study for a representative period. This review included analysis of time cards for employees performing services that should be recorded in these accounts. The time cards showed that employees did not charge actual time to the Transmission and Markets accounts. Rather, PJM employees charged time to internal cost centers. Then, PJM developed percentages to allocate labor charges to the USofA. However, these percentages were not based on a time study for a representative period.

Instead of conducting a representative time study, cost center managers proposed allocation percentages based upon their estimates of how each cost center's responsibilities, in total, aligned with the USofA instructions for Transmission and Markets accounts. PJM said managers' emails to the Accounting Department are the only support for these allocation percentages. In some cases, emails provided to audit staff showed percentages that the Accounting Department had crossed out and revised by hand. For instance, 40 percent of costs from center 490 (Operations Planning) were initially to be allocated to Account 561.1, Load Dispatch-Reliability. PJM said that as the result of a telephone conversation between the manager of cost center 490 and the Accounting Department, the number was raised to 50 percent.

Audit staff tried to compare percentages in these emails to employee time charges to determine whether they were representative of individual employee services. However, while time charges allowed for recording detailed data about employee services, this feature was rarely used. In accordance with General Instruction No. 9, PJM should have used actual time or allocation percentages supported by a time study for a representative period to record employee labor charges in its Transmission and Markets accounts.

## **Recommendations**

We recommend PJM:

19. Revise procedures to ensure the appropriate amount of labor is allocated to Transmission and Markets accounts based on actual employee time or a time study for a representative period;
20. Perform a time study for a representative period to support the reasonableness of amounts allocated to the Transmission and Markets accounts during the audit period; and
21. Submit the time study to the Division of Audits no later than 90 days after this audit report is issued.

**Corrective Actions Taken**

In December 2009, PJM established procedures to conduct a time study every two years to support labor charges accumulated in cost centers and allocated to the Transmission and Markets accounts for reporting purposes. In January 2010, PJM completed the first time study and submitted it to audit staff for review in April 2010. The time study covered allocations of labor charges for information technology cost centers only. In May 2010, PJM completed time studies for system planning, operations, and markets departments, comprising the remainder of departments which allocate labor charges to the Transmission and Markets accounts. PJM submitted these time studies to audit staff for review in July 2010. PJM's corrective actions satisfy recommendations 19 through 21.

## 8. Misclassification of Pension and Other Postretirement Benefits

PJM did not classify the noncurrent portion of its pension and other postretirement benefits liabilities in accordance with the Commission's Chief Accountant guidance letter.

### Pertinent Guidance

The Chief Accountant stated in Docket No. AI07-1-000<sup>21</sup> that the noncurrent portion of a company's liability for under-funded pension and other postretirement benefit plans should be recorded in 18 C.F.R. Part 101 Account 228.3, Accumulated Provision for Pensions and Benefits.

Account 228.3, states in part:

This account shall include provisions made by the utility and amounts contributed by employees for pensions, accident and death benefits, savings, relief, hospital and other provident purposes, where the funds are included in the assets of the utility either in general or in segregated fund accounts.

### Background

PJM sponsors a defined-benefit pension plan, which covers all regular full- and part-time employees. Benefits under PJM's plan are based on an employee's years of service and salary. PJM's contribution to the plan is determined by funding requirements detailed in the Employee Retirement Income Security Act of 1974. Plan assets are invested primarily in stocks and bonds, which PJM's Benefits Administration Committee monitors.

Audit staff reviewed PJM's accounting processes and procedures for its defined-benefit pension and other postretirement plans under Statement of Financial Accounting Standard No. 158 (SFAS No. 158), Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans. This accounting standard requires an employer to recognize an over- or under-funded defined-benefit postretirement plan as an asset or liability in its statement of financial

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<sup>21</sup> Commission Accounting and Reporting Guidance to Recognize the Funded Status of Defined Benefit Postretirement Plans, Docket No. AI07-1-000 (March 29, 2007), corrected, Docket No. AI07-1-001 (January 16, 2008).

position. The standard also requires an employer to recognize changes in the funded status through its comprehensive income in the year in which changes occur. Lastly, SFAS No. 158 requires an employer to measure the funded status of a plan on the date of its year-end statement of financial position.

As of December 31, 2008, PJM recorded its accrued pension liability of \$30,378,604, postretirement liability of \$50,761,380, and supplemental executive retirement plan liability of \$2,697,489 in Account 242. In total, the noncurrent portion of PJM's liability for under-funded pension and other retirement benefits was \$26,849,525. Based on the Chief Accountant's guidance letter, PJM should have classified the noncurrent portion of the pension and other postretirement benefits liability in Account 228.3. PJM agreed that the noncurrent portion of the liability should be classified in Account 228.3.

### **Recommendations**

We recommend PJM:

22. Strengthen its accounting and reporting procedures to ensure the noncurrent portion of its pension and other postretirement benefits liabilities are recorded in Account 228.3; and
23. Reclassify the noncurrent portion of its pension and other postretirement benefits liabilities from Account 242 to Account 228.3.

### **Corrective Actions Taken**

On June 1, 2009, PJM filed with the Commission its FERC Form No. 3-Q for the quarter ending March 31, 2009. PJM's FERC Form No. 3-Q shows that it reclassified the noncurrent portion of its pension and other retirement benefits liabilities from Account 242 to Account 228.3. Also, PJM changed its accounting procedures to ensure that the SFAS No. 158 adjustment is included in Account 228.3 prospectively. PJM's corrective actions satisfy recommendation 22 and 23.

## 9. Completion of the FERC Form No. 1 Supporting Schedules

PJM did not report information for two supporting schedules in accordance with the FERC Form No. 1 instructions.

### **Pertinent Guidance**

The financial statements of the FERC Form No. 1 contain supporting schedules with instructions to provide details for certain accounts. In particular, the Construction Work in Progress schedule for Account 107 and the Other Paid in Capital schedule for Accounts 208-211 have specific instructions for their completion.

The schedule for Account 107 on page 216, Instruction 1, states:

Report below descriptions and balances at end of year of projects in process of construction (107).

This same account schedule, Instruction 3, states:

Minor projects (5% of the Balance End of the Year for Account 107 or \$100,000, whichever is less) may be grouped.

The schedule for Accounts 208-211 on page 253, instructions, state in part:

Report below the balance at the end of the year and the information specified ... for the respective other paid-in capital accounts. Provide a subheading for each account and show a total for the account, as well as total of all accounts for reconciliation with the balance sheet, Page 112.

### **Background**

Audit staff's review of PJM's FERC Form No. 1 identified incomplete supporting schedules for Accounts 107 and 208-211. These schedules contain specific instructions for providing details of the amounts reported on PJM's balance sheet.

In the supporting schedule for Account 107, PJM reported construction projects in total rather than providing descriptions and balances for each project, as the schedule instructions require. In 2007 and 2008, PJM reported \$55,278,441

and \$63,962,408, respectively, as a single project attributed to “CWIP – Intangible Property.” However, these amounts represented various projects, many of which relate to software development paired with construction of PJM’s Advanced Control Center. Instructions for this account on page 216 of the FERC Form No. 1 allow grouping only to the extent that a project represents 5 percent of the year-end balance for Account 107, or \$100,000, whichever is less. PJM’s reported project for CWIP – Intangible Property should be separated by project in accordance with account instructions.

In the supporting schedule for Accounts 208-211, PJM did not provide any detail for the \$722,003 of Other Paid-In Capital, reported on the balance sheet of its FERC Form No. 1 for 2007 and 2008. PJM says this amount represents contributions transmission owners made to fund PJM’s initial operations, money they allowed PJM to keep when it established itself as a limited liability company in 1997. PJM considers this money as paid in capital. The instructions on page 253 of the FERC Form No. 1 require PJM to report the year-end balance and other specifics for these accounts.

### **Recommendations**

We recommend PJM:

24. Provide descriptions and balances at year end for projects under construction on the schedule for Account 107, in accordance with the instructions on page 216 of the FERC Form No. 1; and
25. Report the balance and other specific information for amounts recorded on the schedule for Accounts 208-211, in accordance with the instructions on page 253 of the FERC Form No. 1.

### **Corrective Actions Taken**

In its 2009 FERC Form No. 1, filed April 19, 2010, PJM provided descriptions and balances of projects in process of construction in accordance with the instructions on page 216. Additionally, on the schedule for Accounts 208-211 PJM reported that \$722,003 in Account 211 represents advances from the initial transmission owners when PJM switched from an association to a LLC in 1997. PJM’s corrective actions satisfy recommendations 24 and 25.

## **V. Other Reporting Matter**

### **1. Generators' Advance Access to Market Data**

PJM provides market data to generators through dispatch instructions prior to publicly posting this information for all market participants. Although audit staff did not find any evidence that any generator gained an advantage from receiving this information, the timing difference should be removed to eliminate this risk.

#### **Background**

A market participant raised a concern that generators within the PJM region receive advance access to market data. The concern also identified that market participants receiving this data in advance could use it to take advantage of trading opportunities in spot markets on trading platforms, such as the Intercontinental Exchange (ICE). To evaluate this concern, audit staff reviewed the process for releasing this data to market participants.

To understand the market participant's concern, audit staff asked PJM to describe the types of data released and the process for releasing the data to market participants. PJM acknowledged that generator owners receive data pertaining to dispatch rates on an individual unit and zonal basis as part of their dispatch instructions through Inter-Control Center Communications Protocol (ICCP) links. Individually, generators receive data pertaining to their own generator dispatch (IGD) marginal cost. This data is specific to the individual generator and does not reflect the system marginal price. On a zonal basis, generators receive aggregated zonal dispatch rate data. This data is an ex-ante value based upon a simple average of all individual dispatch rates for generator busses dispatched within the zone where they physically reside. The zonal dispatch rate does not have an ex-post equivalent that is used for settlement.

The IGD rate component of the dispatch instruction is not made public. However, the zonal dispatch rate is publicly posted on PJM's Web site for all market participants subsequent to the generators receiving it through the dispatch instructions. These dispatch rates are publicly available at three places: PJM's Operational Data page, eData, and eData Feed, all of which update their rates about every 15 seconds. PJM said there is no difference between the zonal dispatch rates sent to generators and those posted publicly. However, because of the faster operation of the ICCP links, PJM said that there is up to a five-second delay between zonal dispatch rates being released to generators as part of their

dispatch instructions and the time that it is publicly posted. The generating units in the PJM region receive updates to their dispatch instruction about every five minutes.

PJM plans to meet with the generation owners in the PJM Region to revise the dispatch instructions sent to generation owners to exclude zonal dispatch rate data. According to PJM, the exclusion of zonal dispatch data from the dispatch instructions will remove any risk of generator owners receiving a potential advantage over other market participants.

### **Recommendation**

We recommend PJM address this matter through its stakeholder process with market participants to determine whether changes are necessary.

### **Corrective Actions Taken**

To address this matter, PJM initiated discussions about excluding the zonal dispatch rate data from dispatch instructions at the April 14, 2010 System Operator Subcommittee meeting. Further presentations to stakeholders on the potential change occurred at the May 12, 2010 and June 9, 2010 System Operator Subcommittee meetings, the May 19, 2010 and June 16, 2010 Systems Information Subcommittee meetings and the June 15, 2010 Operating Committee meeting. To avoid potential challenges to the reliable communication of generator dispatch instructions during summer 2010 operations, the changes to the data feed to the generating units dispatch instruction to eliminate the zonal dispatch rate are targeted to be implemented in latter part of 2010. Therefore, PJM's corrective actions to address this recommendation are ongoing.



955 Jefferson Avenue  
Valley Forge Corporate Center  
Norristown, PA 19403-2497

August 5, 2010

Mr. Bryan K. Craig  
Director and Chief Accountant, Division of Audits  
Office of Enforcement  
Federal Energy Regulatory Commission  
888 First Street NE, RM 51-37  
Washington, DC 20246

Dear Mr. Craig:

PJM appreciates the opportunity to comment on the draft audit report of PJM for the period January 1, 2007 through December 31, 2009 sent to Mr. Vince Duane. PJM herein submits its Responses related to the recommendations in that draft report. PJM generally agrees with Commission Staff's audit findings and recommendations.

Further, PJM either has or is in the process of implementing revisions to policies and/or procedures to address all the recommendations in this report. Supporting documentation for corrective actions that had not yet been provided to FERC audit staff as of June 18, 2010 has been provided under separate cover to Brian Harrington.

PJM is available to discuss these responses with you. Please contact me if you would like to arrange a conference call or meeting to review this response from PJM.

Sincerely,

*Suzanne Daugherty*

Suzanne Daugherty  
Vice President, Chief Financial Officer and Treasurer



## **A. Locational Marginal Prices**

### **Recommendation 1**

PJM should update procedures to ensure employees adjust and reset the Price Bounding Tolerance (PBT) default value timely and consistently, and provide documented reasons for changes.

### **PJM Response**

PJM agrees with and has implemented this recommendation. On April 23, 2010, PJM amended its procedures for updating the Price Bound Tolerance (PBT). The amended procedures state that if the PBT is adjusted during normal business hours (8AM-5PM) the Locational Marginal Pricing (LMP) operator will consult with the manager, senior lead engineer, or their designee to confirm the PBT change is warranted. The LMP operator must also record in the LMP verification log, the hours and intervals the tolerance was not at the default value, and the reason it was altered. The LMP operator is also required to set the PBT back to the default value at an appropriate time; should the PBT not be set back to its default value after two hours, a warning message will be displayed to the operator notifying that the PBT is higher than the default. PJM implemented similar procedures for updating the PBT after business hours.

### **Recommendation 2**

PJM should implement procedures to timely notify market participants of price corrections.

### **PJM Response**

PJM agrees with and has implemented this recommendation. On April 29, 2010, PJM filed with the Commission a process for notifying market participants of errors in the posted results of various markets and the correction of prices and quantities resulting from those markets (Docket No. ER10-1137-000). This filing contains proposed revisions to Sections 1.10.8, 7.1A.2, 7.3.7 and 7.4.2 of Schedule 1 of the Amended and Restated Operating Agreement and the parallel provisions of Attachment K - Appendix of OATT, and revisions to Section 5.11 of Attachment DD of the OATT. On June 21, 2010, the Commission approved this filing.

## **B. Board of Managers Meeting Minutes**

### **Recommendation 3**

PJM should strengthen procedures to ensure that minutes for executive and closed sessions are taken and provided to the Secretary for recordation in accordance with PJM's Operating Agreement.



## **PJM Response**

PJM agrees with and has implemented this recommendation. On December 1, 2009, PJM amended its bylaws to state, "The Secretary shall keep regular minutes of all meetings of the Board. To the extent the Board meets in executive session, or if at any other time the Secretary is not present in any meeting, minutes shall be taken by the Chairperson or their designee, who shall provide such minutes to the Secretary for inclusion in the Board records."

### **C. Cross-Subsidization of PJM Subsidiary Costs**

#### **Recommendation 4**

PJM should strengthen its policies and procedures to ensure its subsidiaries are accurately and timely charged for all labor and data services fees.

#### **PJM Response**

PJM agrees with and has implemented this recommendation. Effective November 20, 2009, PJM implemented enhanced procedures for charging time and data services fees. These procedures require the President of each subsidiary and the PJM Controller to review and approve employee time charges monthly. These procedures also require the Secretary of each subsidiary to review and approve charges each quarter to ensure that time is charged for attendance at Board of Directors meetings. Before the end of each quarter, the Senior Financial Accountant in the Controller Department will prepare, and the Controller will approve, a bill to be sent to the subsidiaries for all data services fees.

#### **Recommendation 5**

PJM should charge PJM EIS and PJM Tech \$7,950 for unbilled employee labor hours and make appropriate refunds to customers.

#### **PJM Response**

PJM agrees with and has implemented this recommendation. On November 23, 2009, PJM charged the subsidiaries \$7,950 for previously unbilled labor hours. The associated credit to PJM's regulated operations was included in the stated rate refunds that accumulated during fourth quarter 2009 and were refunded to PJM's members in first quarter 2010 in accordance with Schedule 9 of PJM's Open Access Transmission Tariff.

#### **Recommendation 6**

PJM should charge PJM EIS \$40,000 for unbilled data services fees.



### **PJM Response**

PJM agrees with and has implemented this recommendation. On June 9, 2009, PJM charged PJM EIS \$40,000 for the previous four quarters' data services fees. On June 10, 2009, PJM EIS paid PJM in full this data services invoice amount. The associated credit to PJM's regulated operations was already included in the stated rate refunds that accumulated during in 2008 and 2009.

### **Recommendation 7**

PJM should submit documentation supporting the refunds to the Division of Audits, Office of Enforcement. This report should show underlying supporting calculations, and be submitted within 30 days of the refund date.

### **PJM Response**

PJM agrees with this recommendation and provided supporting documentation to the Division of Audits for the associated refunds.

### **Recommendation 8**

PJM should update the study supporting the \$10,000 quarterly fee assessed to PJM EIS for data services to ensure it reflects current market prices.

### **PJM Response**

PJM agrees with and has implemented this recommendation. During fourth quarter 2009, PJM completed an updated analysis of the \$10,000 quarterly data services fee assessed by PJM to PJM EIS by reviewing the costs charged by companies other than PJM for data and information services fees. That analysis supports that this quarterly fee remains reasonable.

## **D. Employee Travel Costs**

### **Recommendation 9**

PJM should modify its travel policies to include a list of common exceptions that require approval by an officer or Vice President.

### **PJM Response**

PJM agrees with and has implemented this recommendation. Effective July 7, 2010, the PJM Business Travel Policy was updated to include a description of common exceptions to the travel guidelines which require the prior approval of a Vice President or Executive Council member.



### **Recommendation 10**

PJM should maintain records of all trips involving travel policy exceptions or approval by an officer or Vice President.

### **PJM Response**

PJM agrees with and has implemented this recommendation. Effective July 1, 2010, PJM implemented a new process whereby all exception records and approval forms shall be maintained for a period of two years by the PJM Travel Coordinator.

### **Recommendation 11**

PJM should provide training to ensure all necessary PJM employees are familiar with the classes of travel allowed for all employees, and first class travel is used according to PJM's Business Travel Policy and the terms of employment contracts.

### **PJM Response**

PJM agrees with this recommendation, one portion of which has been implemented and a second portion which PJM plans to implement. As of September 2, 2009, administrative and travel coordination personnel received training and a "quick reference card" defining the classes of business travel for the different classification of the PJM employees. PJM Procurement and Business Planning and Support have developed a training plan for all employees. By August 31, 2010, PJM Procurement and Business Planning and Support shall conduct training sessions for all PJM employees to inform PJM employees on the PJM Business Travel Policy.

## **E. Vendor Gifts and Entertainment Received by PJM Employees**

### **Recommendation 12**

PJM should create procedures that require employees to document and report all gifts equal to or exceeding \$50 from business vendors. Documentation should include pertinent information, such as a description and the value, assigned by the vendor, for the gift or entertainment.

### **PJM Response**

PJM agrees with and has implemented this recommendation. PJM amended the gifting procedures of the PJM Code of Conduct in October 2009 to require all gifts from vendors valued greater than \$50 to be registered with the PJM Regulatory Oversight and Compliance Committee (ROCC). In conjunction with such registration, the recipient of any such gift must provide the basis of the valuation. PJM will further modify this registration procedure to require a representation from the giver of any gift valued in excess of \$50 as to the giver's imputed or recorded value.

### **Recommendation 13**

PJM should modify the employee code of conduct to clearly define tangible business benefits to PJM that warrant entertainment exceptions.



### **PJM Response**

PJM agrees with and has implemented this recommendation. The PJM Code of Conduct requires that entertainment valued in excess of \$150 be pre-approved by a Divisional Vice President and be in furtherance of PJM business purposes. In conjunction with the Code of Conduct revisions adopted in October 2009, all entertainment valued in excess of \$150 must also be registered with the PJM Regulatory Oversight and Compliance Committee (ROCC). Effective August 4, 2010, the PJM Code of Conduct was revised to include examples of the types of business reasons that support the acceptance of entertainment from vendors. Further, PJM will ensure that a specific business purpose is included in the pre-approval of any entertainment received valued in excess of \$150. Provided, however, PJM's Code of Conduct will continue to require employees to evaluate and report gifts and entertainment according to their value, which may differ from the giver's attributed cost.

### **Recommendation 14**

PJM should define PJM's threshold for accepting gifts as per year, per vendor, or an aggregate limit over a 12-month period.

### **PJM Response**

PJM agrees with and has implemented this recommendation. On October 13, 2009, PJM amended its code of conduct for employee acceptance of gifts. The amended code of conduct requires any employee accepting a gift from vendors equal to or exceeding \$50 to report it to the chair of the PJM Regulatory Oversight and Compliance Committee within three business days. The revised code of conduct also specifies that the \$150 limit applies to gifts from any vendor "individually or, in the aggregate over a rolling 12-month period." If the value of a gift is "unstated or not readily apparent," an employee must request that the person or vendor offering the gift or entertainment provide him or her with its attributed value. The revised code of conduct also requires executives approving any entertainment exceptions to specify the business purpose.

## **F. Procurement Policy for Competitive Bidding**

### **Recommendation 15**

PJM should train employees involved in the purchasing of goods and services to ensure all employees consistently apply procurement policies for sole, single-source, and competitively bid contracts.

### **PJM Response**

For purchases of \$50,000 or more, PJM's Procurement Policy already (a) refers to competitive bidding and "recommends" it "where appropriate" and (b) includes a process by which sole source or single source justifications also can be utilized to procure goods or services. Effective July 7, 2010 and further clarified effective July 28, 2010, the PJM Procurement Policy and supporting Procedures were updated to clarify procurement procedures and practices. To reinforce understanding of procurement processes in the overall acquisition process related to the evaluation of vendors and goods and/or services and to ensure complete understanding of the application of



the competitive bidding and sourcing justification options, PJM is conducting training on the Procurement Policy and supporting Procedures with all PJM managers and employees by August 31, 2010.

### **Recommendation 16**

PJM should revise procedures and enhance controls to ensure procurement documents, such as contracts and purchase orders, are properly archived in compliance with Commission and PJM record retention policies.

### **PJM Response**

PJM agrees with and has implemented this recommendation. By July 31, 2010, PJM Procurement has completed a review of current practices and implemented procedure revisions, as appropriate. Effective July 31, 2010, PJM Procurement shall conduct regular self-audits on a quarterly basis and revise controls, as appropriate, to ensure that document retention practices comply completely with PJM record retention policies. The results of these quarterly reviews will be provided to PJM's Vice President of Business and Member Services.

### **Recommendation 17**

PJM should change procedures to develop hardware specifications in-house or with consultants not involved in selling PJM hardware to ensure it receives competitive prices and appropriate quantities for goods and services.

### **PJM Response**

PJM agrees with and has implemented this recommendation.. As of June 21, 2010, PJM developed and is in the process of implementing a new procedure with Original Equipment Manufacturers (OEMs) and their distributors. Key aspects of this procedure include:

- OEMs shall confirm to PJM which distributors the OEM has authorized to sell the type of hardware for which PJM intends to solicit bids prior to PJM developing the associated hardware bid specifications;
- PJM will initially develop hardware requirements and specifications: 1) in-house, 2) with the OEM who is not bidding on the hardware, 3) and/or with consultants not involved in selling hardware to PJM hardware;
- All distributors eligible to bid on a PJM hardware purchase shall have access to the same information at the same time from PJM to allow the distributors to develop their hardware configurations to include in their bid responses to PJM;
- PJM will support a review of the hardware requirements and specifications with each of the distributors and make any detailed configuration changes that may be beyond the initial requirements and specifications (e.g. part numbers, new versions of firmware, etc). Each of the distributors will have an opportunity to clarify anything related to the requirements and specifications;



- OEMs shall provide all bidding distributors with an equal level of hardware pricing on which the distributors will base their bids to PJM; and
- Subsequent to analysis of the bid packages delivered to PJM, the OEM shall be notified of PJM's decision as to the selected distributor. The selected distributor shall then resubmit a bid based on any additional discounts awarded to the distributor by the OEM.

### **Recommendation 18**

PJM should consider using sealed bids or another control procedure for competitive bidding to ensure vendor confidentiality.

### **PJM Response**

PJM agrees with this recommendation, one portion of which has been implemented and a second portion which PJM plans to implement. Effective July 7, 2010 with further clarifications effective July 28, 2010, the PJM Procurement Policy and supporting Procedures were updated whereby the vendor base and all bids, whether delivered to PJM via USPS, Federal Express, or any form of hardcopy delivery, as well as electronically via email, shall be delivered only to the Procurement Representative managing the bid process. The PJM Procurement Representative shall organize all bids received, and share with the acquisition project team as a group. PJM is reviewing the Procurement Policy and supporting Procedures with all PJM managers and employees by August 31, 2010.

## **G. Allocation of Employee Labor Charges**

### **Recommendation 19**

PJM should revise procedures to ensure the appropriate amount of labor is allocated to the Transmission and Markets accounts based on actual employee time or a time study for a representative period.

### **PJM Response**

PJM agrees with this recommendation. In December 2009, PJM established procedures to conduct a time study every two years to support labor charges accumulated in cost centers and allocated to the Transmission and Markets accounts for reporting purposes.

### **Recommendation 20**

PJM should perform a time study for a representative period to support the reasonableness of amounts allocated to the Transmission and Markets accounts during the audit period.

### **PJM Response**

PJM agrees with and has implemented this recommendation. In January 2010, PJM completed a time study related to information technology staff labor cost allocations. In May 2010, PJM completed the time studies related to system planning, operations and markets departments for which staff labor cost allocations are included in the FERC Transmission and Markets Accounts.



With the conclusion of the time studies for these eight departments, PJM now has completed time studies during 2010 for all PJM departments that have labor costs allocated to the FERC Transmission and Markets accounts. The resulting labor cost allocations will be utilized for PJM's financial reporting to FERC from second quarter 2010 forward until the next time studies are completed.

#### **Recommendation 21**

PJM should submit the time study to the Division of Audits no later than 90 days after this audit report is issued.

#### **PJM Response**

PJM agrees with and has implemented this recommendation. The time study PJM completed in January 2010 was submitted to audit staff for review in April 2010. The additional time studies PJM completed in May 2010 were submitted to audit staff for review in July 2010.

### **H. Misclassification of Pension and Other Postretirement Benefits**

#### **Recommendation 22**

PJM should strengthen its accounting and reporting procedures to ensure the noncurrent portion of its pension and other postretirement benefits liabilities are recorded to Account 228.3.

#### **PJM Response**

PJM agrees with and has implemented this recommendation. Effective March 2009, PJM changed its accounting procedures to ensure that the SFAS No. 158 adjustment is included in Account 228.3 prospectively.

#### **Recommendation 23**

PJM should reclassify the noncurrent portion of its pension and other postretirement benefits liabilities from Account 242 to Account 228.3.

#### **PJM Response**

PJM agrees with and has implemented this recommendation. On June 1, 2009, PJM filed with the Commission its FERC Form No. 3-Q for the quarter ending March 31, 2009. PJM's FERC Form No. 3-Q shows that it reclassified the noncurrent portion of its pension and other retirement benefits liabilities from Account 242 to Account 228.3.

### **I. Completion of the FERC Form 1 Supporting Schedules**

#### **Recommendation 24**

PJM should provide descriptions and balances at year end for projects under construction on the schedule for Account 107, in accordance with the instructions on page 216 of the FERC Form No. 1.



## **PJM Response**

PJM agrees with and has implemented this recommendation. In its 2009 FERC Form No. 1, filed April 19, 2010, PJM provided descriptions and balances of projects in process of construction in accordance with the instructions on page 216.

## **Recommendation 25**

PJM should report the balance and other specific information for amounts recorded on the schedule for Accounts 208-211, in accordance with the instructions on page 253 of the FERC Form No. 1.

## **PJM Response**

PJM agrees with and has implemented this recommendation. In its 2009 FERC Form No. 1, filed April 19, 2010, on the schedule for Accounts 208-211 PJM reported that \$722,003 in Account 211 represents advances from the initial transmission owners when PJM switched from an association to a LLC in 1997.

## **J. Generators' Advance Access to Market Data**

## **Recommendation 26**

PJM should address this matter through its stakeholder process with market participants to determine whether changes are necessary.

## **PJM Response**

PJM agrees with this recommendation. PJM has no knowledge of any member achieving a commercial advantage from the generator zonal dispatch rate data provided to generating units via high-speed Inter-Control Center Communications Protocol (ICCP) data link approximately five seconds prior to that data being posted publicly on PJM's Web site. Though zonal dispatch rates are not actual energy market prices, PJM is dedicated to all stakeholders having confidence in the PJM's commitment to nondiscriminatory competitive wholesale markets. Therefore, PJM initiated discussions with its stakeholders at the April 14, 2010 System Operator Subcommittee (SOS) meeting regarding eliminating the zonal dispatch rate from the data transferred to each generating unit with that unit's specific dispatch instructions. Further presentations of the potential change to the data provided to generating units were made at the May 12, 2010 and June 9, 2010 SOS meetings, the May 19, 2010 and June 16, 2010 Systems Information Subcommittee (SIS) meetings and the June 15, 2010 Operating Committee (OC) meeting. To avoid potential challenges to the reliable communication of generator dispatch instructions during summer 2010 operations, the changes to the data feed to the generating units to eliminate the zonal dispatch rate in the PJM Region are targeted to be implemented in latter 2010.