Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Valley Forge Corporate Center
Eagleville, PA 19403
Phone: 610-271-8050
Fax: 610-271-8057

Monitoring Analytics

February 25, 2010

Kimberly D. Bose, Secretary
Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: PJM Interconnection, L.L.C. and Progress Energy Carolinas, Inc., ER10-713-000

Dear Ms. Bose:

On February 23, 2010, Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM ("IMM"), submitted a motion to intervene and comment in the above-referenced proceeding. The IMM has subsequently discovered a number of errors in that filing, mostly of a non-substantive nature. Please find a corrected pleading attached.

If you have any questions regarding this filing, please contact the undersigned at (610) 271-8053.

Sincerely,

Jeffrey Mayes

Jeffrey W. Mayes, General Counsel

Attachment

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C. and Progress Energy Carolinas, Inc.	))))	Docket No. ER10-713-000

MOTION TO INTERVENE AND COMMENTS OF THE INDEPENDENT MARKET MONITOR FOR PJM

Pursuant to Rules 211, 212 and 214 of the Commission's Rules and Regulations, 18 CFR § 385.211, 385.212 & 385.214 (2008), Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM ("Market Monitor"),[1] submits this motion to intervene and comments on the Joint Operating Agreement ("JOA") executed and submitted by PJM Interconnection, L.L.C. ("PJM") and Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc. ("PEC") on February 2, 2010 ("February 2nd Filing") in the above captioned proceeding. The PJM/PEC JOA includes a proposed real-time congestion management methodology and establishes procedures for, among other things, the exchange of reservation and interchange schedules to permit calculation of total transfer capability (TTC), available transfer capability (ATC) and available flowgate capability (AFC).

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1 PJM Interconnection, L.L.C. is a FERC-approved Regional Transmission Organization. Capitalized terms used herein and not otherwise defined have the meaning provide in the PJM Open Access Transmission Tariff.

The Market Monitor has a number of recommendations related to the PJM/PEC JOA included in the February 2nd Filing. In summary, the Market Monitor:

- Supports, only as an interim step, the "dynamic schedule" approach to managing congestion, and
- Recommends that the Commission, as a condition of approval, assign a sunset date no later than December 31, 2011, and direct the parties to develop a clearly defined LMP solution that would respect constraints on both systems and determine the most economic unit commitment.
- Recommends that the Commission direct the parties to file with the Commission the jointly developed loss compensation method, with notice and opportunity to comment, prior to implementation.
- Recommends that the Commission reject the provision that PEC units will only respond up to 50 MW on a 5-minute interval until detailed support has been provided.
- Recommends that the Commission direct the parties to file with the Commission the specific details reserved for inclusion in the "implementation document", with notice and opportunity for comment, prior to implementation.
- Recommends that:

- the Commission reject the provision that requires PJM to make after the fact transmission reservations for PEC to match the "dynamic schedule."
- the Commission require PEC to acquire the necessary transmission reservations in advance.
- the Commission require that the agreement explain, in detail, how the parties intend to account for the case where ATC is not available on either PJM's or PEC's OASIS node at the time of the after the fact reservation.

- Recommends that the integration and settlement of "dynamically scheduled" transactions be done using the same method applied to all other transactions.
- Recommends that:
  - nuclear and hydro units be included with all other units in the determination of the interface price.
  - PJM and PEC be required to clarify, prior to implementation of the proposed method, how third party transactions would be priced.
  - specific terms be added to the agreement providing that the pricing does not apply when PEC is importing or exporting from other areas.

- Recommends that the proposed make whole payments for the export portion of the "dynamic schedules" be removed from the agreement as it is not consistent with the way PJM treats other export transactions.
- Recommends that:
    - the Commission reject the provision that PEC only be required to follow dispatch for eight 5-minute periods in an hour in order to be considered to be following dispatch.
    - the Commission require a clarification of the time period and criteria for reevaluating the make whole settlement process.

In addition to these specific concerns, the Market Monitor believes that PJM should attempt to develop a comprehensive solution for all parties impacted by congestion at its southern interfaces rather than negotiating bilateral arrangements. The approach here is the negotiation of a bilateral "congestion management agreement" with a counterparty with commercial and competitive interests. This is very different than developing a congestion management agreement with the Midwest ISO. In addition, the proposed "congestion management agreement" does not address the management of congestion on PEC flowgates and does not require that PEC calculate the system equivalent of LMP in order to facilitate a full economic congestion management agreement. A comprehensive agreement would be equitable to all parties and be consistent with LMP-based markets. The Market Monitor recommends that the Commission continue to encourage the development of a comprehensive solution.

I. COMMENTS

A. Calculation of ATC Value on the VACAR/PJM Interface (Art. 12.2)

Article 12 of the PJM/PEC JOA provides for additional parallel flow management through PJM's support of the PEC/Duke Energy Carolinas ("DUK") non-firm parallel flow management agreement. The PEC/DUK agreement defines a method for revenue sharing to account for scheduled versus actual flows across their systems. The details of the PEC/DUK agreement are not available but should be made available.

The new ATC calculation will not change the paths available on the PJM OASIS. There will be a single ATC value available for all paths (i.e. CPLE-PJM, DUK-PJM and CPLW-PJM for imports and PJM-CPLE, PJM-DUK and PJM-CPLW for exports) that will decrement together with each reservation. This approach appears reasonable.

B. Loss Compensation Process for Non-Firm Power Flows (Art. 13)

The transmission system incurs losses when power is moved from the source to the load. However, when a significant part of the actual power flow creates a parallel flow on a third party's system, that party may have to increase generation due to an increase in losses. The JOA provides for PJM and PEC to compensate each other when the non-firm power flow on one system increases the losses on the other. The process for determining compensation has yet to be determined, but the parties have agreed to work in good faith to develop this process within one year after the effective date of the agreement.

The Market Monitor recommends that the Commission direct the parties to file with the Commission the jointly developed loss compensation method, with notice and opportunity to comment, prior to implementation.

C. Managing Real-time Congestion (Art. 14)

Coordination of actual flow across the PJM/PEC Interface to reduce congestion will be accomplished by implementing a "dynamic schedule" between CPLE and PJM to move power across the interface.

Due to the specific topology of the transmission system between the PJM and PEC balancing authorities, the "dynamic schedule" approach to managing congestion is more efficient in this case than redispatching on one side of the congested facility, due to the increased impact of transfers. PEC calculates the "dynamic schedule" based upon the PEC cost, PEC ability to move generation and the PJM LMP value. The PJM LMP value is calculated by PJM based on the value to PJM for PEC to relieve the congestion on the PJM transmission system.

Although the "dynamic schedule" approach is more efficient than redispatching on one side of the congested facility, it is not as efficient as joint or coordinated economic dispatch. PEC is not required, under the agreement, to account for external congestion when determining its unit commitment. In a joint or coordinated economic dispatch, PJM and PEC likely would use a different set of units to meet their demand while respecting the constraints on both systems. The most efficient unit commitment would result because the calculated LMP values would simultaneously respect both PJM's and PEC's constraints.

The Market Monitor agrees that the proposed approach is a more effective method for managing constraints than redispatching on one side of the congested facility, but the implementation of the "dynamic schedule" is not the optimal resolution to the congestion issue. The Market Monitor supports this general approach only if it is explicitly defined as an interim step with a specific end date. The Market Monitor recommends that the Commission, as a condition of approval, assign a sunset date no later than December 31, 2011, and direct the parties to develop a clearly defined LMP solution that would respect constraints on both systems and determine the most economic unit commitment.

D. "Dynamic Schedule" (Art. 14.2)

This paragraph of the PJM/PEC JOA notes that the "process allows for settlement based on power deliveries and receipts, thereby avoiding modification to existing billing practices." This statement is contradictory to paragraph 14.5.3 in which a new process for determining a make whole payment is described.

Section 14.2 of the JOA also specifies that the dynamic schedule will only be able to change within a 50 MW maximum every five minutes. The "dynamic schedule" will continue to increase or decrease at this level until the PJM LMP value sent matches the PEC cost. It is not yet known whether this ramp rate will adequately respond to constraints (as the curtailment of external interchange transactions can be significantly larger than 150 MW on a 15-minute interval), and this limitation should be evaluated prior to implementation.

The Market Monitor recommends that the Commission reject the provision that PEC units will only respond up to 50 MW on a 5-minute interval until detailed support has been provided.

E. Data Exchange (Art. 14.3)

This section of the JOA notes that the "data to be exchanged will be documented in the PJM/PEC JOA Implementation Document." The Market Monitor recommends that the Commission direct the parties to file with the Commission the specific details reserved for inclusion in the "implementation document", with notice and opportunity for comment, prior to implementation, in order to ensure compliance with the JOA with respect to the exchange of data, the overall implementation of the "dynamic schedule" and the PJM/PEC JOA in general.

F. Transmission Reservations (Art. 14.4)

Section 14.4.2 of the PJM/PEC JOA provides that PJM will, on behalf of PEC, make a non-firm point-to-point reservation on the PJM OASIS, after the fact, in order to match the actual MWh delivery. This after the fact acquisition of transmission service is not available to other market participants. An alternate method to permit PEC to acquire transmission service prior to the flow of energy, in a manner consistent with that available to other market participants should be incorporated.

Additionally, this paragraph notes that transmission on the PEC system will be network secondary service with verification that ATC is available. The PJM/PEC JOA lacks a sufficiently detailed description of what will happen in the event that transmission (whether on the PJM or PEC transmission system) is not available after the fact. The Market Monitor recognizes that the "dynamic schedule" creates additional ATC on the PEC/PJM path by relieving congestion, and that the transmission service should be available after the fact.

The Market Monitor recommends that the Commission reject the provision that requires PJM to make after the fact transmission reservations for PEC to match the "dynamic schedule" and recommends that the Commission require PEC to acquire the necessary transmission reservations in advance. The Market Monitor recommends that the Commission require that the agreement explain, in detail, how the parties intend to account for the case where ATC is not available on either PJM's or PEC's OASIS node at the time of the after the fact reservation.

G. Energy Settlement Process (Art. 14.5)

PJM and PEC will model the "dynamic schedule" as energy deliveries and receipts, one for when the schedule is in the PEC to PJM direction, and another for when the schedule is in the PJM to PEC direction. The purpose of these directional schedules is to account for when the "dynamic schedule" reverses direction during an hour. In the event that this occurs, it is possible that PEC could lose money by responding to PJM LMPs under the existing hourly integrated settlement process. This methodology for settlements is not available to other market participants.

The Market Monitor recommends that the integration and settlement of "dynamically scheduled" transactions be done using the same methods applied to all other transactions.

H. Price Determination (Art. 14.5.1)

When an interface price is only one LMP, there are still issues with determining the appropriate price. The PJM/PEC JOA sets the interface price at the marginal unit's cost using the "high/low" methodology. In addition to excluding the bus LMPs at the generators that are not on line, the PJM/PEC JOA also excludes nuclear and hydro units from the interface price determination. There is no economic basis for excluding nuclear and hydro units in determining the economics of the PEC system and therefore the interface price.

The equitable treatment of third party transactions remains a concern. A third party transaction may have the same impact on a constraint as the "dynamic schedule." The parties have not explained why such a third party should not also receive the PEC interface price. The Market Monitor recognizes that PEC will be capable of reacting more quickly than is possible for a third party transactions because the "dynamic schedule" will be responding to a five-minute LMP, whereas the third party transaction would have to wait for the next fifteen minute interval to react.

The Market Monitor has concerns about how PJM market settlements will handle both the "dynamic schedule" and simultaneous third party transactions. It is unclear whether the entire "dynamic schedule" should obtain the SouthIMP or SouthEXP pricing point when additional third party schedules occur or if only the difference between the imports/exports into PEC and the "dynamic schedule" should acquire the PEC defined interface price.

The Market Monitor recommends that nuclear and hydro units be included with all other units in the determination of the interface price. The Market Monitor recommends that PJM and PEC be required to clarify, prior to implementation of the proposed method, how third party transactions would be priced. The Market Monitor recommends that specific terms be added to the agreement providing that the pricing does not apply when PEC is importing or exporting from other areas.

I. Make Whole Evaluation (Art. 14.5.3)

The Market Monitor also has concerns with the proposed make whole payments for export transactions. The purpose of this approach is to not cause payments by PEC for helping alleviate PJM constraints by switching from imports to exports on the "dynamic schedule" within the same hour. This can occur due to the hourly integration of the five-minute LMP's.

The proposed make whole evaluation will consider separately the hourly integrated import and export transactions on the basis of a 24-hour calendar day. These make whole calculations will only apply if PJM determines that PEC is responding to the defined dynamic pricing signal.

Section 14.5.3 of the PJM/PEC JOA also states: "If the PEC "dynamic schedule" is determined to be following PJM dispatch for at least eight 5-minute periods in an hour, it will be considered as following dispatch for the hour and the hour will be included in the make whole calculations for the day." The February 2nd Filing does not explain how the "eight 5-minute periods in an hour" criteria were determined or identify any precedent for these criteria. The Market Monitor recommends that the Commission requires that PEC be required to follow PJM dispatch for all 5-minute periods in an hour to qualify for make whole payments.

J. Calculation of PEC Total Cost/Revenue (Art. 14.5.4)

Subsection 14.5.4 of the PJM/PEC JOA explains how the total PEC costs and revenue will be determined for make whole payments. PJM does not currently have make whole provisions for export transactions, and creating this export make whole payment specifically for PEC is not equitable to other market participants.

Subsection 14.5.4.1 provides that for the import transactions, PJM will calculate the total revenue earned by PEC by multiplying the hourly integrated value of the applicable LMP by the hourly integrated MW value of the import transaction for each hour and summing for all 24 hours of a calendar day. PJM will calculate the PEC cost of providing the import transaction by multiplying the hourly integrated value of the PEC incremental cost for each hour by the hourly integrated MW value of the import transaction for each hour and summing for all 24 hours of the same calendar day. If the total cost for all 24 hours exceeds the total revenue for all 24 hours, PJM will make PEC whole for the difference via Balancing Operating Reserves.

Subsection 14.5.4.2 provides that for the export transactions, PJM will calculate the total cost incurred by PEC by multiplying the hourly integrated value of the applicable LMP by the hourly integrated MW value of the export transaction for each hour and summing up the values for all 24 hours of a calendar day. PJM will calculate the PEC avoided cost of receiving the export transaction by multiplying the hourly integrated value of the PEC decremental cost for each hour by the hourly integrated MW value of the export transaction for each hour and summing up the values for all 24 hours of the same calendar day. If the total cost incurred by PEC exceeds the total avoided cost for the entire 24-hour period, PJM will make PEC whole for the difference via Balancing Operating Reserves.

Subsection 14.5.5 states that "If the make whole evaluation settlement is used for over 10 percent of the hours that PEC is responding correctly to relieve PJM congestion, the settlement process will be reevaluated to determine if changes to the process are required to provide equitable compensation for the congestion relief provided."

The Market Monitor recommends that the proposed make whole payments for the export portion of the "dynamic schedule" be removed from the agreement as it is not consistent with the way PJM treats other export transactions. The Market Monitor recommends that the Commission require a clarification of the time period and criteria for reevaluating the make whole settlement process.

II. MOTION TO INTERVENE

The PJM Tariff requires that the Market Monitor, among other things, monitor "actual or potential design flaws in the PJM Market Rules," "structural problems in the PJM Markets that may inhibit a robust and competitive market" and "the potential for a Market Participant to … violate … FERC Market Rules," including specifically "market behavior rules and the prohibition against energy market manipulation codified by the Commission in its Rules and Regulations at 18 CFR §§ 1c.2 and 35.37, respectively."[2] Issues raised in this proceeding implicate these responsibilities.

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[2] OATT Attachment M §§ II & IV.B.2–4.

Consequently, this matter implicates matters within the Market Monitor's purview, and it is in the public interest that the Commission grants this motion. Rule 214 provides that the Commission may grant interventions where "[t]he movant's participation is in the public interest."[3] The Market Monitor has the exclusive duty to perform the market monitoring function for PJM, and no other party can adequately represent it in this proceeding.

III. COMMUNICATIONS

Pursuant to 18 CFR § 385.203(b)(3), the Market Monitor designates the following persons as those to receive all notices and communications with respect to this proceeding:

Joseph E. Bowring
President
Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Valley Forge Corporate Center
Eagleville, Pennsylvania 19403
(610)-271-8051
joseph.bowring@monitoringanalytics.com

Jeffrey W. Mayes
General Counsel
Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Valley Forge Corporate Center
Eagleville, Pennsylvania 19403
(610) 271-8053
jeffrey.mayes@monitoringanalytics.com

[3] 18 CFR § 214(b)(2)(iii).

IV. CONCLUSION

The Market Monitor respectfully requests that the Commission grant this motion to intervene and afford its comments due consideration as it considers the issues raised in this proceeding.

Respectfully submitted,

Jeffrey W. Mayes
General Counsel

Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Valley Forge Corporate Center
Eagleville, Pennsylvania 19403
(610) 271-8053
[*jeffrey.mayes@monitoringanalytics.com*](mailto:jeffrey.mayes@monitoringanalytics.com)

Joseph E. Bowring
Independent Market Monitor for PJM
President
Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Valley Forge Corporate Center
Eagleville, Pennsylvania 19403
(610) 271-8051
joseph.bowring@monitoringanalytics.com

John Dadourian
Senior Analyst
Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Valley Forge Corporate Center
Eagleville, Pennsylvania 19403
(610) 271-8050
john.dadourian@monitoringanalytics.com

Dated: February 23, 2010

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Eagleville, Pennsylvania,
this 23rd day of February, 2010.

Jeffrey Mayes

Jeffrey W. Mayes
General Counsel
Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Valley Forge Corporate Center
Eagleville, Pennsylvania 19403
(610) 271-8053
jeffrey.mayes@monitoringanalytics.com