



**Monitoring
Analytics**

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July 24, 2009

By Electronic Mail

David Anders
Manager, PJM Stakeholder Affairs
PJM Interconnection, L.L.C.
955 Jefferson Avenue
Valley Forge Corporate Center
Norristown, Pennsylvania 19403

Re: MRC Agenda Item No. 3 (Proposed Unit Specific Opportunity Cost Calculation)

Dear David:

The IMM has here enclosed alternative revisions to the PJM Operating Agreement related to the above indicated agenda item and requests that they be posted for the July 30, 2009, meeting scheduled for the PJM Markets and Reliability Committee. We believe that the proposed language more accurately captures the changes appropriate for this phase of compliance.

The IMM notes that, in addition to tariff language, PJM has also posted revisions to the CDTF Manual (m15). The agenda indicates that the MRC will be asked to endorse the proposed revisions, but it does not indicate whether this includes the proposed changes to the manual. Because the tariff language must be filed in compliance with a FERC order, we understand the need for a vote on the tariff revisions. In the event that PJM seeks to obtain a vote on the manual revisions, we believe that this would be premature.

The revisions to the manual do not need to become final, as far as we are aware, until January 1, 2010. Because these provisions necessarily will be complicated and require careful review, because the current draft manual is not final, and because there is no need for immediate action, we request, if this is indeed PJM's intent, that no vote occur until there is an opportunity to fully develop the manual and to afford to the manual appropriate scrutiny.

We appreciate your assistance in this matter.

Sincerely,

Jeffrey W. Mayes
General Counsel

(b) The Day-ahead Energy Market shall enable Market Participants to purchase and sell energy through the PJM Interchange Energy Market at Day-ahead Prices and enable transmission customers to reserve transmission service with Transmission Congestion Charges and Transmission Loss Charges based on locational differences in Day-ahead Prices. Market Participants whose purchases and sales, and transmission customers whose transmission uses are scheduled in the Day-ahead Energy Market, shall be obligated to purchase or sell energy, or pay Transmission Congestion Charges and Transmission Loss Charges, at the applicable Day-ahead Prices for the amounts scheduled.

(c) In the Real-time Energy Market, Market Participants that deviate from the amounts of energy purchases or sales, or transmission customers that deviate from the transmission uses, scheduled in the Day-ahead Energy Market shall be obligated to purchase or sell energy, or pay Transmission Congestion Charges and Transmission Loss Charges, for the amount of the deviations at the applicable Real-time Prices or price differences, unless otherwise specified by this Schedule.

(d) The following scheduling procedures and principles shall govern the commitment of resources to the Day-ahead Energy Market and the Real-time Energy Market over a period extending from one week to one hour prior to the real-time dispatch. Scheduling encompasses the day-ahead and hourly scheduling process, through which the Office of the Interconnection determines the Day-ahead Energy Market and determines, based on changing forecasts of conditions and actions by Market Participants and system constraints, a plan to serve the hourly energy and reserve requirements of the Internal Market Buyers and the purchase requests of the External Market Buyers in the least costly manner, subject to maintaining the reliability of the PJM Region. Scheduling shall be conducted as specified below, subject to the following condition. If the Office of the Interconnection's forecast for the next seven days projects a likelihood of Emergency conditions, the Office of the Interconnection may commit, for all or part of such seven day period, to the use of generation resources with notification or start-up times greater than one day as necessary in order to alleviate or mitigate such Emergency, in accordance with the Market Sellers' offers for such units for such periods and the specifications in the PJM Manuals.

1.10.1A Day-ahead Energy Market Scheduling.

The following actions shall occur not later than 12:00 noon on the day before the Operating Day for which transactions are being scheduled, or such other deadline as may be specified by the Office of the Interconnection in order to comply with the practical requirements and the economic and efficiency objectives of the scheduling process specified in this Schedule.

(a) Each Market Participant may submit to the Office of the Interconnection specifications of the amount and location of its customer loads and/or energy purchases to be included in the Day-ahead Energy Market for each hour of the next Operating Day, such specifications to comply with the requirements set forth in the PJM Manuals. Each Market Buyer shall inform the Office of the Interconnection of the prices, if any, at which it desires not to include its load in the Day-ahead Energy Market rather than pay the Day-ahead Price.

(b) Each Generating Market Buyer shall submit to the Office of the Interconnection:
(i) hourly schedules for resource increments, including hydropower units, self-scheduled by the Market Buyer to meet its Equivalent Load; and (ii) the Dispatch Rate at which

each such self-scheduled resource will disconnect or reduce output, or confirmation of the Market Buyer's intent not to reduce output.

(c) All Market Participants shall submit to the Office of the Interconnection schedules for any bilateral transactions involving use of generation or Transmission Facilities as specified below, and shall inform the Office of the Interconnection whether the transaction is to be included in the Day-ahead Energy Market. Any Market Participant that elects to include a bilateral transaction in the Day-ahead Energy Market may specify the price (such price not to exceed the maximum price that may be specified in the PJM Manuals), if any, at which it will be wholly or partially curtailed rather than pay Transmission Congestion Charges. The foregoing price specification shall apply to the price difference between the specified bilateral transaction source and sink points in the day-ahead scheduling process only. Any Market Participant that elects not to include its bilateral transaction in the Day-ahead Energy Market shall inform the Office of the Interconnection if the parties to the transaction are not willing to incur Transmission Congestion Charges in the Real-time Energy Market in order to complete any such scheduled bilateral transaction. Scheduling of bilateral transactions shall be conducted in accordance with the specifications in the PJM Manuals and the following requirements:

- i) Internal Market Buyers shall submit schedules for all bilateral purchases for delivery within the PJM Region, whether from generation resources inside or outside the PJM Region;
- ii) Market Sellers shall submit schedules for bilateral sales to entities outside the PJM Region from generation within the PJM Region that is not dynamically scheduled to such entities pursuant to Section 1.12; and
- iii) In addition to the foregoing schedules for bilateral transactions, Market Participants shall submit confirmations of each scheduled bilateral transaction from each other party to the transaction in addition to the party submitting the schedule, or the adjacent Control Area.

(d) Market Sellers wishing to sell into the Day-ahead Energy Market shall submit offers for the supply of energy (including energy from hydropower units), demand reductions, Regulation, Operating Reserves or other services for the following Operating Day. Offers shall be submitted to the Office of the Interconnection in the form specified by the Office of the Interconnection and shall contain the information specified in the Office of the Interconnection's Offer Data specification, [this Section 1.10.1A\(d\), Schedule 2 to this Agreement and the PJM Manuals](#), as applicable. Market Sellers owning or controlling the output of a Generation Capacity Resource that was committed in an FRR Capacity Plan, self-supplied, offered and cleared in a Base Residual Auction or Incremental Auction, or designated as replacement capacity, as specified in Attachment DD of the PJM Tariff, and that has not been rendered unavailable by a Generation Planned Outage, a Generator Maintenance Outage, or a Generation Forced Outage shall submit offers for the available capacity of such Generation Capacity Resource, including any portion that is self-scheduled by the Generating Market Buyer. The submission of offers for resource increments that have not cleared in a Base Residual Auction or an Incremental Auction, were not committed in an FRR Capacity Plan, and were not designated as replacement capacity under Attachment DD of the PJM Tariff shall be optional, but any such offers must contain the information specified in the Office of the Interconnection's Offer Data specification, [this Section 1.10.1A\(d\), Schedule 2 to this Agreement and the PJM Manuals](#), as applicable. Energy offered from generation resources that have not cleared a Base Residual Auction or an Incremental Auction, were not committed in an FRR Capacity

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Plan, and were not designated as replacement capacity under Attachment DD of the PJM Tariff shall not be supplied from resources that are included in or otherwise committed

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to supply the Operating Reserves of a Control Area outside the PJM Region. The foregoing offers:

- i) Shall specify the Generation Capacity Resource or Demand Resource and energy or demand reduction, amount, respectively, for each hour in the offer period, and the minimum run time for generation resources and minimum down time for Demand Resources;
- ii) Shall specify the amounts and prices for the entire Operating Day for each resource component offered by the Market Seller to the Office of the Interconnection;
- iii) If based on energy from a specific generating unit, may specify start-up and no-load fees equal to the specification of such fees for such unit on file with the Office of the Interconnection, if based on reductions in demand from a Demand Resource may specify shutdown costs;
- iv) Shall set forth any special conditions upon which the Market Seller proposes to supply a resource increment, including any curtailment rate specified in a bilateral contract for the output of the resource, or any cancellation fees;
- v) May include a schedule of offers for prices and operating data contingent on acceptance by the deadline specified in this Schedule, with a second schedule applicable if accepted after the foregoing deadline;
- vi) Shall constitute an offer to submit the resource increment to the Office of the Interconnection for scheduling and dispatch in accordance with the terms of the offer, which offer shall remain open through the Operating Day for which the offer is submitted;
- vii) Shall be final as to the price or prices at which the Market Seller proposes to supply energy or other services to the PJM Interchange Energy Market, such price or prices being guaranteed by the Market Seller for the period extending through the end of the following Operating Day; and
- viii) Shall not exceed an energy offer price of \$1,000/megawatt-hour.

(e) A Market Seller that wishes to make a resource available to sell Regulation service shall submit an offer for Regulation that shall specify the MW of Regulation being offered, the Regulation Zone for which such regulation is offered, the price of the offer in dollars per MWh, and such other information specified by the Office of the Interconnection as may be necessary to evaluate the offer and the resource's opportunity costs. The price of the offer shall not exceed \$100 per MWh in the case of Regulation offered for all Regulation Zones. In addition to any market-based offer for Regulation, the Market Seller also shall submit a cost-based offer. A cost-based offer must be in the form specified in the PJM Manuals and consist of the following components as well as any other components specified in the PJM Manuals:

- i. The costs (in \$/MW) of the fuel cost increase due to the heat rate increase resulting from operating the unit at lower MW output incurred from the provision of Regulation;

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SCHEDULE 2

COMPONENTS OF COST

(a) Each Market Participant obligated to sell energy from operating capacity on the PJM Interchange Energy Market at cost-based rates shall include the following components or their equivalent in the determination of costs for operating capacity supplied to or from the PJM Region:

- (1) Boilers
Firing-up cost;
No-load cost during period of operation;
Peak-prepared-for maintenance cost;
Incremental labor cost; and
Other incremental operating costs.
- (2) Machines
Starting cost from cold to synchronized operation;
No-load cost during period of operation;
Incremental labor cost; and
Other incremental operating costs.

~~For a resource that is subject to operational limitations due to energy or environmental constraints imposed on the resource by Applicable Laws and Regulations (as defined in the PJM Tariff), the Market Participant may include in the calculation of its other incremental operating costs an amount reflecting the resource's unit-specific opportunity costs incurred during the hour(s) in which such resource is expected to be constrained, in accordance with the procedure prescribed in the PJM Manuals.~~

(b) Each Member obligated to sell energy on the PJM Interchange Energy Market at cost-based rates shall include the following components or their equivalent in the determination of costs for energy supplied to the PJM Region:

- Incremental fuel cost;
- Incremental maintenance cost;
- Incremental labor cost; and
- Other incremental operating costs.

~~For a resource that is subject to operational limitations due to energy or environmental constraints required imposed on the resource by Applicable Laws and Regulations (as defined in the PJM Tariff), the Member may add to its cost-based offer include in the calculation of its other incremental operating costs an amount reflecting the resource's unit-specific opportunity costs incurred during the hour(s) in which such resource is expected to be constrained, in accordance with the procedure prescribed in the PJM Manuals.~~

(c) All fuel costs shall employ the marginal fuel price experienced by the Member.

(d) The PJM Board, upon consideration of the advice and recommendations of the Members Committee, shall from time to time define in detail the method of determining the costs entering into the

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said components, and the Members shall adhere to such definitions in the preparation of incremental costs used on the Interconnection.

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